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ORAL001

EXPLORING ATTENTIONAL BIASES TO BODY EXPRESSIONS OF PAIN IN MEN AND WOMEN

Category: Psychology

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Background

People in pain need to effectively communicate to others they are in need of help. This is particularly the case when the person in pain is unable to verbalise, and so needs to rely on nonverbal signals. Observer accuracy in nonverbal pain cue detection is critical, but can vary, and is effected by a range of individual and contextual factors. Whilst there are known gender differences in the recognition of emotional expressions, it is unclear whether this also extends towards pain cues. Furthermore, most gender-based research focuses on facial expressions, whereas there are other nonverbal channels, such as body postures. Finally, studies tend to utilise simple recognition tasks, whereas there are other, more sophisticated approaches, which allow for deeper investigations into different types of attentional processing. One such approach would be to consider whether there are selective attentional biases toward pain, which in turn occur in a gender-specific way.

Aims

The primary aim of this study was therefore to see whether gender differences exist in selective attentional biases towards body expressions of pain and core emotions. An additional aim was to examine whether such biases are due to increased attentional vigilance or slower disengagement from pain cues.

Methods

Following ethical committee approval, 47 adults (22 male, 25 female) complete a computer-based dot probe task. Pairs of images from the Bath Emotion and Pain Posture set were presented (left or right of a central point), one of which was replaced with a dot. Participants indicated the location of the dot. Of critical importance was that the images comprised of an actor presenting an expressive and neutral body posture. This technique allows us to calculate an index of attentional bias towards the location of the expressive stimulus, based on the relative speed of response (reaction time) to probes when the dot appeared in the same or alternative location as the expressive image. The gender of actors and valence of the body posture images (pain, fear, sad) were varied. To consider differences between vigilance and disengagement biases, the duration images were presented for was varied (150 vs. 500 vs. 1250msec).

Results

One participant was removed due to missing data, and high number of errors. Attentional bias index scores were calculated, with a positive score indicating a relative bias towards the location of an expressive posture. Analysis of Variance revealed a significant main effect for image valence ($F(2,88)=4.63$, $p<.05$), in that there was a stronger bias toward pain postures (11.53) than those depicting fear (6.05) or sadness (4.16). There was a significant main effect of presentation time ($F(2,88)=4.69$, $p<.05$), but this should be interpreted in light of a significant interaction between gender and presentation time ($F(2,88)=3.98$, $p<.05$). Further analysis of this interaction indicated that a general attentional bias towards expressive postures was sustained across all time presentation points amongst women, but that this was not the case for men; men did not show an attentional bias at the longest presentation times.

Conclusion

A specific bias towards images of pain-related body postures was found, which was greater than those found for other negative body expressions. This suggests painful postures are particularly good at capturing attention in observers. A general nonspecific gender difference was also found, although only at longer image presentation times. This suggests whilst men and women are initially vigilant towards emotive postures, men disengage from such images before women do. If so, then men and women may differ in the attentional processes that may contribute towards the decoding of nonverbal signals. Further research using this method is warranted.

ORAL002

ADDRESSING PAIN MANAGEMENT ISSUES FOR MALE CHRONIC ABDOMINO-PELVIC PAIN – ANALYSIS OF THE DATA FROM THE SPECIALISED PAIN MANAGEMENT PROGRAMME LINK

Category: Non-Pharmacological Pain Management

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Background

Guidelines for treating patients with chronic pain recommend attending a pain management programme (PMP) to improve quality of life. Patients with chronic abdomino-pelvic pain (APP) may face difficulties in accessing services specific to their needs. The Pain Management Centre at UCLH runs an APP-specific PMP, 'Link', which includes sessions on sexual activity, bladder and bowel issues. Groups are single sex at patients' request. Previous evaluation has shown efficacy with effect sizes exceeding the treatment benchmark for this type of intervention, for both men and women.
We believe that our male-only APP programme is the only one in the UK. Currently programme content is the same for both sexes. However, men seemed to express more anxiety in the groups, possibly indicating that we should adjust content accordingly.

Aims

1. Identify baseline differences between men and women in anxiety and pain impact.
2. Identify differences in treatment gain between men and women in anxiety and pain impact.

The findings will inform clinical practice and tailoring the content of the intervention to meet the needs of his unique single-sex group.

Methods

The Link programme is adapted for APP from evidence based cognitive-behavioural therapy (CBT) PMPs. Patients assessed as suitable by the APP team (consultant, nurse specialist, clinical psychologist and physiotherapist) attend a seven-day programme, one of which includes friends and family members, over seven weeks, and one and nine month follow-ups. The following outcome measures are used; pain severity (BPI) and interference (BPI), catastrophic thinking about pain (PCS), sexual anxiety (MSQ), mood (DAPOS anxiety and depression subscales), pain-related self-efficacy (PSEQ) and physical function (1 minute sit to stand test). These are completed at the beginning and end of the programme, and at follow-ups.

Results

Data was analysed from 262 patients: 69 men from 7 groups and 193 women from 21 groups. The mean age was 47 for males and 44 for females. Male patients had a shorter duration of pain (mean 7.5 years versus 10 years for females). Data were analysed using a general linear model with pain duration as covariate and examining for sex differences. There were no sex differences in anxiety at baseline, nor in gains with treatment which were statistically significant: overall mean 7.6 to 6.5 ($F=13.9$, $p<0.001$). Nor were there sex differences in pain interference at baseline, nor in gains with treatment which were statistically significant: overall mean 5.7 to 4.7 ($F=19.5$, $p<0.001$). Changes were maintained at 1 month.

Conclusion

General anxiety, as shown by the questionnaire, does not differ between men and women, nor were there any other baseline differences in psychological variables, nor differences in the extent to which men and women benefited from the programme, implying that no immediate adjustments to programme content need be made. Our best hypothesis about the divergence of findings from our observations about male anxiety are that anxiety expressed in groups may be focal to pain, whereas a range of anxieties is sampled by the questionnaire. We plan to test this hypothesis in the next phase.

ORAL003

THE IMPACT OF TRAIT MINDFULNESS ON SENSORY AND COGNITIVE ASPECTS OF PAIN

Category: Psychology

Authors: George Kitsaras - Psychology University of Reading, Richard Harrison - Psychology University of Reading, Tim Salomons - Psychology University of Reading,

Background

Mindfulness training leads to higher pain tolerance and improved pain management (including lower pain catastrophizing, decreased negative affect and better cognitive performance) in both clinical and non-clinical populations (Mrazek et al., 2013; Schutze et al. 2010; Zeidan et al., 2012). While the effects of mindfulness training on pain outcomes are well known, the degree to which trait mindfulness is associated with sensory and cognitive aspects of pain remains poorly understood.

Aims

We aimed to examine the association between trait mindfulness and sensory, emotional and cognitive aspects of pain in individuals with no previous mindfulness training.

Methods

69 participants (Mean age= 21.64, s.d.=4.63. 38 female) completed the Five-Facet Mindfulness Questionnaire (Baer et al., 2006) and Pain Catastrophizing Scale (Sullivan, Bishop & Pivik, 1995). Thermal Pain stimulation was delivered using the MEDOC Pathway System. Pain threshold was determined using method of levels (8°/s) and method of limits (8°/s, step rate= 2°, increased/decreased steps of .5°). The scores from the two methods were averaged to produce a threshold. Participants also completed an adapted cognitive Stroop task (Kucyi et al., 2013) where they were presented with three cards and asked to report the highest number of digits. This required that they supress the numbers (1-9) on the cards. Pain stimuli (12seconds, at temperature corresponding to individual's rating of 6/10 pain) were given on half the trials. Cognitive interference was calculated as increases in reaction time when pain was present.

Results

We found a positive correlation between trait mindfulness and pain threshold, $r(68)= .31$, $p<.05$. There was a strong negative correlation between mindfulness and pain-catastrophizing, $r(67)= -.49$, $p<.001$, as well as a negative correlation between pain-catastrophizing and threshold, $r(67)= -.28$, $p<.05$. Mindfulness was not correlated with cognitive interference reaction-times ($r(58)= .34$, $p=.8$) or error rates ($r(58)= -.77$, $p=.56$).

Conclusion

Consistent with previous research (Petter et al., 2013), individuals with higher trait mindfulness had lower pain catastrophizing scores.

Importantly, we also found a positive association between trait mindfulness and pain threshold. These findings indicate that trait mindfulness is associated with both sensory and emotional aspects of pain and may therefore be a useful measure for examining pain sensitivity in clinical settings.

ORAL004

PERSONAL DISTRESS AND SYMPATHY DIFFERENTIALLY INFLUENCE HEALTH CARE PROFESSIONAL AND PARENTS' ESTIMATION OF CHILD PROCEDURE-RELATED PAIN

Category: Paediatric

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Background

Facing another in pain elicits a variety of responses in observers that may impact caregiving, and hence the sufferer's pain. Among the variety of observer responses, caregivers' pain estimations may have particular important implications for pain management decisions. This is particularly important in the context of paediatric pain as children highly depend upon another's care. Affective responses elicited by facing the child in pain are considered key in understanding caregivers' estimations of paediatric pain experiences. Increasing evidence suggests that anticipating or observing another in pain is likely to elicit other-oriented affective responses such as emotional sharing or sympathizing with the other's pain experience but also self-oriented feelings of personal distress. Theory suggests differential influences of sympathy versus personal distress on pain estimations; yet empirical evidence on the impact of caregivers' feelings of sympathy versus distress upon estimations of paediatric pain experiences is lacking.

Aims

The study investigated the relationship between caregivers' distress and sympathy when faced with child pain upon caregivers' estimation of child pain. Including a variety of caregivers (i.e. parents and various health care professionals; HCP) allowed exploring whether affective responses have a differential impact on pain estimates depending on caregiver type.

Methods

The present study reports on the longitudinal part of the "Ghent - Pain in Child Leukemia - study" ("G-PICL study") for which ethical approval was obtained from the Ethics Committee of Ghent University Hospital. A prospective design was applied in 31 children diagnosed with acute Lymphoblastic or Myelogenous Leukemia. Each lumbar puncture and/or bone marrow aspiration (LP/BMA procedure) the child had to undergo, as part of their treatment protocol, was consecutively included in the study. Standard procedures at Ghent University Hospital allowed parents in the treatment room during preparations and aftercare, but parents waited outside during the actual LP/BMA procedure. At least three staff members were present during LP/BMA procedures: a physician, a nurse and a child life specialist (CLS). Caregivers' (i.e. parents, physicians, nurses, and child life specialists) distress and sympathy were assessed before each LP/BMA procedure; estimates of child pain were obtained immediately following each procedure.

Results

Descriptive analyses revealed that parents reported significantly more personal distress compared to all HCP (all $t(60) > 6.25$, $p < .001$) and higher sympathy levels than nurses ($t(60)=2.54$, $p<.05$). CLS also reported significantly more sympathy towards child pain compared to nurses ($t(60)=2.71$, $p<.05$). Caregiver distress and sympathy was only moderately correlated for parents ($r=.16$, $p<.01$) and pain estimations did not differ between the caregivers (all $t(60)<1.88$, ns). Using multilevel modelling, results indicated that, beyond the impact of child pain behaviour, personal distress explained parental and physician's estimates of child pain, but not pain estimates of nurses and child life specialists. Specifically, higher level of parental and physician's distress was related to higher child pain estimates. Caregiver sympathy was not associated with pain estimations by any caregiver.

Conclusion

The current findings highlight the importance of caregivers' personal distress when faced with child pain, rather than sympathy, in influencing their pain estimates. While elevated estimates of pain may contribute to an adaptive response of increased pain management and protective responses, it may also put caregivers at risk for heightened and/or prolonged engagement in protective behaviour, which may have maladaptive effects on child outcomes. Interestingly, the findings revealed differential associations between distress and pain estimates depending on the caregiver's relation to the child thereby suggesting that personal distress may not always be equally important in understanding caregiver pain estimates.

ORAL005

THE DISRUPTIVE EFFECTS OF PAIN ON ATTENTION IN LARGE GENERAL POPULATION INTERNET SAMPLES

Category: Psychology

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Background

Pain disrupts attention, which may have negative consequences for daily life in people with acute or chronic pain. It has been suggested that switching attention between tasks may leave us particularly susceptible to pain-related attentional disruption, because we need to disengage our attention from one task before shifting it onto another. Switching between tasks is typically associated with lower accuracies and/or longer reaction times compared to repeating the same task, and pain may exacerbate this effect. We present two studies with large, general population samples experiencing a variety of naturally-occurring pain conditions, to test this hypothesis. Study 1 used three versions of the task switching paradigm, while Study 2 focused on low and high complexity versions of two task switching paradigms.

Aims

We aimed to investigate the effects of pain on attentional switching using a series of variants of the task switching paradigm in large general population samples. We also investigated the effects of type of pain, duration of pain and analgesics on attentional switching performance.

Methods

In Study 1, we investigated the effect of pain on three attentional switching tasks in a large heterogeneous sample of 1078 adults recruited via Amazon's Mechanical Turk and tested online using Qualtrics. Participants reported whether or not they were in pain and the type and intensity of any pain they were experiencing. Participants then completed three versions of the task switching paradigm. In each task participants saw digits between 1 and 9 and switched between deciding whether the number was odd or even and whether it was lower or higher than 5. The switches occurred either randomly, every two numbers with cues, or every two numbers without cues. In Study 2, 3208 participants were recruited to complete one of four versions of a task switching paradigm with varying complexity and switch types.

Results

In Study 1, we found a stable performance decrement on all three tasks for those with pain compared to those without: participants responded significantly more slowly and less accurately across both switch and repeat trials. This effect was consistent across age, sex, type of pain and duration of pain, and was also present in participants who had taken analgesics. In Study 2, accuracy scores were lower in participants with pain than in those without pain on the random switch tasks, but not on the predictable uncued switch tasks. Higher intensity pain was associated with worse task performance and the longer participants had had their pain, the lower their accuracies on the random switch tasks. Finally, participants who had pain and had taken analgesics had significantly longer RTs than those who had pain and had not taken analgesics or those had no pain and had not taken analgesics.

Conclusion

Pain was associated with a small but stable dampening of performance on six of our seven attention switching tasks: it did not increase switch costs, rather performance decreased on both switch and repeat trials. This suggests that the disruptive effect of pain is strong enough to interrupt attention even when participants are engaged in a trial, not only when attention has been disengaged for shifting to a new task. Pain is common in the general population and attentional disruption may have important, as yet uninvestigated, consequences for everyday cognition.

ORAL006

DEVELOPING A PAIN KNOWLEDGE AND SKILLS FRAMEWORK FOR THE NURSING TEAM

Category: Education

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Background

The Royal College of Nursing (RCN) is the major professional body for nursing in the United Kingdom (UK). Its 'Knowledge and innovation action plan for 2014-2018' aimed to develop new knowledge and evaluate its impact. Assessing and managing pain are essential components of nursing practice. Pain is often categorised as acute or chronic, but it is a complex physical, psychological and social phenomenon that is uniquely subjective. Although a key fundamental of nursing care patients continue to report unrelieved pain during procedures, after surgery, in the community and in care homes. Pain traverses all clinical settings and the age spectrum yet it is often poorly assessed and managed by nurses. This results in short and long term adverse consequences. The RCN Pain and Palliative Care forum leads on educating and supporting nurses caring for patients with pain and formed the basis of the working party to develop the framework.

Aims

To develop and disseminate a knowledge and skills framework for all members of the nursing team that would improve the understanding and skill-set of the wider nursing team - promoting excellence in practice thus improving patient care across all four countries of the UK.

Methods

Funded by the RCN, a working party consisting of expert pain educationalists, academics, researchers and specialist nurses from across the UK was convened. Firstly the career framework (Skills for Health 2010) was mapped against Benner's (1982) levels of practice (novice, advanced beginner, competent, proficient and expert). These two in turn were then mapped against levels of education, training and professional qualification from Care Certificate through to Doctoral studies. Aspects of care (e.g. awareness of painful conditions, holistic pain assessment) were then mapped against dimensions (e.g. nursing responsibilities, elements of nursing care) all underpinned by attributes (e.g. person centred care, communication). Prior to publication the document was circulated for consultation to a variety of groups including: RCN Fora, Royal Colleges, Professional Colleges, organisations supporting people with pain and specialist pain nursing networks in the UK, Ireland and New Zealand.

Results

The published framework was endorsed by the British Pain Society. Presented as a booklet, and designed to be used alongside local competency documents, the KSF supports the individual nurse's migration from novice to expert. The content has been split to meet the specific needs of unregistered and registered members of the nursing team, with each group having their own section of the document. There is clear progression in the knowledge, practice and experience of nurses working within the framework. The KSF was launched at the European Pain Federation meeting in Vienna in September 2015 and has been presented at a variety of local and regional meetings within the UK since then. In the first three months following publication it was downloaded from the RCN website over 3800 times.

Conclusion

Prior to the publication of this document, there were no nationally agreed standards, competencies or frameworks for pain management in the UK; although a similar document, on which ours is based,

exists in New Zealand. The document has been well received at a local, national and international level. Research work is now planned to assess the effectiveness of the dissemination plan and the impact of its introduction on nursing practice and patient care. Early indications are that the KSF improves the understanding and skill-set of the wider nursing team, promoting excellence in practice which improves patient care and outcomes.

ORAL007

COMPLEX REGIONAL PAIN SYNDROME: PATIENTS' PRIORITIES FOR DEFINING RECOVERY

Category: Assessment & Measurement

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Background

Complex Regional Pain Syndrome (CRPS) is a persistent pain condition characterised by extreme pain and sensory, motor and autonomic disturbances, disrupted body perception and neglect or dis-ownership of the affected body part. While CRPS can resolve spontaneously, between 15 and 20% of patients demonstrate long-term residual symptoms, leading to poor health-related quality of life including severe difficulties in performing usual activities. The longevity and complexity of symptoms in persistent CRPS leads to problems with defining recovery and evaluating the efficacy of therapeutic interventions. Over time, symptom fluctuation, adaptation to functional limitations and the use of coping skills to help manage the impact of the condition, may mean that patients' expectations of recovery look very different from those held in the first few weeks of illness. Having a greater understanding of recovery from the patients' perspective will help healthcare professionals in the design and evaluation of future treatment approaches.

Aims

An international consortium explored CRPS patients' definition of recovery using a two-stage Delphi process. To augment findings previously reported, we report here results from second-stage data, seeking to identify the themes patients consider are priority areas in relation to their perceptions of recovery.

Methods

Potential participants, ⩾18 years, who met Budapest diagnostic criteria for CRPS, were identified from 8 country-specific databases (UK, Netherlands, Germany, Denmark, Switzerland, Poland, Canada and USA). Reported previously, content analysis of responses to "I would consider myself recovered if…" had identified themes characterising patients' definitions of recovery. In the present study 62 statements representing the most frequently mentioned themes were translated as necessary and presented in random order. Participants selected the 10 items they felt were most relevant to their perception of recovery and ranked these in order of importance. Rankings were subsequently weighted (priority 1=100%, 10=10%) and cumulative weighted percentages calculated for each statement across the whole sample. To identify the top 5 statements overall, only the statements quoted by ⩾5% of respondent were weighted in this way. Sub-group analyses identified the top three statements by geographical region, gender, recovery status (recovered/non-recovered), age, employment, duration and site of CRPS.

Results

The top five ranked recovery statements from 252 participants (77% female, 90% non-recovered) were no longer having: 1.CRPS-related pain, 2.generalised pain and discomfort, 3.restricted range of movement, 4.a need for medication, and 5.stiffness in the affected limb. These themes were mirrored in the top three statements for each geographical region, with the exception of: improved sleep and rest (UK, Denmark) and not having involuntary movement in the affected limb/s (The Netherlands). Further analyses showed the top three statements for the large majority of subgroups were also a subset of the top five. This was true for: males and females; recovered and non-recovered; age groups 30-50 and 50+; and paid employment and non-employed. It was also true irrespective of duration of CRPS and site of CRPS (upper or lower limb). Individual exceptions were: having a better quality of life (aged 18-30), and improved sleep and rest (non-paid workers).

Conclusion

Our data suggest that a very small number of themes are of highest importance to people with CRPS in their definition of recovery and that these vary little across countries and within patient demographics. People with CRPS want their CRPS-related pain, generalised pain, movement difficulties, and reliance upon medication to be addressed, above all other factors, for them to consider themselves recovered. These findings support the role of pain management and rehabilitation services in CRPS and are consistent with current UK guidance for treatment. Funding: RSDSA, CRPS Patient Society NL. C McCabe was supported by an NIHR CDF.

ORAL008

UNDERSTANDING THE PHYSICAL AND MENTAL FUNCTIONING OF THOSE WITH PERSISTENT AND RESOLVED COMPLEX REGIONAL PAIN SYNDROME TO HELP INFORM TREATMENT APPROACHES

Category: Neuropathic Pain

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Background

Pain is bio-psychosocial in nature. Recognising the inter-relationship of physical and psychological factors in Complex Regional Pain Syndrome (CRPS) has clinical implications for treating this often poorly understood chronic pain condition. Whilst there is little evidence suggesting psychosocial factors have a prognostic role in the development of CRPS, research suggests CRPS has significant consequences for patients, such as poor psychological health, poor functional ability and reduced quality of life (QoL). It is also known that anxiety, pain-related fear, and disability in the early stages of CRPS are associated with poorer outcomes in the first year. However, little is known about how demographic and bio-psychosocial factors may vary and relate to patient-defined recovery and other individual characteristics (including duration of the condition and upper- versus lower-limb CRPS). Understanding self-reported symptoms and psychosocial factors within these contexts may be important in helping healthcare professionals design and evaluate future treatments.

Aims

To undertake a cross-sectional study, describing the self-reported physical and psychological function of people with CRPS (with varying disease duration), and those who had recovered. Using an international sample to ensure population diversity, to identify variances and/or relationships between recovered and non-recovered populations and condition characteristics (upper/lower limb affected).

Methods

Following ethical and institutional approvals at study sites, potential participants ⩾18yrs, who met, or previously met, Budapest CRPS criteria, were identified from 8 country-specific databases (UK, Germany, USA, Canada, Switzerland, Denmark, Netherlands, Poland) and sent postal questionnaires (translated from English as required). Consent was implied by return of completed questionnaires. Data collected within countries was anonymised and pooled on a single common database (lead centre Bath). Self-reported data included: patient demographics, limb affected, disease stage (early, intermediate, late, recovered/non-recovered); knowing CRPS type (I or II); date of CRPS onset; trigger (trauma or spontaneous); and symptoms (from a provided list) in the prior 48 hours. Participants also completed: McGill Pain Questionnaire (MPQ); EQ-5D; Acceptance and Action Questionnaire (AAQ-II); Radboud Skills Questionnaire (RSQ) for upper-limb CRPS; and Measuring Activity Limitations in Walking Questionnaire (WAQ) for lower-limb. Chi-squared, Welch's t-tests, odds ratios and regression analyses were used to explore the data.

Results

N=347 participants (80.4% female; mean age=53yrs; 52.7% disease duration ⩾3yrs. N=310 reported recovery status: 280 (90.3%) non-recovered. Self-reported recovery and number of symptoms were strongly associated $\chi 2 = 124.94$, df = 15, $p<.001$). There were no associations with demographics, disease duration, trigger, limb affected but positive associations with knowing CRPS type ($p < .05$) and having caring responsibilities ($p < .05$). Non-recovered participants had lower psychological flexibility/higher avoidance (AAQ-II), higher pain (MPQ) and lower QoL (EQ-5D) ($p \geqslant .001$). Non-recovered participants with lower-limb CRPS more frequently reported hyperalgesia, allodynia, hair changes, involuntary muscle movements than those with upper-limb CRPS and had poorer MPQ ($p < .01$), EQ-5D ($p < .05$), SF-36 Physical Functioning ($p < .001$) and Energy/Fatigue ($p < .05$) scores. Function (RSQ), AAQ-II, and number of symptoms were jointly ($p < .001$) and individually ($p < .05$) predictive of EQ-5D scores for non-recovered participants with upper-limb CRPS.

Conclusion

Unresolved CRPS has negative consequences for mental and physical well-being, with people with lower-limb CRPS having the poorest health outcomes. Disease duration and demographic characteristics did not influence health status but a small "recovered" sample (n=30) should be noted. Lower psychological flexibility/higher avoidance in the non-recovered cohort maybe of relevance for treatment interventions, and supports a multi-disciplinary rehabilitation approach which promotes increased physical function conducted with concurrent psychological support. Education about CRPS and responsibilities for others may support recovery from CRPS. Funding: RSDSA, CRPS Patient Society NL. McCabe was supported by an NIHR CDF.

ORAL009

CORE OUTCOME MEASURES FOR COMPLEX REGIONAL PAIN SYNDROME CLINICAL TRIALS (COMPACT): A FIRST DRAFT CORE MEASUREMENT SET

Category: Assessment & Measurement

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Background

Complex Regional Pain Syndrome (CRPS) is a chronic pain condition. Currently, synthesis of clinical trial evidence is limited as there is no standardised core measurement set of internationally-agreed outcome measures. Recently published revised diagnostic criteria will improve patient standardisation across studies, however CRPS clinical trials currently use different outcome measures across studies to capture its multidimensional nature. This has impeded the understanding of CRPS and potential interventions. In 2013 an international consortium of patients, clinicians, researchers and representatives from industry (COMPACT) was established under the auspices of the IASP CRPS Special Interest Group, to agree on a minimum core set of standardized outcome measures for use in CRPS clinical trials. The development of this core measurement set will facilitate the comparison and pooling of data to answer specific research questions identified as internationally important for the advance of the treatment of CRPS.

Aims

To agree on a minimum core set of outcome measures advocated for use in all CRPS clinical trials, using an iterative process of consensus.

Methods

Four workshops with supplementary teleconferences, focus groups and email correspondence informed the development of the first draft core measurement set. Workshops (W) took place over a 21 month period (November 2013 – August 2015). Attendees (range 15-27 per workshop) were members of the COMPACT consortium, comprising patients, clinicians, researchers and representatives from industry. A research question was identified which required international collaboration and pooling of data, and could not be investigated without a consistent data set (W1). A process of consensus identified the domains which encompassed the key concepts necessary to answer the research question (W1&2). The optimum generic or condition specific questionnaire outcome measures, which captured the essence of each domain, were agreed by consensus and comprised the first draft core measurement set (W3&4). The potential was explored of using an existing item bank of psychometrically sound and validated patient reported outcome measures; Patient Reported Outcomes Measurement Information System (PROMIS).

Results

The research question was agreed by consensus as 'What is the clinical presentation and course of CRPS and what factors influence it?' Seven domains were identified by COMPACT as essential for the development of the core measurement set: pain, disease severity, participation and function, emotional and psychological function, self-efficacy, catastrophizing and patient's global impression of change. The following patient reported outcome measures encompass these domains and are advocated by the authors to be included in the first draft core measurement set: pain intensity (average, worst, least), McGill Pain Questionnaire 2 neuropathic items, PROMIS 29 Profile (version 2) and additional PROMIS suicide ideation question, Pain Catastrophizing Scale, EQ-5D, Pain Self Efficacy questionnaire and CRPS symptom questions. The authors recommend completion at baseline and 6 months, with additional options of 3 and/or 12 months. Clinician completion of the CRPS Severity Score at baseline and, if possible, additional time points is recommended.

Conclusion

The first draft core measurement set for CRPS clinical trials has been agreed upon by an iterative consensus process. The next step is to conduct a feasibility and acceptability study to explore the potential of using the core measurement set in the CRPS clinical trial population. This is essential prior to disseminating widely to the CRPS research community. In addition we intend to test the feasibility of using an existing data management system, Research Electronic Data Capture (REDCap), as a data collection tool. This work was supported by NIHR CDF for McCabe, Balgrist University, Switzerland, and the Netherlands Patient Association.

ORAL010

BIASED VISUAL ATTENTION IN PATIENTS WITH COMPLEX REGIONAL PAIN SYNDROME

Category: Psychology

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Background

Complex Regional Pain Syndrome (CRPS) is a chronic and disabling condition in which pain, swelling and other symptoms arise in one or more limb(s). CRPS patients report slowed movements and a sense of detachment from their affected body-part(s). Patients are also slower to process tactile stimuli on whichever hand is positioned on the affected side of space. These symptoms have been likened to the syndrome of Hemispatial Neglect ("neglect"), which results from brain injury and is marked by decreased attention to the contralesional side of the body and space. Understanding the full nature of the spatial attention bias in CRPS patients and the extent to which it resembles neglect following brain injury could provide additional insights into the cortical underpinnings of CRPS and inform new treatments. The current study examined the distribution of visual attention in patients with CRPS of the upper or lower limb for the first time.

Aims

We aimed to test visual attention in patients with CRPS. We hypothesised that they would attend less to targets appearing on the affected as compared to the unaffected side of space. Furthermore, we hypothesised that patients would show less precision in their judgements of spatial targets as compared to controls.

Methods

Twelve upper- and 12 lower-limb CRPS patients and 24 controls completed visual temporal order judgement tasks. Two lights were projected onto a table 9cm to the left and right of a fixation point and at offsets of 120, 60, 30, 15, 5, 5, 15, 30, 60 and 120ms [negative numbers = light appeared on the affected (patients) / non-dominant (controls) side]. Participants stated which light appeared first. They completed the task three times:1) with their hands out of sight ("no hands"), 2) with the left and right lights projecting onto the left and right hand, respectively ("hands uncrossed"), and 3) with the left and right lights projecting onto the right and left hand, respectively ("hands crossed"). Points of subjective simultaneity (PSSs) and just noticeable differences (JNDs) were obtained from psychometric functions fitted to individual data, and were analysed using bootstrapped linear mixed models regression.

Results

Group (patients or controls) was a predictor of PSS (β=22, 95% CI=[-44,-4]) and JND (β=24, 95%CI=[5, 41]). For patients, the light on the affected side of space had to appear, on average, 15ms earlier than the light on the unaffected side for the two to be perceived as simultaneous (95%CI=[-27,-2]). Controls exhibited no lateralized bias (PSS=-6, 95% CI=[-16, 6]). Overall, the JNDs of patients (M=96, 95%CI=[76, 117]) were 22ms larger than those of the controls (M=74, 95%CI=[54, 95]). The patients' biases were statistically similar in the no hands (PSS=-27, 95%CI=[-45, -8]) and the hands uncrossed conditions (PSS=-15, 95%CI=[30,6]), but significantly smaller in the hands crossed condition (PSS=-1, 95%CI=[-17, 15]). The difference between JNDs for controls and patients was comparable between the three hand arrangement conditions. Limb (upper or lower) and side (left or right) did not contribute to the prediction of patient's PSS or JND scores, but other clinical measures did.

Conclusion

The results provide the first empirical evidence for visual neglect in CRPS. This bias is not limited to visual information about the body because the PSS bias was largest for lights appearing on the table and did not differ between patients with upper and lower limb CRPS. The absence of a bias in the hands crossed condition may reflect an interaction of different spatial reference frames (i.e., attention to the body versus egocentric space) as has been demonstrated in stroke patients.
Larger JNDs in patients indicate decreased certainty when judging the order of visual targets, consistent with impaired body representation.

ORAL011

DO SUBGROUPS OF INDIVIDUALS WITH CHRONIC WIDESPREAD PAIN WHO RECEIVED EXERCISE TREATMENT AS PART OF A RANDOMIZED CONTROLLED TRIAL FOLLOW DISTINCT LONG-TERM PHYSICAL ACTIVITY TRAJECTORIES?

Category: Epidemiology

Authors: Kathryn R Martin - Epidemiology University of Aberdeen, Katie L Druce - Arthritis Research UK Centre for Epidemiology The University of Manchester, Lucia D'Ambruoso - Division of Applied Health Sciences University of Aberdeen, Gary J Macfarlane - Epidemiology Group University of Aberdeen

Background

For individuals living with chronic widespread pain (CWP), physical activity can be an effective non-pharmacological therapy for symptom management. Exercise Interventions may enhance activity levels in the short term, however less is known about longer-term activity maintenance (i.e., ⩾2 years) in those with CWP.

Aims

Our aims are twofold: 1) to determine whether subgroups of individuals with CWP who received an exercise intervention follow distinct post-exercise intervention activity trajectories long-term; and 2) to examine the characteristics of these subgroups which may be potentially useful in developing future stratified interventions for individuals with CWP.

Methods

Individuals with CWP took part in a 2x2 factorial randomised controlled trial and received a 6 month exercise intervention (with or without telephone cognitive behaviour therapy (CBT)). Data was collected at baseline, treatment end, 3, 24 and 60 month post-treatment. Self-report activity was from two questions querying the number of times per week they had engaged in either vigorous-intensity activity ⩾20 minutes or walking / moderate-intensity activity ⩾30 minutes in a usual week. Total activity was calculated as the number of moderate intensity sessions/week + (2 x vigorous intensity sessions/week). Analyses were conducted on 196 men and women who had either received exercise or exercise + CBT and who had ⩾3 activity data-points (baseline and at least 2 other time-points). Group-based trajectory modelling was used to identify latent activity trajectory groups between which descriptive statistics were used to identify whether baseline variables (e.g. self-rated health, fatigue, sleep, coping-strategies) differed (α=0.05).

Results

The best fitting model identified was one with three trajectories: non-maintainers, maintainers and super-maintainers. Overall, baseline activity levels (mean sessions/week (SD)) were significantly different between groups (non-maintainers: 1.1 (1.2); maintainers: 4.6 (2.8); super-maintainers: 8.6 (2.7), $p<0.001$) and at all other follow up points. While activity levels were higher for all groups (non-maintainers: 2.2 (2.2); maintainers: 6.2 (2.4); super-maintainers: 9.9 (1.8)) at treatment end, only maintainers and super-maintainers reached 'adequate' or 'high' activity levels (i.e. total activity score 5-7 or ⩾8) and maintained this over time. Non-maintainers were more likely to have a BMI ⩾25, high pain intensity, lower physical functioning, low active/high passive coping, and be working part time/student than were all maintainers (maintainers and super-maintainers combined). Groups did not vary on SF-36 MCS, fatigue, sleep, and kinesiophobia

Conclusion

We have identified a subgroup of individuals with CWP who are less likely to benefit from an exercise intervention in both the short and

long-term. These results suggest that a stratified medicine approach to care might be needed for these individuals at greatest risk of low activity levels. Specifically targeting this sub-group with activity interventions that take into consideration pain intensity, physical functioning levels and coping strategy styles appears to be warranted. Such an approach may increase activity levels and long-term activity maintenance for optimal symptom management among individuals with CWP.

ORAL012

A SERVICE EVALUATION TO ASSESS THE CLINICAL EFFECTIVENESS OF STRATIFYING PATIENTS WITH CHRONIC MUSCULOSKELETAL PAIN IN SECONDARY CARE

Category: Non-Pharmacological Pain Management

Authors: Leila Heelas - Physiotherapy Oxford University Hospitals NHS FT, Dr Francine Toye - Physiotherapy Research Oxford University Hospitals NHS FT, Professor Karen Barker - Physiotherapy Research Oxford University Hospitals NHS FT

Background

Only 14% of the 7.8 million people with chronic pain in the United Kingdom will have access to a pain clinic and many pain clinics do not have the capacity to meet demand (CMO Report 2008). This suggests that there is a large unmet clinical need and a requirement for more responsive services. Back pain is the most common and disabling musculo- skeletal pain condition (Hoy et al 2014). The Start Back Trial developed a stratification model for use in primary care to direct spinal patients to the most effective treatment pathway (Hill et al 2011). To date this method of stratifying patients in a multidisciplinary secondary care setting with patients experiencing chronic musculoskeletal pain has not been conducted. Use of stratification in this setting may allow for a greater number of patients to access rehabilitation.

Aims

To conduct a service evaluation to determine whether patients that are stratified according to a protocol and directed to either a physiotherapist led programme (PLP) or a pain management programme (PMP), achieve effective outcomes at 3 months post treatment.

Methods

212 consecutive patients presenting with chronic musculoskeletal pain were assessed by physiotherapists in an NHS pain rehabilitation unit.. Assessment and 3 month post treatment data were collected. Physiotherapists performing assessments were guided by a patient selection protocol to direct patients to either a physiotherapist led rehabilitation programme (PLP) of 45 hours duration or to a multidisciplinary pain management programme (PMP) of 35 hours duration. A battery of validated questionnaires were completed pre and 3 months post treatment. This included the Brief Pain Inventory – Interference Scale (BPI), Patient Health Questionnaire -9 (PHQ- 9), Generalised Anxiety Disorder -7 (GAD – 7) , the Chronic Pain Acceptance Questionnaire (CPAQ), sit to stand in one minute and standardised walking tests. Effect sizes and mean for all domains and percentage of patients achieving clinically reliable improvements in depression were calculated. Ethics Approval: All patients assented to their outcome data being used for service evaluation. The Joint Research and Development Committee LREC not required.

Results

Effect sizes were small for GAD 7 (anxiety) 0.33 and 0.26 for the PMP and PLP respectively, moderate for PHQ-9 (depression) 0.48 and 0.63 for the PMP and PLP respectively, moderate for the shuttle walk test 0.48 and large for sit to stand 0 .85 (PMP), 0.93 (PLP), BPI 0.76 (PMP) and 0.84 (PLP). The effect size for the walk test in the PMP was large 0.88. 33% and 40% of PMP and PLP patients obtained a clinically reliable improvement in depression. Mean pre-treatment data demonstrated that patients attending the PMP were more highly disabled, more depressed and had higher levels of pain interference.

Conclusion

Results suggest that patients were appropriately stratified, with only the more severe patients accessing the PMP. This stratification is in keeping with the Stepped Care Model advocated by IASP (2012) and is a model that could be adopted in other centres. Most of the effect sizes were moderate or large suggesting that both programmes were effective up to three months post treatment.
Implications: These findings indicate that experienced physiotherapists working in a pain rehabilitation unit can effectively utilise a stratified care model. The model can be applied in secondary care for use with patients with chronic musculoskeletal pain.

Acute Pain

013

PRESCRIBING OPIOID ANALGESICS FOR POST-SURGICAL PAIN IN HOSPITAL AND GENERAL PRACTICE

Category: Acute Pain

Authors: Athanasia Chatziperi - anaesthetic Royal Victoria Infirmary, Saleish Mishra - Anaesthetic Royal Victoria Infirmary,

Background

Opioids remain the mainstay for the management of moderate to severe postoperative pain. In selected patient groups, treatment with opioids may need to continue for a variable period of time after discharge. By the 1940s, opioids were so tightly restricted that they could be used legally only when they were prescribed strictly by physicians only. Consequently, there was reluctance to prescribe opioids, and globally for decades, pain was undertreated. Over the last 30 years, the use of opioids to manage acute pain has regained its place in accepted medical practice. The WHO promoted pain as the "fifth vital sign" with the intent of swinging the pendulum back to appropriately treating patients' pain. This work is conducted at a time when opioids prescriptions are increasing, media reports highlight concerns about strong opioids and campaigning organisations are calling for improved management.

Aims

This survey aimed to identify the magnitude of inappropriate post-operative discharge prescribing of opioids by the hospital doctors

and the role of GP in optimizing and monitoring postoperative opioid prescribing. The overall goal was to identify the size of inappropriate opioid prescribing at discharge from hospital and on subsequent follow-up.

Methods

We prospectively selected 90 patients who underwent general, gynecological or orthopedic procedures between 01/04/2015 and 01/05/2015. Patients on pre-existing opioid medications and those under 18 yrs. of age were excluded from the study. We reviewed patient's hospital discharge letter and discharge prescriptions using the electronic patient record keeping system (e records) in our Trust. We then sent letters to the patients' GP, requesting information regarding their ongoing prescriptions 1 month following the discharge from the hospital. The GP had option to respond with a fax, email or a letter in a prepaid envelope that was included in our requesting letter.

Results

We reviewed the postoperative discharge prescription of 90 patients. 13 patients underwent general surgery while 25 had gynaecological and 52 orthopaedic procedure. 34(38%) of the patients were male and 54 (60%) of the patients were between 18 and 65 years old. 66 (73%) of the patients had a prescription with opioids at the time of discharge -55 patients were prescribed codeine and 7 of them combined with oramorph, 6 had tramadol and 5 had zomorph. Only 11(16%) patients had clear instructions in their discharge letter about the length of the opioid consumption. 19(21%) patients were discharged from the hospital without a prescription. Responses were received from 43 (47%) GPs for postoperative opioid prescribing after discharge from the hospital. 12 (28%) patients continued the opioids for a month at least after they had their operation.

Conclusion

The use and efficacy of opioid for management of post-surgical pain in the community after discharge from hospital is debatable. Clear discharge instructions regarding the intended period of opioid use for post-surgical pain and subsequent timely review by GP for continued need for opioids and side effects assessments is a joint responsibility. More awareness and communications among hospital doctors and GP is warranted to address this issue of inappropriate post-surgical opioid use. More focused education and development of a national guidance for monitoring post-surgical opioid use will be effective in bringing about a safer opioid prescribing practice.

014

SURVEY OF HOSPITAL IN-PATIENTS REGARDING ACUTE PAIN AND ITS MANAGEMENT

Category: Acute Pain

Authors: Sadia Choudhury - Anaesthetics Ipswich Hospital NHS Trust, Daniel White - Anaesthetics Ipswich Hospital NHS Trust, Arun Natarajan - Anaesthetics Ipswich Hospital NHS Trust, Arun Bhaskar - Anaesthetics Ipswich Hospital NHS trust, Wajihah Saghir - Anaesthetics Ipswich Hospital NHS Trust

Background

Pain is a common presenting symptom for hospital admission. The experience of pain in the hospital can have long lasting consequences including stress, chronic pain, poor experience and cardiovascular complications. It has been recognized as the fifth vital sign to be recorded on a regular basis. Recent CQC in-patient survey published May 2015 question 39 and 40 tried to capture the pain experience. The national in-patient survey looked at the experiences of over 59,000 people who were admitted to an NHS hospital in 2014. Between September 2014 and January 2015, a questionnaire was sent to 850 recent inpatients at each trust. Responses were received from 420 patients at Ipswich Hospital NHS Trust. They were all asked if the hospital staff did all they could to help control their pain, if they were ever in pain. The trust scored 8.1/10.

Aims

The aim of the survey was to ascertain the prevalence of pain as a reason for hospital admission and how well it was managed. We also looked at who managed the pain initially, when adequate analgesia was received and if any side effects were experienced.

Methods

A questionnaire was asked of any in patient willing to participate, comprising of six set questions consisting mainly of yes/no. This happened on one day to obtain a snapshot of how much of an effect pain had on admission and its general management. The following patients that were excluded were: paediatrics, ED patients, ICU, HDU, maternity, inability to answer (dementia, altered sensorium, too unwell, away from bedside, refusal to participate). Unfortunately due to the questionnaire happening on one day, it meant that patients that were away for investigations/surgery could not participate, which reduced the number of patients able to answer the questionnaire. Within the medical patients, those that were mainly excluded were either in the care of the elderly ward with some form of dementia/confusion or stroke ward that had aphasia.

Results

Of the total number of possible 430 inpatients we surveyed 160 inpatients on one day. Of those 96 described pain to be the major problem for their hospital admission. Out of those 96 patients 78 patients felt like they received adequate pain relief in a timely manner (81.2%). The patients with pain, 81 said the medications were working and only 19 complained of side effects. The most common side effect was nausea (10) followed by vomiting (5), then constipation, 3 complained of skin issues (itch, rash), and two were either passed out or drowsy, with one suffering from confusion. However the number suffering from confusion may be skewed by the fact that those already confused could not participate in the questionnaire. The main highlight of the side effects was that nausea and vomiting were the main problems.

Conclusion

In conclusion pain is a major problem that patient present with to hospital, poor management can have deleterious long term effects. In the national survey Ipswich hospital scored 8.1 out of 10 in their effectiveness to manage pain. An in-patient survey was carried out on a single day to obtain a snapshot of the effect and

management of pain. The survey had a total of 160 participants, with 96 complaining of pain being the major reason for admission to hospital. Of those patients, 76, felt they received adequate analgesia, whilst 19 experienced side effects, nausea being the most common (10).

015

NURSES' RATIONALES AND EMOTIONS WHEN ADMINISTERING OPIOIDS

Category: Acute Pain

Authors: Charlotte Halmshaw - Pain Management Chelsea and Westminster Hospital NHS Foundation Trust

Background

Despite progress of in-hospital pain management, 25-40% of patients still suffer unacceptable pain . Reasons are manifold but personal experience suggests nursing staff are often reluctant to give sufficient amounts of opioids. This study was hence designed to explore post-registration nurses' views towards administering opioids.

Aims

To explore post-registration nurses' views towards administering opioids. The objectives are to consider their fears and attitudes towards administering opioids and the impact this has on their behaviours.

Methods

A questionnaire was designed and distributed to all n=334 nursing staff at Chelsea and Westminster Hospital, London, UK between 01.09. and 31.10. 2014. First, based on interviews a preliminary questionnaire was created and its content- and face-validity confirmed. Subsequently, redundant or ambiguous items were removed. The final questionnaire included 8 demographic questions and 14 regarding nurses' views towards administering opioids.

Results

N=179 from 334 (54%) nurses (mean age: 36+/-10years; 85% female) participated. 48% had more than 10 years' experience. 30% worked in critical care, 23% on medical and 21% on surgical wards. Unambiguous answers were given when asked whether opioids scared them (83% disagreement), whether they associated opioids with assisted death (85% disagreement), whether they were more confident using familiar opioids (92% agreement) and whether they were constantly aware of opioid-induced side-effects (95% agreement). An undirected graphical model for item-dependence revealed four latent variables influenced nurses' answers: Conscious Decision-Making, Practice-Based Observations, Medication-Related Fears and Risk Assessment.

Conclusion

This study showed nurses are influenced by both knowledge-based (rationale) and subjective (emotional) factors when administering opioids. Future programs to improve pain management would need to account for these findings. However, more research is necessary to determine the precise nature of the emotions that guide opioid administration.

016

MANAGING PAIN IN A MAJOR TRAUMA CENTRE – HOW DO WE MEASURE UP?

Category: Acute Pain

Authors: Edward Jack Amiry – Aintree University Hospital and Lynne Clarke – Acute Pain Team Aintree Hospital

Background

Major trauma affects 20,000 patients a year and 75% of these will experience moderate to severe pain as a result. Poor pain control may result in increased morbidity and mortality including predisposition to chronic pain. Uncontrolled pain also increases length of stay and financial implications for the NHS. Aintree Hospital became a Major Trauma Centre in 2012 and has developed local guidelines for pain management in trauma patients as per national guidance including; pathways for pain management in severe chest injuries, early access to epidural pain relief and early surgical assessment.

Aims

Review analgesic administration in the Emergency Department and the Major Trauma ward following severe chest injury, including implementation of complex pain techniques. Assess pain control in trauma patients and identify areas in which we can improve our practice.

Methods

Prospective audit of 68 trauma patients admitted between Nov' 2014 and Feb' 2015. Data were collected with a proforma recording admission details, specialists involved, analgesia prescription, complex pain techniques used and pain experienced by patients at various stages. The data were compiled and analysed using Microsoft Excel.

Results

Average time to first dose of analgesia in the emergency department was 34 minutes, ranging from one to 184 minutes. No patient had a pain score documented in the emergency department, though 93% had their pain assessed on arrival to the major trauma ward. 30% of patients spent more than five hours in the emergency department. 67% of patients received IV paracetamol and 33% received IV morphine. 19% received a complex pain technique. 62% of patients had severe pain (7/10 or greater) on arrival to the ward. 12% of patients were only prescribed analgesia once they arrived on MTW by surgical doctors. 15% of patients had no regular analgesia prescribed on the ward before inpatient pain team review. One patient had no analgesia prescribed until seen by the inpatient pain team.

Conclusion

Our audit revealed an analgesic gap resulting in severe pain in almost two-thirds of major trauma patients and clear areas for improvement. The results have been presented at Aintree's Major Trauma Clinical Governance meeting and recommendations made to raise awareness of national guidelines, improve analgesic prescribing and more active pain assessment in the emergency department.

017

USE OF TAPENTADOL SR FOR ANALGESIA IN A PRIMARY ARTHROPLASTY ENHANCED RECOVERY PATHWAY

Category: Acute Pain

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Background

Enhanced recovery programmes (ERP) are well established within primary hip and knee arthroplasty and aim to ensure all patients receive high quality 21st century care. Fundamental to high level care is good peri-operative analgesia. The benefits include attenuating the surgical stress response, improved mobilisation and participation in physiotherapy as well as improved patient satisfaction.In 2014 the ERP at Hampshire Hospitals Foundation Trust was updated to use Tapentadol SR rather than Oxycontin as the primary analgesic agent. This was in an effort to reduce problematic side effects which were preventing early mobilisation. Audit of the initial roll out revealed low levels of analgesic administration. Discussion with nursing staff revealed poor understanding of the drug as well as practical issues with prescription timings. Following a comprehensive review of the analgesic regime a further audit was performed to look at analgesia and side effects within this group.

Aims

To assess whether Tapentadol SR, as part of our enhanced recovery protocol, provides good reliable analgesia with minimal side effects to all patients undergoing primary hip and knee arthroplasty. This is to enable rapid participation in physiotherapy and facilitate timely discharge.

Methods

All patients undergoing primary hip and knee arthroplasty from November 2015 were entered into the audit process. Anaesthetists were asked to record basic details of the procedure and prescribe analgesia from the ERP protocol at the time of operation. Analgesia regime contained 50mg Tapentadol SR twice daily for six doses, beginning on the night of operation. Regular simple analgesics were also prescribed. All patients were asked to self-rate their average pain score on the afternoon of day one and day two post-operatively. They were also asked about the presence of problematic side effects. Two weeks after discharge, upon attendance in the follow up clinic, patients were asked to rate their overall experience and satisfaction with treatment. Pain scores were checked against the drug chart to look for amount of regular and PRN analgesia given and whether anti-emetics were given.

Results

To date 23 patients have completed the audit cycle; 15 knee arthroplasty and 8 hip arthroplasty. Overall day one pain scores were lower than previous recorded, with 34.8% reporting mild pain, 43.5% moderate pain and 21.7% severe pain and no patients in very severe pain. On day two no patients reported severe pain, 47.8% in mild pain and 52.2% in moderate pain. There was low rate of side effects reported; 8.7% nausea and vomiting rate on day one, falling to 4.3% on day two. 8.7% dizziness and sedation reported on day one dropping to 0% on day two. There was greater adherence to analgesic protocols than previously and on average patients received nearly 250mg Tapentadol SR. PRN analgesia was required in 18 cases, in addition to regular Tapentadol SR. All patients were satisfied or very satisfied with their care, and all found it met or exceeded their expectations.

Conclusion

Although a small study, regular Tapentadol SR has proven to be effective analgesic agent for patients undergoing primary arthroplasty. The self-reported pain scores are much improved from all previous audits and the total number of side effect were low, allowing early mobilisation. With most patients requiring PRN analgesia on top of regular tapentadol SR future dosing regimens will be reviewed and optimised.Greater adherence to the protocol, ensuring access to high quality analgesia, was aided by pathway review and engagement with nursing staff to remove potential barriers.

018

PERIOPERATIVE PAIN MANAGEMENT OF LIMB AMPUTATION – ARE PERINEURAL CATHETERS THE ANSWER?

Category: Acute Pain

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Background

Lower limb amputation occurs with a frequency of between 5.8 - 31 per 105 total population. It is well known to be associated with postoperative pain; in particular phantom limb pain (PLP). Poorly controlled acute postoperative pain can increase the risk of PLP. It is suggested that 50-85% of amputees go on to experience PLP. Optimization of perioperative pain has been shown to reduce the risk of PLP. National Confidential Enquiry into Patient Outcome and Death for lower limb amputations (2014) suggested that patients seen perioperatively by acute pain specialists were found to have better overall pain management. In 2012, a retrospective vascular audit of lower limb amputations undertaken in our hospital highlighted poor postoperative pain control. Most patients had moderate or severe pain at some point during the 7 days post-operatively. Regional techniques provided better analgesia over the 7 day postoperative period compared to general anaesthesia only.

Aims

Following a literature review, a guideline was devised and implemented to address the pain management of lower limb amputations. This included preoperative acute pain team involvement and commencement of gabapentinoids. The primary focus was intraoperative placement of sciatic nerve catheters with postoperative local-anaesthetic infusions. The service was then re-audited prospectively.

Methods

A prospective audit over an eight month period (May – December 2015) was carried out. All patients who underwent either an emergency or elective lower limb amputation in a large district general hospital with a specialist vascular hub service were included. At the end of surgery, a sciatic nerve catheter was surgically placed. After an initial bolus dose of 10mls 0.25% bupivacaine, they were commenced

on a local-anaesthetic infusion of 0.2% ropivacaine at 5-10mls/hr up to 4-6 days postoperatively via an Ambit pump. Audit data collected included the type of anaesthetic, the opioid use intraoperatively, the requirement of additional analgesia in the postoperative period, respective pain scores and complications. Pain scores were based on a numerical rating scale (0-3); 0 being no pain and 3 being the most severe pain. The data was interpreted and a comparative analysis with the previous audit was undertaken.

Results

Thirty five patients have been analysed thus far with a larger proportion (60%) undergoing an above knee amputation compared to 2012 (38%). 100% of patients received a sciatic nerve and the local-anaesthetic infusions commenced in accordance with the guideline. All patients received either an opioid based spinal or general anaesthetic. After anaesthetic induction, 28% of patients received a single shot femoral nerve block. 49% of patients had been prescribed gabapentinoids preoperatively compared to 24% in 2012. Since the implementation of the guideline there has been an overall significant improvement in postoperative pain scores. Comparing median pain scores for the 5 postoperative days, 81% of patients rated their pain as 0 compared to 60% previously. Furthermore only 1% of patients had a pain score of 3 compared to 7% prior to implementing the guideline. Only 1% of patients had a PCA prescribed as compared to 26% prior to the guideline.

Conclusion

The study has shown a considerable improvement in overall pain scores following the implementation of a perioperative management guideline for lower limb amputation. Through the use of perineural catheters we have seen a substantial improvement in post-operative pain scores as compared to single shot nerve blocks and analgesia adjuncts alone. Furthermore there has been a reduction in opioid based analgesia requirements in the postoperative period. The guideline has been received positively by the department and multidisciplinary team.

019

THE CAUSES OF SEVERE POST-OPERATIVE PAIN: A YEAR-LONG QUALITATIVE REVIEW OF SUB-OPTIMAL PAIN CONTROL

Category: Acute Pain

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Background

Although there is much written about the predictors of acute post-operative pain there is less discussion about the actual causes, particularly in relation to suboptimal analgesic plans or failed anaesthetic techniques. The acute pain service at Sir Charles Gairdner hospital was developed in 1996 and consists of a consultant led ward round 6 days a week with 24-hour cover by anaesthetic staff. During a 12-month period it saw 2,636 patients, the majority of whom were seen for the first time on day 1 post-operatively. The efficacy of their analgesia was scored as follows: 1 – no pain; 2 – no pain at rest, acceptable pain on movement; 3 – pain at rest, unacceptable pain on movement; 4 – uncontrolled pain. 58 of these patients (2.2%) scored 3 or 4 and were classed as having severe pain.

Aims

Our aim was to see whether severe pain in this group of patients could have been predicted and/or avoided.

Methods

Data on all patients seen by the acute pain service is prospectively collected by acute pain nurses and includes demographic data, type of analgesic intervention used, analgesic efficacy and adverse events. The medical records for all patients receiving a 3 or 4 efficacy score during the 12 month period preceding November 2015 were then retrospectively reviewed by the investigators to ascertain patient and surgical risk factors for severe pain, anaesthetic and analgesic techniques, acute pain service interventions and subsequent short term outcomes. A subjective assessment was then made by the investigators as to why the patients suffered severe post-operative pain.

Results

65% of the group had pre-existing chronic pain of which a quarter were taking more than 100mg/day of oral morphine equivalents. Common procedures included laparotomies (26%), knee replacements (17%), and open upper GI procedures (13%). It was estimated that severe pain could have been improved in 73% of the patients. Approximately half of these (19 patients) had technical problems with the analgesic technique, the most common of which was inadequately functioning or improperly managed epidurals. We estimate that the other half (22) of these patients could have had better pain management including either a more comprehensive analgesic plan or the use of a planned regional technique. 15 patients had maximal analgesic therapy and still had severe pain. Of these, 13 (87%) had pre-existing pain.

Conclusion

The rate of severe pain in this study is very low. This is likely due to timing of data collection and the resources given over to the APS at this institution. Nonetheless it demonstrates that severe post-operative pain is not a foregone conclusion governed by pre-existing patient and surgical risk factors, but that in most patients there is opportunity for better pain management through careful planning.

020

PREVALENCE AND CHARACTERISTICS OF FREQUENT AND UNPLANNED ADMISSIONS TO MEDICINE WITH EXACERBATION OF CHRONIC PAIN

Category: Acute Pain

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Background

Chronic conditions were highlighted by the Kings Fund report (2010) as one of the reasons for multiple hospital admissions and this

was at an increased cost to the hospital and patient due to extended length of stay. Although chronic pain in adults is largely managed on an outpatient basis at our trust the inpatient pain service identified a cohort of patients who were repeatedly referred to the service following an unplanned admission with acute exacerbation of their chronic pain. The RCOA document Guidance on the provision of services for Pain management recommends close liaison between acute pain management and chronic pain services to enable patients who present acutely and whose symptoms that do not resolve to be managed appropriately as an outpatient.

Aims

The purpose of this study was to quantify the number of patients affected by frequent unplanned admissions to the department of medicine with exacerbation of chronic pain and to identify characteristics of the patient and their chronic pain condition. It was felt that these indicators would enable the development of an alternate model of care, to reduce unplanned admissions for chronic pain.

Methods

This analysis relied on prospective data collection on our data base (Medicus software) for the year January 2014 to October 2014. In addition to demographic details, details on category of pain requiring admission were also collected on all inpatient referrals for pain management from the department of medicine. Patients who had not attended the outpatient multidisciplinary clinic within the previous 5 years were also identified. Frequent attenders were identified as patients who had been admitted as an inpatient more than once within 12 months of their discharge. Once the cohort of frequent attenders were identified, their hospital length of stay for each admission was ascertained retrospectively.

Results

There were 253 inpatient pain referrals from the department of medicine. 56 were identified as frequent attenders (22%) Of the 56 –18 (32%) were in the age group of 20-40 years and 18 (32%) were in the age group of 40-60. 10 (17%) were in the age group of 60-80 and 9 (16%) were above 80 years of age. There was only one admission that was less than the age of 20. 31% of the cohort was admitted with back pain, 30% with abdominal pain, 13% with limb pain and 7% had widespread pain. The average hospital length of stay was 12 days with a maximum of 114 days and minimum of 4 days. The total number of ED attendance was 221 with 50% of the attendance out of hours and at the weekend. Only 17% had ever attended a multidisciplinary pain clinic.

Conclusion

The most significant finding from this interrogation of our database was that 83 % of the patients who were identified, as frequent attenders to the department of medicine had never had the input of the outpatient based multidisciplinary pain clinic. This shortfall in access to multidisciplinary approach to the management of their chronic pain and focus on self-management has to be addressed in order to avoid repeat admissions to secondary care. This analysis has also revealed the potential to reduce hospital length of stay and presentation to ED for a cohort of patients with acute exacerbation of chronic pain. The Inpatient service is currently working on a seamless referral pathway from the inpatient based pain service to the outpatient based service.

021

COMPARISON OF INTRATHECAL DIAMORPHINE WITH CONVENTIONAL METHODS FOR ANALGESIA FOLLOWING LUMBAR SPINE SURGERY

Category: Acute Pain

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Background

Pain following lumbar spinal surgery could be severe. Unrelieved postoperative pain can lead to adverse clinical outcomes including deep vein thrombosis, pulmonary embolism, myocardial infarct, pneumonia, poor wound healing and insomnia. The current standard of postoperative pain management consists of opioid-based pain controlled analgesia. To achieve satisfactory pain control, high dose of opioids are administered, resulting in adverse effects such as nausea and vomiting, constipation and respiratory depression. Intrathecal opioids (morphine) following spinal surgery have been described but can be associated with an increased incidence of late respiratory depression. There are no studies that compare intrathecal diamorphine with conventional methods of analgesia following lumbar spinal surgery

Aims

To compare the safety and efficacy of spinal diamorphine with systemic analgesia in patients undergoing transverse lumbar interbody fusion (TLIF, 1-2 level) surgery.

Methods

We conducted retrospective comparative study with data collection done from the notes review. Sixty consecutive patients undergoing minimally invasive TLIFs performed by single surgeon and anaesthetist were included. The anaesthetist injected spinal diamorphine with the patient under general anaesthesia prior to the surgical incision. Perioperative analgesic requirement, immediate recovery and postoperative pain scores for up to 48 hours, estimated blood loss (EBL), side effects, critical care and length of stay and indicators of gastrointestinal function like postoperative number of days needed to establish oral intake and for bowel opening. Statistical analysis was performed using a standard t-test

Results

32 patients had spinal diamorphine and 28 no diamorphine. Patient demographics are comparable. Mean dose of spinal diamorphine injected was 1.56mg (range 1-2mg, 20-30mcg/kg). Patients in the diamorphine group had less blood loss (330 vs. 556 mls), less opioid consumption, less pain scores at recovery and for up to 48 hrs postoperatively and opened their bowels earlier (3.7 vs 4.4 days). All were statistically significant ($p<0.05$). The incidence of pruritus was higher in the diamorphine group (29% vs 47%). 56% of patients in the diamorphine group had pain scores of zero in the recovery and for up to 24 hours compared to 18% in the other group. The length of stay in critical care (average 1 day in both groups) and hospital were similar (5.4 vs 6 days). There was no respiratory depression requiring naloxone in the diamorphine group.

Conclusion

Spinal diamorphine provides better analgesia than conventional analgesia methods following lumbar spinal surgery. Spinal diamorphine is safe. Spinal diamorphine might decrease intraoperative blood loss. Future dose dependent randomised controlled trials are needed to find out the optimum dose of intrathecal diamorphine which would maximise the benefits without increase in the incidence of side effects

022

IMPROVING PATIENT EXPERIENCE AND OUTCOMES FOLLOWING FRACTURE RIBS AT THE ROTHERHAM NHS FOUNDATION TRUST

Category: Acute Pain

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Background

Chest trauma can significantly affect the morbidity and mortality in the elderly population. Fractured ribs cause an inability to cough and impair deep breathing which leads to hypoxia and pneumonia. Chest injury resulting in fractured ribs is recognised factor which can increase mortality up to 25% in this age group. Good pain control allows early mobilisation and introduction of effective chest physiotherapy resulting in shortening hospitalisation. Managing pain from fractured ribs has always been a challenge, therefore an early acute pain strategy and well-established hospital guidelines are essential to improve patient's outcome.

Aims

The aim of this service evaluation was to assess pain control, morbidity and mortality in patients with fractured ribs. Patients were given diamorphine only epidural analgesia versus oral analgesia, given as per our current guidelines. This technique was newly introduced in 2014.

Methods

The data was collected prospectively and on a daily basis by the Acute Pain Team as part of their patient review. Every patient admitted to Rotherham District Hospital with fractured ribs between April 2014 -March 2015 was included. Patient age, co-morbidities and mechanism of injury was collected as well as mode of analgesia, quality of pain relief, time from referral to epidural insertion. Respiratory support requirements and side effect data was also collected.

Results

42 patients were included in the data collection. 35 (83%) received epidural analgesia or paravertebral block. 73% of patients recruited were over sixty years old. 69% had more than three co-morbidities. Mechanical falls were the main cause of rib fractures (76%). 14 patients were referred within 4 hours of admission, 51% of epidurals were inserted within that time period. In the epidural group 32 of 35 (91%) patients complained of severe pain on admission, which was reduced to 'No' pain in 16 cases and 'mild pain' in 17 cases within the two hours following the epidural/ paravertebral block. No major side effects (hypotension, motor block, respiratory depression) occurred. 35 (85%) of patients were managed on the ward, only 3 (7%) required NIV and with 2 (5%) requiring IPPV. Two patients died during their admission. The cause of death was related to the extent of their injuries and co-morbidities.

Conclusion

An early and appropriate pain management strategy is essential for patients with fractured ribs especially in the elderly population. It improves breathing comfort, allows adequate ventilation and the ability to cough. It also reduces oxygen requirement and complication rates. No significant side effects were recorded in our newly introduced diamorphine only epidural group. The vast majority of these patients were safely managed on the ward with their epidural in situ. The diamorphine only epidural mixture has proven to be an effective form of analgesia, which could be delivered on the ward with regular support from the acute pain team.

023

DO PCAS REQUIRE SPECIALIST REVIEW?

Category: Acute Pain

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Background

The advent of Pain Teams occurred following publication of the Working Party on Pain After Surgery in 1990. With the formation of Inpatient Pain Services came specialist interventions to manage pain including the PCA (patient controlled analgesia). At St George's University Hospitals NHS Foundation Trust, the Inpatient Pain Service has routinely reviewed all patients receiving PCA. In January 2015, however, due to increasing demands on the service and owing to referrals of more complex patients, we discontinued our routine review of patients receiving PCA. Intensive training and awareness of this development preceded this change. Criteria for referral to the Inpatient Pain Service of patients receiving PCA or with complex pain needs were emphasised. A subsequent snapshot audit has enabled us to assess the ward care of patients receiving PCA. Pain is assessed using a 5-point verbal rating scale.

Aims

Our aim was to ensure that patients receiving PCA are cared for according to the Trust Inpatient Pain Management Policy. This

included safe prescription and administration of co-analgesia, and appropriate discontinuation. Failure rate was assessed against our benchmark of 5% (defined as pain ⩾3 on 2 consecutive occasions).

Methods

A snap shot audit was carried out over a 3 week period in November 2015; each week day was represented once. Every ward area trained in the care and management of patients receiving PCA was visited on each audit day. Intensive Care Units (ICUs) were excluded from the audit, but note was made if the patient had been discharged from an ICU in the previous 24hrs. The audit was performed in the morning to maximise the amount of patients included in the audit, however a limitation was that the last areas visited had often removed the PCA devices before we were able to audit; consequently, we rotated the order of visited wards. We reviewed supplementary PCA forms, drug charts and inspected the PCA pumps. In wards where electronic documentation and prescription occur, the equivalent electronic documents were assessed.

Results

We reviewed 44 patients from 17 wards (range 0-15 patients per ward). Overall 95% of PCAs conformed with our standard format and all patients discharged from ICU had a standard PCA prescription. 95% of patients were prescribed and received regular paracetamol; 34% a regular step 2 or modified release step 3 analgesic (in accordance with Policy). Pain control was deemed to have failed in 18% of patients. The failure rate was particularly high (71%) in one general surgical ward. Exclusion of this area from the analysis revealed an overall failure rate of 6%. Of these patients 12.5% received a regular step 2 analgesic despite only 25% being NBM. One third of 12 patients who had the PCA in situ for ? 3 days could have had it discontinued earlier according to our discontinuation criteria, but the failure rate in these patients was 50%.

Conclusion

Overall PCAs were prescribed safely with standard format alongside regular paracetamol. However, 30% of patients still receiving PCA at day 3 and beyond met the discontinuation criteria. Of particular concern was a high failure rate in general surgical patients, yet these patients were unlikely to be prescribed a step 2 analgesic despite 75% having availability of the oral route. This poses the question, is there a reluctance to prescribe oral opioids at the detriment of patients? Opioid sparing techniques may be beneficial for these patients. Further training is required including reinforcement of the referral criteria to the Inpatient Pain Service.

024

NATIONAL INPATIENT PAIN STUDY

Category: Acute Pain

Authors: Fiona Duncan - RIHSC Manchester Metropolitan University

Background

Despite the many and varied approaches to acute pain management, there is little doubt that pain control remains poor for many patients for a myriad of reasons. Not least of these is the lack of data collected over a long enough period to allow the quality of service provision and techniques to be viewed with both a current and historical perspective for effectiveness and safety.

Aims

To monitor the quality and side effects of different analgesic techniques, and compare with data collection reported in 2011.

Methods

Several hospitals in the UK collect routine data on every patient visit using real time data collection software. The clinical dataset is divided into six main sections and includes demographic data, surgical details if relevant, the primary technique used to control pain (e.g. epidural, intravenous Patient Controlled Analgesia, nerve block, intramuscular/subcutaneous and oral analgesia), pain scores, adverse events, and a measure of effectiveness. A group of hospitals exported a minimum dataset in 2012 and 2013 to a master database that automatically processed the data.

Results

The main workload of acute pain services was orthopaedic and general surgery. 21% of visits in 2012, and 18% in 2013 were to non-surgical patients. In 2012 38% of patients reported a pain score of moderate to severe pain on the first assessment (n = 19058 patients), 38.5% in 2013 (n = 12687). 19% (2012) and 15% (2013) reported severe pain. 77.5% (2012) and 80% (2013) of epidurals were reported as effective. Over 1,200 adverse events were logged in the critical incident section in 2012, 1,937 in 2013. Nausea and vomiting, hypotension and problems with organisation of care were the most frequently reported events. Fifty-two major adverse events were logged in 2012, of which 42 documented respiratory depression, 7 cardiovascular collapse, 2 epidural haematomas, 1 neurological injury. Forty-seven events were reported in 2013: respiratory depression 38 patients, cardiovascular collapse 6, epidural haematoma/abscess2, and 1 patient death.

Conclusion

The results (pain scores, effectiveness of techniques, adverse events) are very similar to the published results of data collection in 2011. There is still a need for consistent standardised data for both local and national quality improvement. Patient safety and continuous quality improvement should be core values of acute pain services (CSPMS UK 2015). A larger database, including those services that do not currently share their routine data, would allow conclusions to be reached that could be used to spot trends and possible side effects more easily and in a shorter timescale.

025

"I'VE GOT YOU UNDER MY SKIN" A COMPARISON OF TWO SERVICE EVALUATIONS OF IV AND S/C PATIENT CONTROLLED ANALGESIA IN THE MANAGEMENT OF ACUTE PAIN IN ADULTS

Category: Acute Pain

Authors: Nick Williamson - Pain Management King's College Hospital NHS Foundation Trust

Background

Since the 1980s, intravenous (IV) Patient Controlled analgesia (PCA) has been a standard acute pain management technique. King's College Hospital (KCH) in London has two decades' experience using subcutaneous (s/c) PCA almost exclusively. With no possibility of extravasation, lower infection risk, greater continuity of analgesia (anyone can re-site s/c cannulae) and less traumatic cannula insertion, s/c PCA has advantages over IV PCA. The KCH experience is that analgesic efficacy of s/c PCA seems to at least equal IV PCA and the incidence of side effects, particularly nausea and vomiting, seems to favour the s/c route. Unlike IV PCA, s/c PCA has not been comprehensively used or evaluated, possibly resulting from beliefs that s/c administration results in decreased efficacy and increased risk due to unpredictable absorption. Evidence exists suggesting these beliefs may be misplaced. If s/c PCA confers demonstrable advantage for the thousands using PCA, its use should be promoted.

Aims

The aim of this study was to investigate any differences in the pain scores, side effects and adverse incidents (AIs) in a service evaluation of patients using s/c PCA compared to a service evaluation of patients using IV PCA.

Methods

Two service evaluations were compared: s/c PCA at KCH and IV PCA at the KCH sister hospital. Primary outcome measure: pain score. Secondary outcome measures: rates of nausea and vomiting; itch; AIs. Sample: All adult patients on PCA able to communicate a pain/nausea score in English Primary and secondary outcome measures data were obtained during the morning after commencement of PCA. Also recorded: demographic data; operation/trauma; total PCA opioid used; number of PCA demands; alternative analgesia & antiemetics administered. A sub-group of abdominal surgery patients was identified. Additional data were collected as follows: time in theatre; use of volatile anaesthetic; regional anaesthesia; peri-operative opioids administered. Continuous data sets were assessed for normality of distribution. Statistical tests employed: Categorical data: X2; Continuous data: Mann-Whitney U and Kruskal-Wallace tests. Correlations: Spearman's correlation coefficient. Significance was set as $P = 0.05$ for all analyses. All statistical analyses used IBM SPSS vs 22

Results

160 patients were included: s/c PCA n=86; IV PCA n=74. Overall, homogeneity of the groups was not high. Abdominal surgical patients (approaching 50% of each group) demonstrated greater homogeneity. Patients using s/c PCA reported significantly lower pain scores (P=0.001) with 23% reporting no pain (IV PCA: 3%). There was a trend for less nausea & vomiting with s/c PCA (16% vs 27%; P=0.09). Among men this was significant (P=0.003). A trend towards less itch using s/c PCA (6% vs 15%) did not reach significance (P=0.057). Similar results were obtained after abdominal surgery. Both groups had the same number of "good" PCA demands. Subcut PCA delivered 2mg morphine boluses (10 minute lockout) and IV PCA delivered 1mg morphine boluses (5 minute lockout). There were three AIs with s/c PCA (respiratory depression; rash requiring opioid switch and confusion due to AKI), all managed safely. No AIs reported with IV PCA.

Conclusion

Results support the notion that s/c PCA has advantages over IV PCA. Greater analgesic efficacy may reflect the double morphine dose administered. Despite this there was a reduced side-effect burden. These results also compare well with published studies. Limitations prevent generalisability. Well powered controlled studies are both recommended and planned.

026

EFFICACY OF DIAMORPHINE BASED EPIDURAL MIXTURE IN POSTOPERATIVE ANALGESIA: EXPERIENCE FROM A TERTIARY HOSPITAL IN THE UNITED KINGDOM

Category: Acute Pain

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Background

Diamorphine, a long acting opioid had been regularly used in the past to provide post-operative epidural analgesia in UK [1]. Its use has rapidly declined in the last 2 decades, possibly due to practical concerns such as lack of premixed diamorphine based epidural solution [2]. In the University Hospitals of North Midlands, epidural diamorphine/levo-bupivacaine mixture is currently used. Diamorphine is less lipid soluble than fentanyl. Diamorphine administered in epidural space exerts analgesia at spinal level, due to its absorption in CSF (cerebrospinal fluid) [3]. Diamorphine based local anaesthetic mixture is infused at lower rates in comparison to Fentanyl based solutions; hence, produces less sympathetic and motor blockade.

Aims

We did this retrospective study to evaluate the "Efficacy" of Diamorphine based epidural analgesia in post-surgical patients. We also compared the efficacy of diamorphine based epidural in different surgical incisions and site of epidural insertion.

Methods

We obtained approval from local audit and research department. All the patients who had postoperative epidural analgesia between February 2014 and October 2015 were included in the study. Data was obtained from acute pain audit data, patient's electronic as well as paper notes. Data collected include demographic characters, surgical details, epidural procedure details, and static and dynamic pain scores (no pain, mild pain, moderate pain and severe pain) on postoperative days 0 – 5. We also collected information about failed epidurals and reasons behind them.

Results

We collected data on 310 (n) patients, with average age of 67 ± 13 years (SD). 85% of epidurals were performed for elective surgeries. The percentage of patients with pain scores 0/10 to 3/10 (no or mild pain) on both rest and movement on day 0 was 86.6% (276 patients), on day 1 was 91.4% (251patients), on day 2 was 95.4% (155 patients), on day 3 was 92.9% (86 patients), on day 4 was 100% (35 patients) and on day 5 was 100% (15 patients). We used the Kruskal-Wallis analysis to compare differences in pain scores at different time intervals on rest and movement in patients who had

surgeries involving midline, thoacotomy and subcostal incisions and found no statistically significant differences.

Conclusion

Diamorphine/levo-bupivacaine epidural mixtures provide effective postoperative pain relief. Our overall epidural failure rate was comparable to previous studies [4] and was mainly attributed to insufficient block (17 patients), development of complications as excessive sedation, haemodynamic instability and excessive motor block (15 patients) or equipment-related (10 patients). The quality of postoperative static and dynamic pain relief was not different for surgeries involving midline, thoacotomy and subcostal incisions. Pain scores were not affected by the epidural level (thoracic/lumbar).

027

MORPHINE IN POSTOPERATIVE RECOVERY: TIME TAKEN TO ACHIEVE COMFORT

Category: Acute Pain

Authors: Manojit Sinha - Pain Relief Research centre King's College Hospital NHS Foundation Trust

Background

Uncontrolled acute pain can lead to complications like myocardial, pulmonary and gastrointestinal dysfunction. There is also the association of pain with delayed discharge from recovery and development of chronic pain. Preventative strategies include regional techniques, simple analgesics, Opioids and use of adjuvant analgesics. In the United Kingdom, typically small boluses of intravenous (IV) Morphine titrated to effect is one of the techniques used to achieve effective analgesia in recovery.

Aims

Aim of this prospective study was to assess the efficacy of Morphine in managing acute post-operative pain, focussing on time to achieve comfort and time taken for patient to be discharged from recovery.

Methods

We included patients undergoing elective major vascular, general, gynaecology, urology and orthopaedics procedures. Data was collected randomly over a period of two different days of the same week. This included initial pain scores in recovery, doses of morphine given if at all, adverse effects observed and the time taken to achieve comfort. Time to discharge from recovery and patient satisfaction were also collected.

Results

Twenty-eight (68%) of forty-one patients who were admitted to recovery received IV Morphine. The total dose of morphine used in recovery varied from 4 mg to 20 mg; an average of 8.5 mg. Initial pain scores were recorded on Visual Analogue Scale varied from 5 - 10. Time taken to achieve comfort (Pain scores of three or less) in patients who received IV Morphine varied from twenty minutes to sixty minutes with an average of thirty-five minutes. Five patients (17%) reported nausea and vomiting while one patient (3%) was observed to be drowsy. Unsurprisingly, patients who received morphine stayed longer in recovery (50 – 185 minutes) compared to those who did not receive IV Morphine (25 – 58 minutes). The overall experience of patients receiving morphine in recovery was good.

Conclusion

IV morphine is commonly used for pain relief in recovery after major surgery. From our data, Morphine was shown to be effective in providing analgesia in recovery but the time taken to achieve patient comfort and time to discharge from recovery was significantly prolonged. Around 20% of patients who received Morphine reported side effects. The combination of rapidly acting Opioids and Morphine may provide faster time to comfort and earlier discharge from recovery unit. In our hospital, we also use Alphine (Morphine + Alfentanil) protocol and we would like to compare IV Morphine with Alphine protocol in the next study.

028

USING SERRATUS PLANE BLOCKS TO TREAT RIB FRACTURE PAIN IN A MAJOR TRAUMA CENTRE

Category: Acute Pain

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Background

The serratus plane block has been described as a less invasive alternative to paravertebral or thoracic epidural blocks in the management of pain caused by rib fractures. The serratus anterior plane is located between the latissimus dorsi and serratus anterior muscles. In 2014, the team presented the results of a case series showing improved pain scores in 100% of patients (n=11) when these blocks were used to treat rib fracture pain. In this initial study, a 30ml bolus of 0.125% Levobupivacaine was injected. For the re-audit, in the hope of optimising analgesia, it was decided that a catheter would be threaded and an infusion of 0.125% Levobupivacaine would also be infused as well as the initial bolus of 30ml.

Aims

All suitable rib fracture patients to receive a serratus plane block, a catheter to be inserted and an infusion commenced. Completion of an audit form to document pain scores before block insertion and at 1 hour, 8 hours, 12 hours, 24 hours and 48 hours following the block.

Methods

9 patients with rib fractures were included in the study period. The serratus anterior plane blocks (and catheter insertions) were all

performed under ultrasound guidance by anaesthetists who had received teaching on the block technique. Numeric pain scores were recorded prior to the block insertion and at specific intervals following the block. Either a 0-4 or a 0-10 numeric pain score was used. The patients were followed up by the inpatient pain team for 48 hours after the block.

Results

Pain was successfully reduced in 89% (n=8) of patients when it was assessed in the first 8 hours following the block insertion. In 11% (n=1) of patients the pain score remained the same despite the block. On average, the pain score was reduced by 39% following the block insertion and subsequent infusion.

Conclusion

This block continues to be an effective and safe method for analgesia following rib fractures. No adverse events were recorded throughout the study. As familiarity with this new block improves, one would expect the number of patients receiving the block and the efficacy to increase. Limitations of the study include the small number of patients involved and the fact that several different individuals were involved in performing the blocks which may explain the variation of efficacy seen.

Assessment & Measurement

029

ACCURACY OF THE BRIEF PAIN INVENTORY IN IDENTIFYING INSOMNIA IN CHRONIC PAIN PATIENTS

Category: Assessment & Measurement

Author: Hal Robinson - Anaesthetics NHS Grampian

Background

Insomnia is defined as the inability to obtain a sufficient amount or quality of sleep. The prevalence of insomnia is high in chronic pain patients and can contribute to the maintenance of chronic pain. Identifying and treating insomnia is an essential component to improving patient function, activity and mood. Patients attending our chronic pain clinic currently complete the Brief Pain Inventory (BPI) prior to their appointment, which can be achieved quickly and is useful to monitor patient's progress over time. The BPI includes a single question assessing the degree to which pain interferes with sleep; however, this may be insufficient to detect insomnia leading to under-treatment and impeding ongoing pain management. Several sleep assessment tools have been evaluated in chronic pain, but are more time consuming and may overwhelm patients with unnecessary paperwork. Correlation between the BPI and a validated sleep questionnaire would facilitate prompt identification of significant sleep problems.

Aims

The aims of this survey were to measure the prevalence of insomnia in a cohort of chronic pain patients and assess the ability of the Brief Pain Inventory to detect insomnia compared to a validated insomnia-screening questionnaire.

Methods

All Patients attending the NHS Grampian pain clinic who routinely complete the BPI were also invited to complete the Pittsburgh Insomnia Severity Index (PSQI) prior to their appointment. The BPI contains a single question to assess how pain interferes with sleep and is rated numerically from 0 – 10, where 10 is "completely interferes". The PSQI is a questionnaire consisting of 7 questions with multiple stems. These are used to calculate an overall score ranging from 0-21, with scores above 6 positively identifying patients with insomnia. Patient demographics, pain duration and questionnaire scores were collected and collated over a two-week window during November 2015. The two scores for each individual patient were matched and used to look for any association between the questionnaires.

Results

39 patients, 28 Female (71.8%) and 11 Male (28.2%) completed both questionnaires. The average age was 51.7, ranging from 21 to 88. 37 of 39 patients (94.8%) had a PSQI score >6, indicating significant insomnia. The range was from 3-21 with an average score was 14.1. The BPI score ranged from 0-10 with an average of 6.9. A higher BPI score was consistently associated with a higher PSQI score and a score of greater than 3 was associated with a PSQI score of greater than 6. Higher BPI and PSQI scores were associated with longer duration of pain. Individual questions from the PSQI revealed 35 of 39 patients (89.7%) reported trouble sleeping because of pain three or more times per week and 21 of 39 patients (53.8%) reported using over the counter or prescribed medicine three or more times a week to help sleep.

Conclusion

This survey demonstrates a high prevalence of insomnia amongst chronic pain patients as assessed by formal sleep questionnaire testing, and that a higher BPI score is associated with a higher PSQI. Based on our results we suggest patients with a BPI of greater than 3 receive education to improve sleep hygiene and scores of greater than 6 are considered for cognitive behavioural therapy. Despite its simplicity, the BPI can detect patients with insomnia, however this is based on a small cohort and the validity of using the BPI as a sole tool for screening for insomnia requires further evaluation.

030

RISK FACTORS FOR PERSISTENT PAIN AFTER TOTAL KNEE REPLACEMENT CONFIRMED BY USE OF PATIENT PAIN DIARY

Category: Assessment & Measurement

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Background

Total knee replacement for some individuals is known to be linked to persistent knee pain post-operatively and patient dissatisfaction. Identified risk factors for poor outcome include pre-operative anxiety and depression and pre-existing presence of neuropathic pain symptoms. As the number of joint replacements being performed rises inexorably , so the total number of dissatisfied patients will predictably increase. The need to identify such patients and optimise their treatment similarly increases. At our hospital, patients listed for

total knee replacement are given a pain diary when they attend the pre-operative assessment clinic. They are encouraged to complete it pre-operatively and bring it to hospital to fill in during the post-operative period. Completion was entirely voluntary.

Aims

To see if a simple self-reported diary might help in determining risk factors for poor outcomes and thus act as a suitable template for mapping patient before and after joint replacement surgery.

Methods

Diaries were collected from patients at post-operative clinic visits and data were extracted and entered into a database. Baseline data comprised OKS (Oxford Knee Score), S-LANNS (Self-completed Leeds Assessment of Neuropathic Signs and Symptoms), 11 point pain intensity score, HADS (Hospital Anxiety and Depression Score). Daily pain intensity scores were collected for 14 days post-operatively. At 6 weeks and 6 and 12 months the OKS, pain intensity and global impression of change were collected. At 12 months the S-LANNS and HADS were measured again. Patients were divided into 'normal' or 'abnormal' groups on the basis of their pre-operative scores for anxiety, depression and neuropathic symptoms, based on thresholds set by the initiating authors. Pain intensity scores were compared at day 1, 7 and 14 post-operatively. Pre-operative X-ray severity, based on Kellgren and Lawrence grades were compared for normal versus abnormal patients.

Results

85 out of 368 patients that had total knee replacement in a 12 month period completed and returned their pain diaries. 52 patients were 'normal' and 33 'abnormal'. There were statistically different pain intensity scores between 'normal' and 'abnormal' patients at Day 1, Day 7 and Day 14. For the 'normal' group, mean pain intensity was Day 1, 6.5, Day 7 5.2, Day 14 4.3. For the 'abnormal' group mean pain intensity was Day 1, 6.9, Day 7, 5.5, Day 14, 4.8. Differences were greatest in the depression sub-group, followed by the neuropathic pain sub-group. There was a marked difference in X-ray severity with a much greater incidence of mild changes in the 'abnormal' patients (15%) compared to the 'normal' group (2%).

Conclusion

Our results support previous work demonstrating that patients with pre-existing depression or neuropathic features experience higher levels of pain in the early post-operative period. A patient diary is an effective way of collecting this data, though completion rates are relatively low. This might be improved by regular reminders from staff. Pre-operative scores can be used to counsel patients about likelihood of poorer outcome. Patients with 'abnormal' features have surgery despite milder changes on x-ray. Efforts should be made to identify these patients so that specific treatment can be offered peri-operatively or surgery avoided, especially if radiographic changes are modest.

031

TESTING THE ABILITY OF PICTOGRAMS TO CONVEY THE QUALITY OF PAIN

Category: Assessment & Measurement

Authors: S. Jose Closs - School of Healthcare University of Leeds, Peter R. Knapp - Department of Health Sciences and the Hull York Medical School University of York, Catherine Stones - School of Design University of Leeds

Background

The quality of pain is important in the identification of the cause of pain, particularly in distinguishing between nociceptive and neuropathic pain. Describing pain can be difficult, even for those who are healthy and fluent in English. Where the person in pain is unable to describe their pain verbally (for instance due to poor English skills, a learning disability or cognitive impairment) the understanding of another's pain can be problematic. While the clinician may observe pain related cues from a range of non-verbal communications, there is increasing interest in the role that pictures and in particular pictograms (simplified icon-based pictures) can play in representing pain. Work in this field is in its infancy, and while a few attempts have been made to develop image sets, these have not been subject to rigorous psychometric testing or other evaluation.

Aims

To test the ability of one set of 12 pictograms ('A Better Picture of Pain', McAuley 2009) to accurately convey pain qualities in a sample of people with good verbal communication skills.

Methods

The pictograms were presented one at a time, for 1 minute each, to 63 undergraduate students (25 student nurses and 38 design students) as a PowerPoint presentation. Concurrently, students were asked to complete a form, on which they recorded the words/phrases describing the quality of pain they thought was being communicated by that pictogram. They were asked to provide as many or as few answers as occurred to them. The number of correct first responses was calculated and a simple scoring system was devised. If the first word recorded was correct the answer was scored 1, if they gave the correct word or close derivative on their second or subsequent response they scored 0.5. Answers were classified and scored independently by three coders. Scores for Nursing and Design students were compared. Responses were then analysed and categorised according to a pain pictogram evaluation system based on the McGill pain questionnaire.

Results

Images varied enormously in their ability to convey meaning accurately. 'Burning', 'stabbing' and 'cold' were most often scored correctly while 'dull/numb' was interpreted correctly by only five of the 63 respondents. The descriptors generated by the students in response to the pictograms fell into categories not only of sensory pain qualities, but also other types of descriptions, including location, intensity, affective, temporal, literal interpretations and other conditions. Interestingly, nursing students scored significantly higher than the design students, perhaps due to a greater level of health literacy.

Conclusion

These images varied considerably in their ability to convey pain qualities accurately; while some appeared reasonably successful, others were widely misunderstood. In addition, different kinds of students

interpreted them in different ways. Finally, the images conveyed attributes other than pain quality, such as location, severity and affect, suggesting that they are not sufficiently specific. Clearly much more work is needed, including the careful development and testing of an image set that should be subjected to evaluation of its utility in practice.

032

A PILOT STUDY TO INVESTIGATE THE EFFECTS OF CHRONIC WIDESPREAD PAIN ON BODY IMAGE

Category: Assessment & Measurement

Authors: Amanda Wall - Physiotherapy Oxford University Hospitals NHS Foundation Trust,

Background

Body image disturbance is a feature of various clinical pain states Studies describe how those with chronic back pain can report that the affected area feels smaller or no longer part of them. Others describe how those with chronic regional pain syndrome can perceive marked swelling of the affected limb when none is apparent and even disownership of the affected part. It is well documented that after amputation the missing limb can be perceived to be present. It is not clear whether body image is disrupted in patients with chronic widespread pain or whether body image impacts significantly on quality of life in this population. This research is the first of its kind to attempt to explore the sensory-perceptual and attitudinal aspects of body image in patients with widespread pain.

Aims

To test whether body image is disrupted in people with chronic widespread pain, using body image assessment software; additionally, to test whether body image impacts significantly on quality of life in this population, using questionnaires.

Methods

26 patients with chronic widespread pain attending a pain management programme and 28 age and sex matched controls completed questionnaires (the Body Image Quality of Life Inventory and the Beck Depression Inventory) and had a series of body measurements taken, dimensions of which were entered into body image assessment software The software produced a scale image of the participant, which they adjusted segmentally to their perceived size (a body part size estimation procedure). The software then calculated the difference between actual and perceived body size. Parametric analyses (Pearson's correlation coefficient) and non-parametric analyses (Spearman correlation coefficient) were performed alongside the two-sample independent t-test, to look at correlations and significant differences between the two independent samples (patients and controls).

Results

Chronic widespread pain did not significantly influence perception of body size ($p>0.05$); patients mean body size estimation (SD) =102.9% (4.8); controls mean body size estimation (SD) =101.6% (3.0). Presence of pain in particular area of the body did not relate to estimated size of that area ($p>0.05$) yet widespread pain did affect accuracy of overall body size estimation. Perception of body size was not influenced by age, gender, duration or intensity of pain or presence of altered sensation ($p>0.05$). Chronic widespread pain negatively affected impact of body image on quality of life and mood ($p<0.01$). A correlation was found between low mood and low body image related quality of life for both patients and controls (significant at the 0.01 level).

Conclusion

There are several unique findings of this study. Chronic widespread pain affects accuracy of body size estimation, body image related quality of life and mood, particularly in those who perceived their body size to be larger than actual. Additionally there is a correlation between low mood and low body image related quality of life. These findings contribute to the understanding of the effects of chronic widespread pain.

033

OBJECTIVE MEASURES OF STANCE SYMMETRY FOLLOWING A COMPLEX REGIONAL PAIN SYNDROME INPATIENT REHABILITATION PROGRAMME

Category: Assessment & Measurement

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Background

Complex Regional Pain Syndrome (CRPS) is a persistent pain condition associated with various sensory, motor, autonomic and trophic changes to the affected limb. Because of the multi-faceted nature of CRPS a wide range of patient-reported outcome measures (PROMS) exist. Objective measures may aid patient rehabilitation motivation and complement subjective outcomes. Pressure mat systems offer objective assessment of weight bearing (WB) and contact area (CA). Clinical observations suggest both patients affected by upper (UL) or lower limb (LL) CRPS can exhibit changes in WB and CA symmetry. Some of these patients may also achieve WB symmetry despite poor foot posture. When assessing impairment and performance, it therefore may be advantageous to also report CA alongside WB symmetry. A perceived lack of objective and responsive measures led to the introduction of pressure mat evaluation as part of this service development project.

Aims

To evaluate use and acceptability of a pressure measurement mat (MatScan -TekScan, Inc) and to provide objective assessment of WB and CA symmetry during stance in patients affected by UL or LL CRPS who are completing a two week CRPS in-patient rehabilitation programme.

Methods

Over a 12 month period consecutive patients with single limb CRPS were assessed at the beginning and end of a two week rehabilitation programme using a standardised protocol. Testing took place after a minimum 2 hour rest from therapy interventions. Patients were

asked to stand on the MatScan (calibrated prior to use) without footwear or additional support and maintain maximal foot CA with the surface for at least ten seconds. Should momentary support be required to maintain balance, patients stood within reach of parallel bars. Recordings were made throughout and subsequently analysed by the same physiotherapist. At each assessment, the time at which a stable maximum CA of the affected limb/side was maintained for at least two seconds was identified. CA and WB of the limb was then noted and expressed as a percentage of bipedal total.

Results

Twenty-two patients with CRPS were tested on the first and last day of the programme. Sixteen had LL CRPS (females:12; age:42.6, SD:15.8yrs, disease duration: median-38, IQR-36months) and six had UL CRPS (females: 8; age:36.7, SD: 12.7yrs; disease duration: median-36, IQR-30months). The majority of patients with UL CRPS presented with no WB and CA asymmetry and no significant changes were seen between the start (WB -mean 55%, SD: 8.0%, CA -mean 51%, SD 1.6%) and end (WB -mean 56%, SD: 7.2%, CA -mean 51%, SD 2.4%) of the programme. There was a general trend for LL patients to have reduced CA and WB of their affected limb. Overall significant improvements ($p<0.05$) in both mean CA and WB of LL patients were found between the start (WB -mean 26%, SD: 12.0%, CA –mean 37%, SD 9.9%) and the end (WB -mean 35%, SD: 13.3%, CA –mean 42%, SD 7.5%) of the programme.

Conclusion

The MatScan provided an acceptable measure for patients and therapists when objectively assessing WB and CA during stance. Its use enabled quantification of changes in WB and CA during a two week rehabilitation programme which supported clinical judgements of improved foot posture during the gait cycle. Testing on patients with UL CRPS did not indicate changes in CA and WB associated with balance. Continued use of the Matscan with a focus on LL CRPS will enable correlation with appropriate PROMS and allow examination of the interplay between CA and WB.

034

TACTILE ACUITY, LATERALITY DISCRIMINATION AND MOTOR CONTROL IMPAIRMENT IN ADULTS WITH CHRONIC LOW BACK PAIN - A REVIEW

Category: Assessment & Measurement

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Background

As well as pain, non-specific chronic low back pain (CLBP) is a long-term condition contributing to morbidity and low quality-of-life. Treatments often focus on pain medication and motor function but improvements are moderate at best and many sufferers stop seeking help, despite on-going pain. Absence of local tissue damage or other clinical features means aetiology often remains unknown and thus treatment is difficult. Other chronic pain conditions may provide a new approach to the problem. In both Complex Regional Pain Syndrome (CRPS) and Phantom Limb Pain (PLP), the cortical neurophysiology and corresponding efferent outputs to specific sensory functions (such as discriminatory touch, self-perception and body schema) appear to be altered. Interventions to reverse these impairments also coincide with a reduction in pain intensity. Before exploring whether similar approaches are appropriate for improving pain outcomes in adult CLBP sufferers; understanding whether similar characteristics occur in adults with CLBP remains a priority.

Aims

Through systematically synthesising the empirical evidence relating to specific functions in adults with CLBP this review aimed to answer the question: 'Are two-point discrimination threshold (TPDT) and body schema (BS) altered in adults with CLBP and do they relate to impaired voluntary lumbopelvic motor control (LMC)?'

Methods

A systematic search for mixed-methods and quantitative approaches such as randomised controlled trials, cohort and cross-sectional studies was conducted using MeSH terms and PICO tools between February and June 2015. The strategy incorporated 12 bibliographic databases, Google Scholar and grey literature databases. Reference lists of included articles were hand searched for further relevant articles. Studies involving adults aged 18 or older with CLBP lasting longer than 3 months duration were included. Pregnancy, 6 months post-partum, central neurological conditions and nerve root pathologies were exclusion criteria. Internal validity was assessed by two independent reviewers using an adapted Downs and Black Quality Index Score. Following testing, reporting quality, external validity, internal validity (bias), internal validity (confounding or selection bias) and power were assessed. Studies considered high ($\geqslant$70%) or medium (60-69%) quality were included in the review. The included studies reported varied designs and techniques therefore, a narrative data synthesis was considered.

Results

A total of 334 studies were identified. Titles and abstracts were screened against inclusion and exclusion criteria. Subsequently 14 publications were included in the full review process, 13 were quantitative and one mixed-methods design. Of the 14 papers, eight met the selection criteria and were included in the data extraction process. Internal validity assessment revealed seven to be of high and one of medium quality. Assessment exposed similar areas of quality weakness and strength. Despite the quality of reporting to score highly across all eight articles; power was only mentioned in one. Sample sizes ranged from six to 51 with a total of 398 participants. All studies involved male and female participants with a mean age of 44.2 years. The studies utilised different techniques and study populations to explore tactile discrimination, body schema and motor function but critically; none explored all three concepts.

Conclusion

Altered two-point discrimination threshold occurred in those with CLBP but only within the area of their typical pain. Sub-groups reported within this group may be related to altered body schema. Tasks relating to the low back that were dependent on an intact body schema were impaired in CLBP sufferers. Bilateral CLBP participants performed more poorly than unilateral sufferers, who performed worse than pain-free groups. TPDT was negatively correlated with lumbopelvic motor control but the relationship between BS and LMC remains unknown.

This review revealed that the question cannot be fully answered and highlights specific knowledge gaps to be explored further.

035

TRIGEMINAL NEURALGIA: THE BURDEN OF DISEASE

Category: Assessment & Measurement

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Background

Trigeminal neuralgia (TN) is a rare condition defined as a sudden unilateral severe, brief, stabbing, recurrent pain in the distribution of one or more branches of the fifth cranial nerve. In recent years there has been an increasing interest in assessing the clinical and imaging features of TN. It has been proposed by various specialities that some TN patients will also have a less intense background pain and others may have autonomic features during attacks of pain which are similar to those described by patients with trigeminal autonomic cephalalgias. A European survey identified in 82 TN sufferers the considerable impact this condition has on quality of life. Many of these patients do not get access to the internationally recommended care pathways and yet this is one of few neuropathic pain conditions that when managed by the right teams can result in complete pain relief and return of quality of life.

Aims

The aim of this study is to determine the burden of this condition when patients come to a centre that specialises in the management of TN. It also aimed to ascertain the differences between classical TN, TN with concomitant pain and TN with autonomic symptoms including SUNA and SUNCT.

Methods

All patients with TN and its variants except symptomatic TN attending a national facial pain unit in a London teaching hospital were prospectively enrolled on a cohort study from 2007 and ongoing till 2015. Informed written consent was obtained and the study has ethics approval. Patients were fully assessed at their first outpatient appointment using a specially structured form and completed a range of psychometrically validated questionnaires. Particular attention was paid to their route of referral, medical history and past treatments. Investigations included an MRI. They were all seen and then managed by one clinician according to international recommendations. The final diagnosis was made after response to treatment had been ascertained and 26% had been assessed independently by headache neurologists to confirm the diagnosis. All the data was entered on an Excel spreadsheet and then analysed.

Results

Of 237 patients 5.1% had symptomatic TN and were excluded. The mean age was 61 years, 63% were female, and the median duration of TN was 4 years. Patients were referred in equal numbers from medical and dental primary care and the majority had consulted both with 18% having undergone unnecessary dental treatment. Over 50% had already been seen in the secondary care sector. Classical TN: 154, TN with concomitant pain: 32, TN with autonomics: 39. All patients had medication prior to referral but only 54% had the recommended carbamazepine and 10% had used opioids. Over 50% reported disability Grade III or IV on the Chronic Graded Pain Score with >60% taking time off work. Anxiety was high > 50% , depression 40% and significant pain catastrophising 78%. Brief Pain Inventory general interference with quality of life mean 3.5 but on the extended facial pain part mean 4.9.

Conclusion

As the disease frequently presents in the lower part of the face patients often consult their dentists who fail to recognise it and carry out irreversible procedures. Despite both NICE and international guidelines patients are not managed with the gold standard dug carbamazepine with its NNT of 3 and in this cohort >90% found it to be effective. During relapses the impact on quality of life is significant with associated anxiety and depression. A combination of pain severity and poor management potentially contributes to high levels of catastrophising which can further impact on quality of life.

036

DOES QUALITY OF LIFE, USING THE EQ5D-5L, CHANGE IN LINE WITH OUTCOMES COMMONLY USED TO MEASURE THE EFFICACY OF PAIN MANAGEMENT PROGRAMMES?

Category: Assessment & Measurement

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Background

The EQ-5D has been used to evaluate quality of life (QoL) in patients with the many conditions undergoing different treatments for their pain including: osteoarthritis, acute and chronic low back pain (LBP), LBP patients having spinal surgery, peripheral neuropathic pain, implantation of spinal cord stimulation for neuropathic limb pain, Fibromyalgia and injection therapy. The EQ-5D is a standardized, non-disease-specific instrument for evaluating patients' preference-based valuations of health-related quality of life (HRQoL). The EQ-5D is a five-item health state descriptive system used to develop health states (EQ-5D (index) and a visual analogue scale (VAS, 0–100 from worst to best imaginable health state (EQ-5D (VAS) on which to mark your health today. The five domains are: mobility, self-care, usual activities, pain/discomfort and anxiety /depression. The Euroqol has been developed to generate a cardinal (utility) index of health, to provide potential for use in economic evaluation.

Aims

We were interested in the use of the quality of life instrument EQ5D-5L for measuring change in patients attending outpatient pain management programmes (PMPs) and how it compared with

commonly used outcomes measuring domains similar to the five – item health states.

Methods

190 adult patients who attended an outpatient five week half-day short PMP (SPMP) and 200 patients who attended a seven week whole day long PMP (LPMP) from January 2013 to June 2015 completed the following outcome measures: the Numerical Rating Scale (NRS) for pain intensity, the Hospital Anxiety and Depression Scale (HADS) for distress and emotional impact, the Pain Self-Efficacy Questionnaire (PS-EQ) for their beliefs of their confidence coping with activity, the Stand-Up test for one minute from a 17 inch height chair without arms for observed physical performance, the EQ-5D (index) of five items of health states and a EQ-5D (VAS 0 – 100) of health state today. Patients were assessed at the beginning and end of the programme and at follow up 6 to 9 months later. The data was analysed using means, standard deviations and the paired two tailed T test.

Results

The measurements of pain intensity NRS, the total score of HADS, PS-EQ and stand-up test showed change from beginning to end of programme and some were maintained at follow up. Results of the SPMP EQ-5D (index) showed similar increases from beginning to end of programme but were not sustained at follow up. The LPMP EQ-5D (index) showed improvement at the end of the programme which was maintained at follow up. The EQ-5D (VAS) showed improvements from beginning to end of both programmes only sustained for the LPMP. The results at the end of the SPMP were significant for decreased pain intensity and at follow up for decreased pain intensity, and increases in PS-EQ, stand-up test and EQ-5D (VAS). The results of the LPMP were significant from the beginning of programme to follow up for decreased pain intensity, increased PS-EQ and improvements in stand-up test, EQ-5D (index) and EQ-5D (VAS).

Conclusion

Use of the EQ5D-5L showed changes in QoL, in line with commonly used outcomes for evaluating patients' progress after attending PMPs. The SPMP EQ5D (index) and EQ5D (VAS) were less sensitive to changes in commonly used outcomes that were sustained at follow up. For the LPMP both the EQ5D (index) and (VAS) values showed similar significant improvements at follow up to the commonly used outcomes. The results showed that the EQ5D-5L identified significant QoL changes for patients attending PMPs and evidence in the literature supports its use for measuring change in patients with chronic pain undergoing treatment.

Cancer Pain

037

AN EXPLORATION OF BEREAVED CARERS' VIEWS ABOUT INTRATHECAL PAIN RELIEF FOR THE TREATMENT OF CANCER PAIN

Category: Cancer Pain

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Background

Intrathecal analgesia is known to reduce pain in patients where conventional systemic analgesia has been ineffective or intolerable. However there is little evidence of how this intervention affects quality of life (QoL).

Aims

To explore how intrathecal analgesia affected QoL in patients with advanced progressive cancer and severe uncontrolled pain and/or intolerable side effects.

Methods

Qualitative interviews were undertaken with relatives of deceased individuals who had intrathecal analgesia (external system) as part of their pain control. Interviews were analysed using thematic analysis.

Results

11 interviews were conducted in two UK centres with established intrathecal services. The emerging themes were: i) 'making the decision to have the intrathecal' (relatives described desperate situations with very severe pain and/or sedation, in which the suffering individual would try anything); ii) 'knowing they were having the best' (intrathecal analgesia, with the associated increased access to pain and palliative care services, meant relatives felt everything possible was being done, making the situation more bearable); iii) 'was it worth it?' (the success of the intrathecal was judged on whether it enabled the individual to be themselves through their final illness and dying phase, not simply on improved pain control); and iv) 'not without its problems' (a range of significant side effects were described, however these were considered to be acceptable, if the intrathecal acted to enable self-expression).

Conclusion

Intrathecal analgesia was perceived to be of greatest value when it achieved quality of time by controlling pain and enabling individuals to be themselves through their final illness and dying phase; under these circumstances significant side effects were judged to be acceptable.

Education

038

DO HAVE A SEAT WHILST WE LINK HUMAN FACTORS AND EPIDURALS - INTRODUCING A STRUCTURED EPIDURAL ASSESSMENT TOOL (SEAT)

Category: Education

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Background

Within Hawkes Bay, New Zealand, epidurals for post-operative analgesia are managed on surgical wards with close anaesthetic input, unless patients require vasopressors.
Recently, there has been a movement from epidurals for enhanced recovery for abdominal surgery as alternative regional techniques have facilitated earlier mobilisation and reduced IV fluid requirement with no mortality difference. Epidurals remain valuable for certain patient groups but worryingly, nursing confidence of caring for them has decreased. Human factors describe the relationship between the individual and their environment and equipment, as well as their inter/intra-personal relationships. Unfamiliarity with epidurals can contribute to reduced efficacy of epidurals with reduced patient satisfaction; increased error with potential for harm; and increase in stress for both patient and staff. To address this learning need for ward nurses, we introduced the Structured Epidural Assessment Tool (SEAT) with a communication strategy for escalating problems using in-situ simulation.

Aims

To improve technical and non-technical skills for nurses caring for patient with epidurals:

1. Develop an assessment tool (SEAT) with clear triggers to track and escalate for help;
2. Facilitate consistent and standardised assessment of the patient with an epidural;
3. Communicate using SBAR with epidural specific information.

Methods

Using our trusts acute-pain management guidelines, we developed a simple flowchart SEAT. This covered the management of four domains: the routine assessment and minimum documentation; inadequate analgesia; hypotension and motor block. A supplementary SBAR style communication aid was developed to facilitate concise, epidural specific handover. Attendance was encouraged by bringing the teaching to the wards. Using a combination of didactic lectures and simulation, the theory of epidurals for analgesia was introduced together with an assessment tool to evaluate epidural efficacy and identify complications. Using in-situ simulation with simulated patients, nurses used the SEAT to identify, manage and escalate problems to the relevant team. Feedback was collected in the form of a short pre- and post-teaching survey.

Results

22 nurses attended teaching sessions between June 2014- May 2015. SEAT was popular amongst nursing staff, with the in-situ delivery being more accessible to staff both in terms of time, location and learning style. Deliberate practice, with feedback of assessing patients with epidurals improved nursing familiarity to the equipment and environment and was an enjoyable way to put theory into practice. Nurses described reduced perceived anxiety of managing epidurals; more confidence identifying problems and more confidence recognising epidural emergencies. Having a structured SBAR style handover was perceived as useful to make communicating problems easier.

Conclusion

We feel that SEAT addresses human factors that may contribute to epidural safety. Firstly, it serves to reduced cognitive load and stress, by providing a easy flow-chart on how to assess a patient with an epidural. Using the clear sign-posts to identify when to escalate and to whom, the SBAR handover empowered nurses to make timely decisions on management, with a communication framework and confidence to relay problems. To observe translational outcomes, follow up audits looking at the impact of the SEAT are recommended together with focused group discussions with nursing staff who attended the teaching.

039

THE EFFECTIVENESS OF HEALTH CARE PROFESSIONALS USING ONLINE PAIN RESOURCES: A SYSTEMATIC REVIEW OF EDUCATIONAL INTERVENTION STUDIES

Category: Education

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Background

The development of new and innovative technologies in the provision of e-learning is growing exponentially and e-learning can facilitate the three domains of healthcare education i.e., knowledge, skills and attitudes. Online learning enables adult learners to tailor their learning according to their unique needs, providing autonomy over their learning and increasing intrinsic motivation, while facilitating the adoption of a reflective approach promoting enhanced learning. Although the amount of on-line instruction for health professionals has increased dramatically overall, and in the field of pain more recently, its effectiveness has not been rigorously evaluated. In fact, evaluation of on-line learning has been characterised as in its infancy.

Aims

The aim of this review is to provide a synthesis of educational intervention studies exploring the effectiveness of e-learning pain-related resources for health-care professionals on knowledge, attitudes, and skills.

Methods

The following databases were searched between 1th January 1995 and 1th November 2015: PsyINFO, CINAHL, MEDLINE, ERIC. Web of Science, Scopus, Cochrane Library and PUBMED databases. Initial search terms included three concept blocks: (i) Type of intervention; online education, computer-based, e-learning, web-based, and internet-based intersected with (ii) Population; paediatrician, physician, nurse, psychologist, and medical intersected with (iii) Outcome; pain*.

Results

33 eligible studies were identified and included in this review. Overall, the literature suggests pretest knowledge of pain management was

low across many domains, particularly in more complex areas of pain treatment such as palliative care. Knowledge was the most commonly adopted outcome variable, which for the majority of studies improved following training. Improvements in attitudes towards pain management and competence were also reported by some studies and, when assessed, acceptance of online interventions was generally high. Fewer studies explored the impact of training on patient outcomes, although one reported a significant increase in non-pharmacological interventions prescribed for nursing home residents by physicians, while another reported significant decreases in paediatric pain intensity.

Conclusion

Online pain education benefits healthcare professionals particularly in terms of knowledge, attitudes and to a lesser extent skills. Further research needs to be conducted exploring the potential clinical benefits to patients, which are rarely assessed in the existing literature. The variations among instructional methods and the rapid advancement of technology make it difficult to determine which elements contribute to an effective online learning environment and further research is required in that area.

040

QUESTIONNAIRES FOR ASSESSING HEALTH PROFESSIONALS BELIEFS AND ATTITUDES TO PAIN; A LITERATURE REVIEW

Category: Education

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Background

Pain presents a huge economic cost and is a key public health problem currently unsupported by high quality and effective education. It is suggested that the deficit in effective education be addressed by encouraging and empowering inter-professional pain education. Currently only 18% of institutions in the United Kingdom share content relating to pain with another health profession and the amount of time spent on pain education is considered to be inadequate. Successful pain management is dependent not only on understanding and recognising the causes and multisystemic nature of pain but on the attitudes and beliefs of health professionals to pain. Health professionals need to be able to work together and with pain suffers to enable a transparent holistic approach to pain management. There is a requirement to understand learners' attitudes and beliefs towards pain in order to design pain education that is appropriate for all health professionals.

Aims

Appropriate inter-professional education of pain management is reliant on understanding attitudes and beliefs of students. This enables educators to design curricular that meet the needs of individuals. The aim of this paper was to explore the literature relating to existing questionnaires that assess health professionals' attitudes and beliefs to pain.

Methods

A literature search was undertaken including MEDLINE, CINAHL, SPORTDiscus, PsychARTICLES and PsycINFO from 1989-2014. The search terms were as follows, 'attitudes and beliefs', 'pain', 'questionnaire' and 'health care practitioners' with terms for different health professionals. The quality of the questionnaires were assessed using the COSMIN checklist.

Results

Seven questionnaires were identified in this literature search. There was overlap in the questionnaires between professions, types of pain and domains. Five questionnaires were profession specific and identified: General Practitioners, Physiotherapists, Nurses, Physicians and Health Care Providers. Three questionnaires were aimed at professionals working with specific patient groups: back pain; neonatal pain and postoperative pain. Two of the questionnaires (The Attitudes to Back Pain Questionnaire for General Practitioners; Back Beliefs Questionnaire (Mutsaers et al 2012); Health Care Providers Pain and Impact relationship Scale (Rainville et al 1995) were back pain related. The following questionnaires (The Pain Attitudes and Beliefs Scale for Physiotherapists (Laekeman et al 2008); Attitudes, beliefs and self-reported competence about postoperative pain among physicians and nurses on surgical wards (Rognstad et al 2012) were profession specific. Two questionnaires (Fear Avoidance Beliefs Questionnaire (Waddell et al 1993); Neonatal pain survey (Schultz et al 2009) were domain specific.

Conclusion

This literature search revealed a number of questionnaires that have been developed to ascertain pain attitudes and beliefs in a few health professionals and/or for the management of pain in certain conditions or domains. There were no questionnaires that assessed pain attitudes and beliefs in a generic pain population that could be used for inter-professional learners. This is an area that requires further development.

041

INTRODUCING A STANDARDISED METHOD OF TEACHING PAIN MEDICINE INTO BRITISH MEDICAL SCHOOLS

Category: Education

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Background

The Essential Pain Management Programme (EPM) was originally developed in Australia and New Zealand by Roger Goucke and Wayne Morriss as an educational tool for health care workers in low and middle-income countries. EPM Lite is a scaled down version of the full course, designed with the additional help of Linda Huggins in New Zealand, which is delivered to Medical undergraduates in half a day. The UK Faculty of Pain Medicine introduced EPM Lite as a project in 2014 and the first UK EPM Lite course was held in Bristol in September that year. The course helps students understand classifications of pain, why pain should be treated, and an overview of different drug and non-drug treatments. The half day

course is flexible as the content and timings can be amended to suit group size and level of teaching.

Aims

A survey of pain education (Briggs et al) within undergraduate medical studies estimated that 'the identification, assessment and treatment of pain represent less than 1% of the university-based teaching for healthcare professionals'. The aim of EPM Lite is to expand the level of pain management knowledge taught at undergraduate level.

Methods

EPM Lite is centred on a three letter acronym, RAT (Recognise, Assess, Treat), which is designed to allow rapid recall of a logical, stepwise system for pain management. The students are taught to treat patients in an individual way and to avoid using a 'one size fits all' model. The course encourages discussion of non-pharmacological therapies, use of drugs, and issues around the use of opioids in chronic non-cancer pain. The format is short lectures, punctuated with small group discussion sessions covering all elements of the RAT approach and culminating in a wide series of case based discussions. Handbooks, slide sets and references are provided for trainers and students.

Results

EPM Lite has successfully been delivered in five UK medical schools. EPM Lite was piloted at The University of Bristol Medical School in 2014 and delivered to a total of 240 fourth year medical students over four sessions. In the current academic year it has been delivered to the entire year group of third year medical students on a single half day session! Since the pilot colleagues in Aberdeen, Oxford, Plymouth and St Andrews have now run EPM Lite in a variety of guises: as an 'extra-lite' version for hour-long weekly medical student seminars, for small group teaching in year 2 and 3, in the fourth year during the students' Anaesthesia Specialty Study Modules, and on a Final Year 'survival' course in preparation for taking up FY1 posts. EPM Lite is also in various stages of consideration or implementation in Cardiff, Durham, Edinburgh, Exeter, Newcastle, Nottingham and Plymouth.

Conclusion

The format has been continually adapted, according to feedback. Students (particularly those in later years), felt the most beneficial elements of the course were the case studies and small group discussions; resulting in the course being adapted to minimise the didactic element in favour of group-work. For the future we are considering delivering the material in smaller groups while the undergraduates are based in local hospitals. Having more teachers involved may help us to spread the RAT approach through the ranks of qualified doctors and other health professionals so that in time the RAT approach becomes as familiar as ABC.

042

DEVELOPMENT OF AN EDUCATIONAL PROGRAMME TO RATIONALISE OPIOID USE FOR CHRONIC NON-CANCER PAIN IN PRIMARY CARE OF EAST LONDON

Category: Education

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Background

The last years have seen a large increase in the prescribing of strong opioids for chronic non-cancer pain (CNCP). This is despite the fact that evidence of the efficacy and safety of strong opioids used for CNCP remains uncertain 1,2. In fact long-term opioid use is associated with cognitive impairment, poor quality of life and higher mortality rates 3,4. Opioids also have adverse effects on the immune system, endocrine system and increase the risk of fractures. This is in addition to the possible problems of tolerance, dependence and addiction. There is support from learned bodies such as the British Pain Society to rationalise opioid use in the United Kingdom. This requires cooperation between primary and secondary care health providers.

Aims

To deliver an educational presentation for GPs in East London to improve their understanding and standards of opioid prescribing for CNCP. Additionally, provide a forum for dialogue between primary and secondary care and an opportunity to discuss more widely the topic of chronic pain management, therefore ultimately improve patient care.

Methods

Educational presentations were delivered by the authors in times and places convenient for GPs over 45 minutes. The sessions aimed to answer the following questions of opioids in CNCP:

- How many opioids are prescribed and what is the cost?
- Are opioids effective & do they improve quality of life?
- What doses of opioids should be used?
- What are the possible side-effects and adverse sequelae of long- term opioids?
- How should opioids be started, monitored and stopped?

Presentations were delivered at Wells Street (City and Hackney) and Blithehale (Tower Hamlets) Medical Centers (July 2015). Feedback was positive but suggested that more clinical case discussions to deliver the key learning messages. A third interactive lecture with more clinical cases was delivered during the protected teaching time of GPs in City and Hackney (December 2015). Questionnaires assessing GPs views and confidence of using opioids for CNCP were filled before and after the educational.

Results

- Each Medical Centre was informed their own patterns of opioid prescribing
- 30 GPs attended & all recommended other GPs to attend this presentation
- 33% didn't fill the questionnaire

Questionnaire Results:

1. Opioids improve quality of life?

Pre-teaching:	SA21%	A47%	D16%	SD11%	DK5%
Post-teaching:	SA4%	A4%	D53%	SD23%	DK16%

2. Opioids improve patients function?

Pre-teaching:	SA24%	A46%	D18%	SD6%	DK6%
Post-teaching:	SA0%	A27%	D50%	SD23%	DK0%

3.Have you received enough training in opioid prescribing?

Pre-teaching:	SA5%	A28%	D50%	SD12%	DK5%
Post-teaching:	SA9%	A65%	D26%	SD0%	DK0%

4. You know how to start, monitor and stop opioids?

Pre-teaching:	SA0%	A40%	D30%	SD30%	DK0%
Post-teaching:	SA4%	A78%	D18%	SD0%	DK0%

5. Opioids should be used with other strategies simultaneously?

Pre-teaching:	SA23%	A44%	D24%	SD0%	DK9%
Post-teaching:	SA9%	A77%	D14%	SD0%	DK0%

6. You can educate patients on opioids?

Pre-teaching:	SA5%	A25%	D 55%	SD5%	DK10%
Post-teaching:	SA5%	A73%	D 17%	SD5%	DK0%

Conclusion

This study has identified that the educational sessions were of high educational value and changed the views and confidence of GPs in considering opioids for CNCP. Furthermore, this project has developed a closer collaboration between Barts NHS Pain Department and GPs in East London. Using interactive clinical cases was found to be the most valuable tool to educate GP during this educational initiative. Similar programmes should be utilised in Primary Care to improve GPs understanding and confidence in opioid prescribing for CNCP.

Abbreviations in Questionnaire Results
Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD) & Don't Know

043

PAIN EDUCATION IN PROFESSIONAL HEALTH COURSES - A SCOPING REVIEW

Category: Education

Authors: Kate Thompson - Rehabilitation Sciences Leeds Beckett University, Dr James Milligan – Rehabilitation Sciences Leeds Beckett University, Professor Mark Johnson - Rehabilitation Sciences Leeds Beckett University, Professor Michelle Briggs - Health and Community Studies Leeds Beckett University

Background

Pain education in professional health courses is key to producing healthcare professionals of the future that are competent to manage the needs of patients experiencing pain (IASP, 2015).
In the UK, there is a lack of guidance from professional regulatory bodies, with only medicine and midwifery training specifically including standards for pain. Subject specific guidance is provided by specialist organisations such as the International Association for the Study of Pain (IASP), yet the uptake of this guidance in professional health courses is thought to be poor (Briggs et al., 2011). Recent surveys revealed that physiotherapy is one of the leading undergraduate health courses in regards to the average number of taught hours of pain education, however statistically it also has the most variance (Leegaard et al., 2014, Hoeger Bement and Sluka, 2015, Briggs et al., 2011). In addition to the number of taught pain hours, further information is needed regarding the structure of pain education. This scoping review will collate current available evidence that informs the provision of pain education across professional health courses.

Aims

Locate, map and report what evidence currently exists that has observed or investigated the structure of pain education in pre-registration professional health courses.

Methods

A systematic scoping review methodology was used (Levac et al., 2010). PRISMA guidelines were adopted where possible to ensure as robust a methodology as possible (PRISMA, 2015). The following search strategy was employed in Medline, Cinahl, ERIC, AMED, HMIC and EBM reviews; [Pain] AND [Education OR Curriculum] AND [Physiotherapy OR Allied health occupations OR Nursing OR Medicine]. MeSH or Thesaurus search terms were used within databases where possible. Two authors [KT & JM] independently screened titles and abstracts of all papers (2396) retrieved in the search strategy. Papers were included for data extraction if they had available abstracts written in English that referred to (1) pain AND (2) pre-registration education or curriculum AND (3) professional health education e.g. nursing, medical or other allied health professions such as Physiotherapy. Authors met to pilot the selection criteria at the beginning and midway through the screening process. A third reviewer [MB] was consulted where agreement could not be reached. The full text of all articles that met the inclusion criteria from the screening process were retrieved (68) and further assessed using eligibility criteria. Twenty nine papers were found eligible for this initial scoping review analysis.

Results

Twenty nine papers were found to be accessible and in a format that data could be extracted for initial analysis of results. Professional pain education provision has been investigated throughout more than 15 countries, with the majority of studies conducted in the USA (38%) and the UK (34%). 93% (27/29) of studies conducted primary research of which 67% (18/27) used a survey questionnaire methodology. No systematic reviews or RCTs were found. Professional pain education provision was investigated in the following pre-registration health courses; Nursing 62% (18/29), Medicine 31% (9/29), Physiotherapy 17% (5/29), Occupational therapy 17% (5/29), Dentistry 10% (3/29), Pharmacy 10% (3/29), Veterinary Science 7% (2/29), and Psychology 3% (1/29). Most studies surveyed student knowledge and skills based on current education provision 76% (22/29), whereas only 7 studies evaluated a 'new' educational strategy e.g. a dedicated pain course (24%). 89% of studies were conducted in the last 15 years

Conclusion

There is a body of literature that has examined pain education across professional health courses. The majority has been conducted in

Nursing and Medicine, with a significant lack of research across the allied and other health professions. Much of the work describes a lack of pain knowledge and skills resulting from existing curriculum designs where pain teaching is embedded throughout modules. Studies that investigated dedicated pain teaching that was additional to the 'usual' curriculum generally reported more positive findings. Further in-depth analysis and synthesis of results is warranted. Where appropriate titles for systematic review and further empirical research will be proposed.

Evidence & Guidelines

044

WRONG SITE INJECTION IN PAIN PRACTICE! HOW CAN WE PREVENT IT?

Category: Evidence & Guidelines

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Background

When it comes to patient's safety, efficiency and coordinated care, the National Health Service in the UK is the most successful in the world. However, there are some undesirable and avoidable accidents that should never happen in our practice, including wrong site injection. Although unintended wrong site (side or level) injection in chronic pain is relatively uncommon, it can have severe consequences such as joint damage, nerve injury, unnecessary steroid injection and even potential radiofrequency denervation of the incorrect site.

Aims

We aimed to prevent wrong site injection from ever happening by introducing a reliable and easy to follow strategy in our pain practice.

Methods

At Ashford and St Peter's NHS Foundation Trust, we routinely undertake chronic pain procedures for more than 250 patients per month. The pain department covers two hospitals and has 5 consultants specialised in chronic pain. In order to meet our objective in clear and effective way, we planned a quality improvement project (QIP) using the Model for Improvement framework. We want to perform pain procedures on the correct patient and on the correct site all the time. We introduced a new patient safety protocol similar to the one adopted by The NHS England to prevent wrong-sided block in regional anaesthesia. In order to understand the objectives of the project and how to reach the overall goal, we developed a campaign poster that has been displaced in all areas where pain injections performed. We also incorporated this protocol in a new checklist that is specifically designed for pain management list.

Results

In this protocol, the pain physician must draw an arrow on the patient's procedure site before they inter the pain theatre to indicate the side and the level of the injection. Immediately before the needle insertion, the pain doctor must stop and visualise the injection site arrow. Then, the physician checks with the patient to confirm the site of injection (if the patient is fully awake) or check the consent form if the patient is unconscious. We have been using this protocol successfully for the last two months. Recently, we conducted a quick survey asking physicians and pain theatre staff about their opinions in the new attempt to avoid wrong site injection in pain lists. The satisfaction was very high and encouraging. What is more important, we never had wrong side injection (not even a potential one) since the introduction of this campaign.

Conclusion

We were the first in pain practice to formally use this simple method that is known to avoid patient harm from wrong side procedures, while providing patient with best possible care. So far, the campaign is very successful, we never had a wrong site injection and the theatre staffs are very happy in adopting it as a routine practice in pain. Our aim now is to introduce this method as a unique and straightforward attempt to avoid wrong site injection in pain medicine nationwide.

Experimental (Basic) Science

045

ANATOMY OF LUMBAR DORSAL RAMI AND THE NERVE SUPPLY TO LUMBAR FACET JOINTS

Category: Experimental (Basic) Science

Authors: Saravanakumar Kanakarajan - Department of Anaesthesia Aberdeen Royal Infirmary

Background

The aetiology of low back pain is often complex and multifactorial; zygapophyseal (facet) joint pain is one among them. The gold standard of diagnosis and treatment revolve around transient blockade of their nerve supply from the dorsal rami. A previous anatomical study has identified medial branches as the nerve supply to facet joints and each joint is supplied by medial branches from 2 levels. However, information about the anatomical variation of the nerve supply is not available. It is possible such anatomical variations may contribute to failure of diagnosis and treatment.

Aims

In this anatomical study, the primary aim was to establish the nerve supply of facet joints as well as the course, pattern and morphological features of medial branches.

Methods

2 Anatomy students dissected four male cadavers as part of thesis for their science degree. Cadavers were embalmed either with standard

formalin or soft fixed Genelyn. The back was dissected from superficial to deep layers to visualise the vertebral column between T12 and Sacral ala. Dissection was aimed to systematically expose branches of lumbar dorsal rami to allow analysis of their presence, branching pattern and location at each lumbar level. The innervation of zygapophyseal joints was noted. Both sides were dissected giving a total of 44 nerves: 40 lumbar and 4 thoracic levels. To qualify as an innervating branch, nerve was required to visibly penetrate the tissue surrounding facet joint or pass within few millimetres of the joint; assumption was made that nerves which were in close proximity were supplying the joint through microscopic nerve fibres or simply the fibres had been damaged during dissection.

Results

Dorsal rami had three branches – medial, intermediate and lateral - at L1, L2 and L3 (18 out of 24 levels) while only one branch at levels L4 and L5 (16 levels). The only seen branches followed course similar to medial branches. Two distinct branching patterns were found: pattern 1 – direct from dorsal root ganglion and pattern 2 – a common stem, called primary dorsal ramus. Majority of nerves branched outside intervertebral foramina. Medial branches started higher than the level of interlocking articular process, descend towards the groove between articular process and transverse process before passing underneath the mamilloaccessory ligament. Medial branches were found to innervate the facet joints; they also supplied multifidus muscle. The average length of medial branches was 40.8 mm. Of the 44 joints, 34 joints had nerve supply from more than one nerve while rest of joints were supplied by single nerves from the same.

Conclusion

Medial branches supply the facet joints. Their course was found to be consistent. But there is significant variation in the individual nerve supply to facet joints. This variation, in contradiction to current literature, may explain the false-negatives and inadequate pain relief from RF denervations.

046

AN INVESTIGATION INTO THE PSYCHOSOCIAL DETERMINANTS OF PAIN SENSITIVITY RESPONSE IN HEALTHY NIGERIAN UNIVERSITY STUDENTS

Category: Experimental (Basic) Science

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Background

Sex and gender, ethno-cultural identity and religious beliefs affect both coping with chronic pain and pain responses of healthy participants to noxious stimuli conducted in laboratory settings. Most data on attitudes and responses of healthy participants toward experimental pain have been collected from Western populations and to a lesser extent from South Asian populations, with one study from a North African student population. There have been several experimental pain studies in North America to compare between African Americans and European Americans but no data on the response of Sub-Saharan Africans living in Africa. We decided to conduct an investigation into the psychosocial factors that influence response to experimentally-induced pain in Nigerians living Nigeria.

Aims

The aim of this study was to investigate the influence of sex, age, religion, region of origin, and catastrophising on response to experimentally-induced cold-pressor pain and ischeamic pain in Nigerians university students.

Methods

Participants were unpaid, pain-free Nigerian university students living in the urban area of Abuja (n=80, 21 females, age = 21 to 35 years). Participants completed one cold pressor test (CPT) by immersing their hand into an iced-water (20C) and indicating when they experienced the first sensation of pain (CPT Threshold) and when the pain became unbearable (CPT Tolerance). Participants also completed one ischemic-pain test (IPT) using a submaximal effort tourniquet test which involved occluding blood flow to the lower arm using a 10 cm wide blood pressure cuff inflated to 240mmHg. Participants performed handgrip exercises (2s duration, 4s intervals) at 50% of their maximum grip strength and indicated when they experienced the first sensation of pain (IPT Threshold) and when the pain became unbearable or were unable to perform the exercise (IPT Tolerance). Participants rated the pain intensity on 0 to 10 scale and completed a Pain Catastrophizing Scale (PCS).

Results

Data was analysed using a Forward Regression model with pain outcomes as dependent variables and sex (2 levels: male, female), age (continuous variable), religion (2 levels, Christianity, Islam), region of origin (6 levels of geopolitical zone), and PCS (continuous variable) as independent variables. Religion was a predictor of CPT Threshold ($F(1,77) = 15.18$, $p<0.001$, $R2=0.17$), IPT Threshold ($F(1,77) = 9.24$, $p=0.003$, $R2 = 0.11$), and IPT intensity rating ($F(1, 77)=4.96$, $p=0.029$, $R2 = 0.06$). Participants who were Muslim had lower CPT Thresholds (mean difference=9.9s, $p<0.001$), lower IPT Thresholds (mean difference=18.26s, $p=0.03$) and higher IPT intensity (mean difference=0.70, $p<0.001$) than their Christians counterparts. Age was a predictor of IPT Tolerance ($F(1,77)=5.02$, $p=0.028$, $R2=0.06$), with older participants having a higher IPT Tolerance than younger participants. Sex, region of origin and PCS did not predict any of the pain outcomes in the linear model.

Conclusion

This analysis suggests that ethno-cultural identity based on religion and tradition in different geopolitical areas were determinants of response to experimentally-induced cold-pressor and ischaemic pain in this Nigerian student population.

047

PRESSURE PAIN THRESHOLDS IN OBESE AND NON-OBESE PAIN-FREE PARTICIPANTS: A META-ANALYSIS

Category: Experimental (Basic) Science

Authors: Osama A. Tashani - Centre for Pain Research Leeds Beckett University, Rehab Astita - Centre for Pain Research Leeds Beckett University, Mark I. Johnson - Centre for Pain Research Leeds Beckett University

Background

There is epidemiological evidence that there is an association between obesity and pain with obese people are more susceptible to some chronic pain conditions than non-obese. In contrast, findings from studies investigating the experimental pain sensitivity differences between obese and non-obese participants were inconclusive. Previously we conducted a systematic review of experiments that compared pain sensitivity response in obese and non-obese pain-free participants (British Pain Society ASM 2013). Seven studies were included but findings were inconclusive because of low methodological quality rating and the use of a variety of pain induction methods. Nevertheless, three studies in our original review measured blunt pressure pain threshold (PPT) and new studies have been published using pressure pain induction methods.

Aims

The aim of this study was to compare pressure pain sensitivity between obese and non-obese adults categorised according to Body Mass Index (BMI, kg/m2) using a meta-analytic approach.

Methods

Our original search strategy was performed in 2013 on OVID, Medline, Embase, Science Direct and Web of Science and included any type of experimental pain. This search was repeated on 20 October 2015 to capture newly published studies. Two reviewers independently screened 'hits' against eligibility criteria and extracted data on PPT (mean, SD, sample size) from included study reports. This data was meta-analysed using Comprehensive Meta-analysis Software. Included studies were assessed for methodological quality using the 11-item "QualSyst" tool and publication bias was assessed using Funnel plot and Egger's regression test.

Results

Our updated search found 15 studies on experimental pain in addition to our 7 studies included in our 2013 review. Of these 22 studies, 6 compared pain sensitivity response between normal BMI and obese BMI using a pressure pain device and four of these were published after 2012. These 6 studies delivered pressure stimuli to the finger (McKendall and Haier 1982, Raymond et al. 1995, Icagasioglu et al. 2015), thenar eminence (Astita et al. 2014, Astita et al. 2015). Price et al (2013) tested both thenar eminence and thumbnail. Five out of the 6 studies scored >65% and one study scored 55% on "QualSyst". All studies provided extractable data for meta-analysis. A fixed effects model suggested that there was no significant differences between normal and obese BMI PPT (z=-0.129, 95% CI=-0.234, 0.205, P=0.897). There was a substantial degree of heterogeneity (I2=88.8) but no publication bias (Egger's regression test, P=0.4).

Conclusion

Three studies revealed that obese participants were more sensitive (i.e. had less PPT) than their non-obese counterparts in response to pressure pain. Two studies found no significant differences between the two groups and only one study suggested that non-obese are more sensitive than obese in PPT. However, this meta-analysis suggested that the level of evidence that obese are different from BMI normal range group in their response to pressure pain is not adequate.

048

A STUDY TO COMPARE PAIN SENSITIVITY RESPONSES BETWEEN PRE-MENOPAUSAL AND POST-MENOPAUSAL WOMEN USING COLD PRESSOR PAIN AND PRESSURE ALGOMETRY

Category: Experimental (Basic) Science

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Background

Women report greater levels of pain associated with certain clinical conditions including migraine, rheumatoid arthritis and fibromyalgia. The effect of gonadal hormones such as oestradiol and progesterone on the sensitivity of women to noxious stimuli is complex with both hormones having pro-nociceptive and anti-nociceptive effects. The ovarian production of oestrogens dramatically decreases during the menopause and this is likely to affect pain sensitivity response. Experimental evidence from animal studies suggests that certain receptors involved in the nociceptive pathway are activated by oestrogen. With this in mind, we hypothesised that post-menopausal women, with lower oestrogen levels, may be less sensitive (i.e. have higher pain thresholds) to noxious stimuli. There are very few studies that have investigated differences between pre-menopausal and post-menopausal women on pain sensitivity response during experimentally-induced pain.

Aims

The aim of this study was to compare pain sensitivity responses of pre-menopausal and post-menopausal women during experimentally induced blunt pressure and cold pressor pain.

Methods

Participants were 39 (20 females) healthy volunteers. Females were categorised as: (i) 18-49 years, self-declared pre-menopausal (n=10); or (ii) >50 years, self-declared post-menopausal (n=10). Males were also categorised according to these age bands and acted as controls. Experimental pain was induced in each participant using pressure algometry and immersion of a hand into icy water (cold pressor pain). Blunt pressure pain threshold was measured using a Somedic algometer with a 1cm2 probe placed perpendicular to the palmar surface of the right hand and force applied at a steady rate until the participant reported the first sensation of pain. Time to cold pressor pain threshold and tolerance, and ratings of pain intensity and unpleasantness were measured by the participant immersing their left hand into a slurry of ice-water (0-2°C). Statistical analysis was performed using Mann-Whitney tests.

Results

There were no significant differences in pressure pain threshold between men aged 18-49 years and >50 years (p=0.935). The pressure pain threshold of women 18-49 years was significantly less than

women >50 years (mean ± SD = 258.8±99.2kPa, 331.8 ± 67.7kPa respectively, p=0.049). The pressure pain threshold of women 18-49 years was approximately 50% lower than men of equivalent age (463 ± 201kPa, p=007) but there were no differences between women >50 years and both of the age categories of men. Women aged 18-49 years had lower cold pressor pain tolerance than men aged 18-49 years and men aged >50 years (p<0.05). There were no differences in cold pressor pain threshold between any of the age categories.

Conclusion

Post-menopausal women >50 years had higher blunt pressure pain thresholds and had higher tolerances to cold pressor pain than pre-menopausal women aged <50 years. This suggests that post-menopausal women >50 years were less sensitive to noxious stimuli. There were no differences in pain sensitivity response between men and women >50 years. Research that measures plasma hormone levels during different phases of the reproductive cycle in a larger population is needed to establish the role of female sex hormones in pain perception.

049

SEX-SPECIFIC EFFECTS OF GENDER IDENTIFICATION ON PAIN STUDY RECRUITMENT

Category: Experimental (Basic) Science

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Background

Research on sex-related differences in pain suggests men and women differ in pain sensitivity and treatment response (Fillingim et al. 2009). Explanations often focus on biological mechanisms. An alternative approach is to examine these differences at the level of socio-cultural beliefs about gender-appropriate behaviour. The expression of pain is viewed as inconsistent with "masculine" behaviour, whereas endurance reinforces masculinity stereotypes. Accordingly, men display higher pain thresholds when tested by female rather than male experimenters (Gijsbers and Nicholson, 2005). Furthermore, individuals that identify with a masculine role show increased pain thresholds compared to those who identify with feminine roles. These findings suggest that sex differences observed in experimental research might partially reflect fulfilment of expected gender roles. A key question is whether such gender roles actually influence recruitment into pain studies, such that these studies do not truly reflect the population to which they are being generalised.

Aims

The aim of this study was to analyse whether biological sex or gender identification influence individuals' willingness to participate in a pain study.

Methods

138 volunteers (59 men, 78 women) were recruited to a study purporting to examine personality traits and emotional responses. Subjects rated their identification with stereotypical feminine (e.g. affectionate, tender, gentle) or masculine (e.g., dominant, assertive, competitive) traits using the BEM Sex Role Inventory. Next they were asked whether they were interested in participating in future research. Subjects who were unwilling to participate in other psychological studies were not included in further analysis. Subjects who agreed to participate in research (n=116) were then asked if they were willing to participate in a study involving pain. According to their responses, they were then divided in two groups: Decliners (subjects who agreed to take part in research but declined to participate in a pain study) and Participators (subjects who agreed to participate in a pain study).

Results

Two two-way, Sex by Participation ANOVAs examined whether masculine and feminine traits respectively differed between those willing to participate and those declining. A significant sex by participation interaction was found for masculine traits (F=6.15; p=0.01) but not for feminine traits. Follow-up tests revealed that males in the Participator group endorsed significantly (F=6.02; p=0.02) higher levels of masculine traits (M=101.1; SD=13.27) than their counterparts in the Decliner group (M=90.5; SD=15.00). Among females, there were no significant differences (F=0.87; p=0.35) in masculine traits endorsement between Participators (M=88.45; SD=13.94) and Decliners (M=91.76; SD=14.47).

Conclusion

Our findings highlight that males who participate in pain research endorse significantly more stereotypical masculine traits than those who decline to participate. This suggests that male samples in pain studies might not fully represent the wider male population. More importantly, these findings lead to questions about whether some of the previously observed effects of sex on pain responsiveness might reflect this selective sampling and, more specifically, reporting bias in males due to adherence to the perception of gender-appropriate responses.

Interventional Pain Management

050

SENSORY MAPPING OF LUMBAR FACET JOINT PAIN DURING RADIOFREQUENCY DENERVATION

Category: Interventional Pain Management

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Background

Radiofrequency lesioning of medial branches is a commonly performed procedure for facet joint pain. Conventional method of patient selection is by evaluating response to diagnostic medical branch blocks. Based on anatomical studies, it is common practice to anaesthetise 2 nerves for each individual joint. It is standard practice to use the radiologic bony landmark for needle positioning during

RF. In both normal healthy volunteers and patients, these medial branches have been electrically stimulated to evaluate the pain referral patterns. Inspite, there are no standard recommendations for nerve stimulation during RF particularly sensory stimulations. Our practice is to use both sensory and motor stimulation to locate the nerve.

Aims

Our aim is find out whether sensory mapping of facet joint pain can be achieved during radiofrequency (RF) denervation using sensory stimulations.

Methods

A prospective quality improvement project was carried over a period of 6 months. All patients undergoing lumbar facet joint RF denervation were included. Preoperatively, pain diagram were obtained. A parallel needle placement was carried out for RF lesioning. Both sensory (50 Hz) and motor (2 Hz) stimulation was used to identify the nerves. Subsequently, suprathreshold stimulation (3 x the sensory detection) was applied. Their pain diagram was used as a reminder to report location and percentage area of coverage for each nerve. We collected the following data: Demographics, details of diagnostic blocks and previous RF, details of nerve stimulation, area of coverage and pain reproduction. The data was collated in Microsoft excel for analysis.

Results

16 patients underwent RF denervation during this period. Their age range varied from 37 to 73 (mean: 54). 59 nerves were pencilled in for RF lesioning. Suprathreshold stimulations reproduced pain in all patients. We could not obtain sensory stimulations in one nerve. Of the stimulated 58 nerves, 48 nerves reproduced patient's original pain while 10 nerves produced pain either above or below their normal painful area. In 75% of patients, sensory mapping of all (100%) painful area was achieved while amongst the rest, near coverage was achieved (>85%). This was not related to number of nerves blocked. Of the 48 nerves stimulated, 30(62.5%) nerves reproduced pain covering >80% painful area. It is interesting to note that stimulations produced pain in non-painful area as well. This could be attributed to anatomical variations in the nerve supply.

Conclusion

Cost-effective study by Cohen et al showed that success rate of RF denervation using no and single diagnostic blocks are similar (33 Vs 36%). Our experience shows that sensory stimulation reliably reproduces the lumbar facet joint pain. The role of sensory stimulation in mapping the lumbar facet pain, thereby guiding the level of RF lesioning is yet to be studied in detail.

051

PARAVERTEBRAL BLOCKS IN LATISSIMUS DORSI BREAST RECONSTRUCTION

Category: Interventional Pain Management

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Background

There is currently no standardised pain management protocol at our institution for controlling pain in patients undergoing reconstructive breast surgery. Regional anaesthesia using Paravertebral Blocks (PVB) have been shown in several randomised control trials to reduce post-operative pain scores and post-operative antiemetic need in patients undergoing mastectomy with and without immediate reconstruction. To date we are not aware of any studies that have looked at the use of PVB in a cohort of patients undergoing reconstructive breast surgery solely with Latissimus Dorsi (LD) flaps.

Aims

To compare outcomes of patients undergoing reconstructive breast surgery with LD based flaps managed with or without Paravertebral Block (PVB) regional anaesthesia.

Methods

In a retrospective study, 55 patients underwent LD reconstruction in Taunton and Somerset NHS trust by two consultant operators. Bilateral cases were excluded. 27 patients received pre-operative PVB, 28 patients did not receive PVB. Both groups received intraoperative analgesia with either fentanyl or morphine, a post-operative patient controlled analgesia system as well as routinely prescribed oral analgesia Outcomes measured included length of stay (LOS), total morphine requirement (TMR), pain scores at 1hrs, 6hrs, 12hrs and 24hrs, complication rate and post-operative nausea and vomiting rates (PONV). Data was analysed using t-tests with level of significance set at $p<0.05$.

Results

The two groups were comparable in terms of mean age (PVB 56 +/- 9.9, without PVB 56 +/- 7.3) and mean BMI (PVB 26 +/- 4.39 without PVB 25 +/- 4.6). There were 5 delayed and 19 immediate reconstructions in the PVB group and 11 delayed and 17 immediate reconstructions in the group without PVB. 3 patients had failed attempts at PVB and were excluded from analysis. There were more complications requiring intervention in the group that received PVB (6/24 (25%) than those without a PVB 4/28 (14%) although this was not significant ($p=0.33$). There were no significant differences between LOS, TMR, PONV and pain scores at 1hr, 6hrs, 12hrs or 24hrs between patients that received PVB and those without.

Conclusion

There are a number of randomised control trials that show that PVBs are effective in reducing pain scores in patients following full or partial mastectomy. This small retrospective study has shown no observed difference between patients managed with or without PVB according to the measured outcomes in patients undergoing LD flap breast reconstruction. Anecdotally, anxiety and reported pain scores may be reduced in those undergoing delayed reconstruction. A future study including patient reported outcomes may be useful to help clarify.

052

AN EXPLORATION OF PATIENTS' PAIN BELIEFS AND EXPERIENCES FOLLOWING ATTENDANCE AT AN NHS BORDERS PAIN MANAGEMENT PROGRAMME

Category: Interventional Pain Management

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Background

Chronic pain (CP) affects approximately 15% of people living in Scotland (Healthcare Improvement Scotland, 2015). The current Scottish chronic pain management guidelines (SIGN, 2013) advocate that referral to a Pain Management Programme (PMPs) be considered for patients. These programmes promote behaviour change and increase well-being, using cognitive behavioural principals, in a group setting (British Pain Society, 2013). The efficacy of PMPs has been demonstrated (Peters & Large, 1990, Morley et al., 1999 & Guzmán et al., 2001,) and cost-effectiveness observed (Turk, 2002). There is however, no published research investigating the experiences of patients attending PMPs. This is despite evidence that patients' views and levels of satisfaction, particularly in regard to the quality of their health care, can impact clinical outcomes and drop-out rates (Prakash, 2010). Patient views are a central component of the NHS Quality Strategy (Scottish Government, 2012) to service improvement, it is therefore important such factors are investigated.

Aims

a) To assess PMP patients' beliefs about their pain and b) to evaluate patients' experiences of their PMP experience.

Methods

A convenience sample of 60 patients who had attended an NHS Borders PMP programme between March 2014 and July 2015 were contacted by the Pain Management Service, and asked to take part in a 1:1 semi-structured telephone interview. Recordings were transcribed verbatim. The data was then analysed using the six key phases of thematic analysis, described by Braun and Clarke (2006). Inter-rater reliability was ensured by a 2nd coder analysing 10% of the data.

Results

11 patients took part in the interviews. Data was clustered into 2 main themes. Theme 1: Evaluation of the PMP, with sub-themes: a) usefulness of content, b) benefits of the group setup and c) Delivery of the PMP. Theme 2: Illness beliefs, with sub-themes: identity, cause, consequences, controllability and curability and emotional representation.

Conclusion

Analysis indicated that patients found attending a PMP a useful experience. Being part of a group appeared to have a positive effect on patients' psychological wellbeing. Beliefs about pain related strongly to a bio-psychosocial understanding. The physical, psychological and occupational consequences, of living with chronic pain, were underpinned by a sense of loss, with some evidence of acceptance demonstrated. Conclusions are restrained by small sample size and potential impact of bias. However, findings suggest that further research into this area is required.

053

A QUESTIONNAIRE SURVEY ON THE SELF-REPORTED USE OF TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION (TENS) BY PHYSIOTHERAPISTS IN THE KINGDOM OF SAUDI ARABIA

Category: Interventional Pain Management

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Background

Transcutaneous electrical nerve stimulation (TENS) is used throughout the world to manage pain. Most information about the use of TENS in clinical practice has been derived from 'western' countries. Surveys on clinical practice have been conducted in India (Banerjee and Johnson 2013) and Sri Lanka (Dissanayaka et al. 2014) but there have been no investigations into the use of TENS in the North Africa and the Middle East region. In the Kingdom of Saudi Arabia TENS is readily available without prescription and is also a treatment option available to physiotherapists. Practices, attitudes and beliefs about TENS for pain management are not known.

Aims

The aim of this retrospective cross-sectional survey was to gather information about the clinical use of TENS by physiotherapists in the Kingdom of Saudi Arabia. The questionnaire was designed to also collect information about attitudes and beliefs of physiotherapists about the effectiveness and safety of TENS.

Methods

The study was designed as a retrospective cross-sectional paper-based questionnaire survey. The questionnaire was designed by the authors based on previously published TENS questionnaires (Banerjee and Johnson 2013; Dissanayaka et al. 2014). The questionnaire gathered information on the: Demographics and current case load; pain management practices; clinical experience of using TENS in practice including TENS techniques; and the policy and operational procedures of their clinic about using TENS. The questionnaire was written in English with 45 open and closed-ended questions with an estimated time for completion of 20 minutes. The questionnaire was distributed by hand to 110 physiotherapists working in the physiotherapy department of the Security Forces Hospital and Clinic in Riyadh. Physiotherapists were asked to complete and return the questionnaire within 2 weeks. Data was collected and analysed using descriptive statistics.

Results

Fifty eight of 110 physiotherapists completed the questionnaire (response rate = 52.72%). Forty eight of 58 respondents (82.75 %)

believed that TENS was beneficial for relieving pain and 57 of respondents (98.28%) reported that they treated pain as part of their clinical workload. Forty one of 58 respondents (70.68%) reported that their clinic offered TENS treatment to their patients and 39 of these 41 respondents (95%) reported that they only administered TENS under supervision in the clinic. Thirty two of 33 respondents (96%) reported that TENS treatments usually lasted between 10-29 minutes. Twenty nine of these 33 respondents (87%) reported that they administered TENS using a strong but not painful TENS sensation and 32 respondents (96%) reported that they placed electrodes over the site of pain.

Conclusion

The findings were similar to surveys conducted in Hong Kong, Australia, India, Sri Lanka, Republic of Ireland, and England. TENS was used as an adjunct, predominantly for musculoskeletal pain, and there were no major cultural barriers to the use of TENS in Saudi Arabia. Interestingly, physiotherapists only delivered TENS treatment under supervision and patients were not advised to self-administer TENS at home. This is contrary to good practice guidelines suggesting a need for further education and training of health care professionals.

054

SAVING FLUOROSCOPIC IMAGES OF CHRONIC PAIN INTERVENTIONS ON PACS - AN AUDIT

Category: Interventional Pain Management

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Background

Fluoroscopy is a technique useful for guiding a variety of diagnostic and interventional procedures and provides real-time X-ray imaging. Fluoroscopic images may be stored as part of the patient examination and are useful to access at a later date for patient continuity of care. Patients have a right to inspect their images and obtain copies. Images are used not only for treatment but also for educational training, quality control and research purposes A facility has statutory obligations with respect to record retention and may face financial penalty and malpractice consequences for failure to retain images.

Aims

The audit aims to review if adequate fluoroscopic images were saved on PACS for Nerve root injections and Caudal Epidurals. The audit ascertains reasons for an inability to find images on the system with the possibility of a guideline/protocol on saving images leading to a change of practice

Methods

Data was collected retrospectively for 63 patients who had undergone nerve root injections and caudal epidurals, the two most commonly performed pain interventions, between December 2014 to February 2015. Where available, fluoroscopic images were reviewed and percentage of patients where no images were saved was documented. We also reviewed percentage of patients where inadequate images were saved i.e. only AP or only lateral.

Results

Of the 63 patients 54 (85%) had their images saved and of these 31(49%) patients had adequate images saved. Percentage of patients who had images saved was 79% 100%, 85% and 75% for caudal epidural, cervical, lumbar and sacral nerve root block respectively and of these the percentage of patients with adequate images saved was 21%,41%, 71% and 62% respectively.

Conclusion

Some of the common reasons for an inability to find images on the PACS system were equipment issues, Inexperienced Personnel, Saved images not transferring to PACS, staff forgetting to save images despite instructions and unclear instructions. A Departmental guideline on common pain procedures to increase knowledge and understanding of pain trainees and neuroradiology staff has been drafted. This would highlight the relevance of saving fluoroscopic images to staff and increase awareness of medicolegal implications.

055

AN AUDIT OF EPIDURAL STEROID INJECTIONS FOR THE MANAGEMENT OF PAIN OF LUMBAR SPINE ORIGIN

Category: Interventional Pain Management

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Background

Epidural steroid administration is a common non-operative management option for the treatment of lumbar radicular syndrome due to spinal stenosis, spondylosis, non-specific radiculitis, and spinal stenosis. The aim of epidural steroid placement is to produce high local concentrations at an inflamed nerve root. Pain relief is attributed to the anti-inflammatory effect of the steroid. These injections are recommended in patients with signs and symptoms of nerve root irritation. The interlaminar and caudal approaches are the most commonly utilised methods of performing an epidural injection. There is evidence to suggest however that the transforaminal route may have greater efficacy. Injections are usually performed under fluoroscopic guidance in an effort to enhance the safety and improve the accuracy of steroid placement.

Aims

To audit the indications for performing epidural steroid injections and evaluate the efficacy and complications of the intervention. We reviewed our current practice against the Standards of Good Practice for Spinal Interventional Procedures in Pain Medicine published by the British Pain Society in April 2015.

Methods

We undertook a retrospective audit of 67 patients between the period July 2014 and April 2015 who received epidural steroid injections for the first time. We recorded demographics, indication for performing the epidural steroid injection, injection approach and whether

fluoroscopic guidance was used. We documented whether patients had a British Pain Inventory (BPI) Score pre and post injection and whether they were followed up within a three-month period. We recorded complications and whether patients reported any benefit following injections.

Results

The commonest indication for injection was spinal stenosis (27 %), followed by foraminal stenosis (18%) and nerve root compression secondary to disc prolapse (18%). 97 % of patients received injections using an interlaminar approach. 100 % of injections were performed using fluoroscopic guidance. 84 % of patients were followed up within three months, 8 % were followed up after three months and 8 % received no follow up. Complications were reported in 7 % of patients. Complications included: dural puncture, severe pain requiring hospital admission, a vasovagal episode and a failed interlaminar approach requiring conversion to a caudal epidural. Pre-injection BPI scores were documented in 4 % of patients and post-injection BPI scores were documented in 1 %. Of the patients followed up 58 % reported benefit as documented in clinic letters following injection, 6 % reported minimal benefit and 28 % reported no benefit.

Conclusion

The main findings from this audit indicate that improvements can be made with regards to recording outcome measures with regards to epidural steroid injection. The adoption of a transforaminal approach may improve the outcome from this intervention. In keeping with best practice we are performing all interventions under fluoroscopic guidance to enhance safety and accuracy of steroid placement. The audit demonstrates that the vast majority of patients are followed up within three months.

056

OUTCOMES OF RADIOFREQUENCY TREATMENT IN TREATING SACROILIAC JOINT PAIN

Category: Interventional Pain Management

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Background

Sacroiliac joint (SIJ) can be a source for low back and buttock pain in 10 to 27% of patients with chronic low back pain. The joint is innervated predominantly by sacral lateral plexus, formed by branches of posterior primary rami of lumbosacral roots; innervation can be variable. Variety of treatment strategies are followed for SIJ pain but good quality evidence for these including radiofrequency (RF) denervation techniques is either fair or not available.

Aims

In the absence of good quality evidence, we aimed to measure outcomes of SIJ denervations to appraise our own practice in Aberdeen. This snapshot audit measured the outcomes of SIJ denervations, based on success rate and the duration of benefit as evaluated in routine follow up clinic or telephonic reviews.

Methods

We retrospectively collected data for a period of 2 years. Two different techniques were used in Aberdeen Royal Infirmary for SIJ denervation - Simplicity™ RF (SIM) & SInergy™ Cooled RF(CRF). Patient choice and clinician expertise determined the chosen technique. The diagnostic paradigm ranged from single intra-articular SIJ injection to comparative set of L5 dorsal ramus, S1, S2 and S3 lateral branch blocks. All patients were followed up with either a telephonic review and / or outpatient basis subsequently. The effectiveness was assessed based on documented global impression of change scale or percentage benefit noted during review. The last known benefit was carried forward, if the patient had not requested for a follow-up or was not referred back to the pain clinic by their GP in the period ending 2 years.

Results

As it was a snapshot audit in time, we omitted the most recent patients awaiting their 1st follow up. Twenty seven patients, who had the procedure from the preceding 2 years and had at least one follow up, were included. Out of the 27 SIJ RF procedures, two Simplicity (SIM) procedures were abandoned due to anatomical difficulties, thus they were excluded from further analysis. Four patients (16%) did not report any benefit (SIM-3, CRF-1). Ten patients (40%) reported ongoing benefit at 9 months, 11 patients (44%) had 6 months plus benefit and 56% had 4 months plus benefit. The median duration of benefit was 7 months. The median duration of benefit in patients undergoing simplicity RF denervation was 5 months, and for those undergoing cooled RF was 10 months.

Conclusion

Based on this retrospective snapshot audit in time, we could assure that at least 40 % of our patients achieved moderate to long term benefit with SIJ denervation in general. The audit highlighted a long duration of benefit (median of 10 months) with cooled RF. But being an audit and having stringent patient selection for patients undergoing CRF, we would defer to compare the outcomes of the two techniques. Our audit helped us to appraise our methods of patient selection & SIJ RF techniques and allowed us to modify our practice to achieve better outcomes for SIJ pain.

057

INDEPENDENT VALIDATION OF THE PAIN PLAN: BENEFITS OF SELF-MANAGEMENT IN A MULTI-DISCIPLINARY PAIN TEAM

Category: Interventional Pain Management

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Background

The Pain Management Plan (PP) is a brief cognitive behavioural self-management (CBT) programme based on the use of specifically written patient workbook and relaxation CD programme to help people living with persistent pain. This can be facilitated as one to one or in a group. This CBT programme is an effective and low cost option designed to ensure more people receive prompt pain

management input. Consequently, the PP programme could form part of an early intervention using a stratified care approach to select people most likely to benefit. Evidence of PP efficacy has been reported. This evidence and training sessions delivered by Dr Cole and others has resulted in around 30 healthcare settings adopting the PP for use with persistent pain. The initial training session was in December 2011 hosted by the County Durham Pain Team (Co. Durham PT) who conducted the independent service evaluation reported here.

Aims

1. To provide an evaluation of the PP as delivered in a busy NHS Pain Team and compare these with the findings reported by Cole et al.
2. To examine which, if any, groups of patients may particularly benefit from this CBT based programme

Methods

All PP participants were under the care of multi-disciplinary Co. Durham PT, would have undergone a medical assessment and fulfilled the inclusion/exclusion criteria of the Pain Management Programme guidelines. The PP delivery and evaluation closely followed regimen by Dr Cole et al. The NHS trust approved this study, since, all participants had given written and informed consent for data collection. Two quantitative recognised pain measures were used, which were the Pain Self-Efficacy Questionnaire (PSEQ) and Brief Pain Inventory (BPI). Other measures included: an assessment of main problems associated with persistent pain (Health Needs Assessment) and also an evaluative questionnaire. Reliable change is defined as a baseline value from which a participant had 'improved', and determined using a Morley et al. method and computer programme. Due to variation across each BPI domain, 2 points improvement was generically attributed as reliable change.

Results

The Co. Durham PT evaluation has run from December 2012 until August 2015 and has 69 participants compared to 88 in the original evaluation. The percentage of reliable change in PSEQ scores was 33% in the Co. Durham PT evaluation, and 52% in the original evaluation. However, the Co. Durham PT population has a mean 7 point lower pre PSEQ score. 23-43% achieved reliable change in BPI interference domains. Interestingly, sleep (25%) and walking (23%) had the lowest percentage of BPI reliable change across the whole population despite being in the top three HNA problems for so many people. Mood (43%) had the highest percentage change in the BPI scores but of those who cited mood as in their top three HNA problem, only 23% had reliable change in this domain. Positive patient feedback was gained from the 7 closed evaluative questions with comparable percentages of patient satisfaction observed.

Conclusion

The clinically significant benefits and high patient appreciation reported by the developers of the PP are equally observed when the PP is used as part of a routine service provision with the NHS (following 1 day staff training). The PP can be used as an early intervention and part of a stratified care approach. Some groups of people were identified who may need further input following the PP; these included those identifying mood, walking or sleep as one of their top three problems to change. A random controlled trial is required before these results could provide evidence of efficacy.

058

PATIENT SATISFACTION SURVEY FOR PATIENTS HAVING LUMBAR FACET MEDICAL BRANCH RADIOFREQUENCY DENERVATION (RFD) IN SPECIALIST PAIN MANAGEMENT CENTRE

Category: Interventional Pain Management

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Background

RFD of the lumbar medial branch is a common procedure for the treatment of facetogenic low back pain. However, patients' experience with RFD has not been examined thoroughly.

Aims

Our objective was to evaluate patient satisfaction with our RFD service.

Methods

After departmental approval and informed consent, 105 questionnaires (15 questions) were posted to patients eight weeks after lumbar RFD. Patients rated their experience scoring change in pain intensity, ability to carry out day-to-day activity, distress due to pain, percentage of pain relief achieved, and overall value to their care.

Results

Data was collected from 70 patients between January and June 2014. 59% of patients rated pain intensity as improved or much improved. 56.5% of patients stated pain reduction between 30% and 100%, and 30.5% had 50% or more pain relief. 37% of patients rated their day-to-day activity as improved and 48.5% remained the same. 44.5% of patients rated their level of distress due to pain as improved, with 37% no change.71.5% of patients rated the value of RFD as quite or extremely helpful for their care overall.

Conclusion

Our study showed that patient satisfaction with RFD was high and most patients had pain improvement. However, reduction of pain may not be matched by reduction of distress or improvement of day-to-day activity. Additional interventions such as physiotherapy and multidisciplinary pain management programme, which may be offered in tandem with the RFD procedure, may further optimise RFD outcomes.

059

A SURVEY OF 7.5 YEARS OUTCOME OF SPINAL CORD STIMULATION THERAPY

Category: Interventional Pain Management

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Background

Spinal cord stimulation (SCS) has been used for refractory neuropathic pain over decades. However, evidence on long-term SCS outcomes is still lacking. In 2008 we changed to use rechargeable devices. We present demographic and outcome data of SCS patients treated with one manufacturer's devices by our multidisciplinary team for the period between January 2008 and July 2015. From 01/2008 till 07/2011 clinical information was recorded mostly retrospectively (retrospective cohort) and number of parameters was limited. Thereafter, prospective data collection was introduced initially with creation of local database, which eventually become a prototype for national register. These two databases (prospective cohort - about 3/4 of all cases) contain baseline assessments and regular follow-up records which include diagnoses, pain scores, Brief Pain Inventory and EQ5D questionnaires, time when neuropathic condition became refractory to conventional treatment, technical details and demographics.

Aims

We were aiming to collect and analyse long-term outcomes of a large cohort of patients with a variety of diagnoses treated with SCS. We were interested in patient's perception of treatment and their reports of success or failure of therapy. This project was qualified as a service evaluation.

Methods

By searching our SCS database and registries we identified 320 patients who attempted SCS therapy with following breakdown: 277 with SCS in situ; 22 negative trials and 4 infected trials (3 were reimplanted); 21 explanted SCS (1 was reimplanted). We perform a staged trial before SCS implantation. The majority had a one (rarely two) week trial; about 15% of patients had on the table trial only. We undertook a postal Survey, asking about patient's demographics; SCS mode of usage and recharging routine; pain scores, assessment of functional status and quality of life; patient's global impression of the SCS therapy. The protocol included one round of questionnaire postage; followed by telephone call of non-responders, and second postage round. We are presenting data at the end of the 2nd postage round. Baseline (pre-implant) parameters of Brief Pain Inventory (BPI) and EQ-5D were collected and compared only in Prospective cohort.

Results

There were 299 patients who had their SCS implanted. The trial-to-implantation conversion rate was 93.4%. Explantation rate for inadequate benefit since implant or disease progression was 4.3%. Rate of infection requiring removal in SCS trial was 1.25%. Out of four infected one patient was re-implanted when infection was cured. Infection rate for SCS implants was 1.67%. Of five patients with infected and explanted SCS three were re-implanted and one deceased. The cohort with SCS in situ shows 1.3:1 female predominance; mean age - 54.5 years; mean number of months since implantation - 33.6 (range 1-90 months). We received 197 replies from patients with SCS in situ (71.1% response rate). 190 patients reported having their pain relieved by SCS: 41 patients - some; 46 - moderate; 80 - much; and 17 – complete relief. That makes 95.8% positive result. The pain scores, BPI and EQ-5D domains significantly improved with SCS treatment.

Conclusion

The list of diagnoses included Failed Back Surgery Syndrome (66%), Peripheral mononeuropathy of traumatic or post-surgical origin (8.0%), CRPS type I (8.6%) and II (3.0%), refractory angina (3.0%). Reported improvement in objective parameters correlate well with numbers of patients who considered themselves being better with SCS (90.1%); would have done it again (91.9%); would have wanted SCS treatment earlier (97.0%); achieved goals of SCS therapy (95.4%). The mean gap between implantation and the time when pain became refractory to treatment was more than seven years.

060

EARLY AND LATE SPINAL CORD STIMULATION COMPLICATIONS AND IDENTIFICATION OF REVERSIBLE FACTORS INCLUDING IMPACT OF PSYCHOLOGICAL ASSESSMENT

Category: Interventional Pain Management

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Background

Spinal cord stimulation (SCS) has been used to treat painful conditions since 1967. Evidence exists mainly for patients with failed back surgery syndrome (FBSS) or complex regional pain syndrome (CRPS). The failure rate of SCS is dependent on multiple factors including complications and inadequate benefit from stimulation. A trial period, typically lasting one-two weeks, allows for assessment of response, including tolerability and degree of pain relief, to determine which patients will benefit from permanent implantation. The average complication rate has been reported as 34%. Complications associated with SCS include electrode migration, infection, electrode fracture, failure of extension wire or implantable pulse generator, dural puncture with cerebrospinal fluid leakage, pain over stimulator site, spinal epidural haematoma, along with others. Patient psychological factors contribute to the success of SCS and best practice is to carry this out before proposing SCS as a therapy.

Aims

Good medical practice involves assessing quality of care through audit. This was an audit of early and late SCS neuromodulation complications and identification of reversible factors in a district general hospital. The impact of psychological assessment on outcome at one year was also assessed.

Methods

The last 51 patients undergoing SCS had their case notes retrospectively audited for psychological assessment, failure rates and

complications. Three palliative care patients were excluded as their pains were managed with only a trial lead that remained in situ until their death. One other patient had died and the notes could not be retrieved. The notes of 47 patients who underwent a trial of stimulation before permanent implantation were reviewed. The data collected included:

1. Indication for trial of SCS
2. Outcome of pre-operative assessment
3. Success rate of trial and reasons for failure
4. Type of system used
5. Infection rate
6. Electrode movement
7. Lead breakage
8. Implantable pulse generator (IPG) site pain Dural puncture

Results

Forty-seven patient notes were analysed. Indications for neuromodulation included peripheral neuropathic pain (27%), FBSS with predominant radicular pain (21%), CRPS (13%), FBSS with predominant back pain (6%), headache (6%), angina (4%), mechanical back pain (2%), other (17%). All patients had a trial of stimulation lasting either one week (60%), two weeks (30%) or longer (10%). Successful trial of stimulation was more common in patients with positive psychological assessment (92%) compared with patients with either no assessment or concerns (52%). Lack of neuromodulation efficacy at one-year follow up was higher in patients with no assessment or concerns (25%) when compared to patients with positive psychological assessment (5%). Eleven patients failed at the trial stage (23%). Five of these did not have psychological assessment (45%), two had some concerns identified by assessment (18%) and four had positive psychological assessment (36%). Complication rates were within acceptable limits.

Conclusion

Patient selection for neuromodulation aims to identify those who will benefit from this evidence based but invasive and expensive technique. Failure to derive benefit from neuromodulation is higher in patients who do not undergo pre-implantation psychological assessment or who have concerns raised when assessment does occur. Psychological assessment is now carried out in our unit in all patients with chronic benign pain when a trial of SCS is considered. This will enable better targeting of resources and reduce unnecessary exposure to the risks associated with neuromodulation for those patients who are unlikely to be afforded benefit.

Management (Audit)

061

MULTIPLE AUDIT CYCLES RESULTING IN IMPROVED POST-OPERATIVE PAIN AND INCREASED RATES OF DAYCASE BUNION SURGERY

Category: Management (Audit)

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Background

Daycase surgery results in improved theatre efficiency, reduced costs to the hospital provider and high patient satisfaction (1). The British Association of Day Surgery suggests that 85% of bunion operations can be performed as daycase procedures (2). The major barrier to daycase bunion surgery is significant post-operative pain (3). A variety of techniques have been used to counter pain after bunion surgery, including opioids and continuous regional anaesthesia, but they are not always tailored to the daycase setting (4,5). It is likely that a standardised approach involving multimodal analgesia will produce pain relief sufficient to allow patients to have daycase surgery (6). Improved pain management combined with organizational changes may result in higher rates of daycase bunion surgery.

Aims

A multidisciplinary team comprising of pain medicine specialists, anaesthetists, physiotherapists, a nurse specialist and surgeon performed three audit cycles aiming to improve post-operative pain and the rate of daycase bunion surgery.

Methods

Three audit cycles were completed over a 2 year period, comprising a total of 80 patients undergoing bunion surgery in a single hospital. All patients underwent unilateral bunion surgery by a single surgeon, under general anaesthesia with an ankle block. Data collection covered the 2-week post-operative period and focused on pain scores, analgesic requirements, medication side-effects, perceived ability to cope at home and satisfaction scores. Audit Cycle 1 – Standardised peri-operative (paracetamol/ibuprofen/tramadol) analgesics + post-operative co-codamol Audit Cycle 2 – Earlier post-operative physiotherapy + oxycontin 10mg BD on discharge Audit Cycle 3 – Patients listed for surgery in the morning + Paracetamol/ibuprofen/codeine on discharge

Results

We included 35 female and 45 male patients, with an average age of 64 years. Standardisation of peri-operative analgesics reduced post-operative pain at 6/12/24 hours by 12/14/10% from baseline (Audit 1). Early physiotherapy improved discharge rates from 17% to 30% but oxycontin resulted in a 22% increase in medication side-effects, with minimal improvements in pain scores (Audit 2). Further optimisation of discharge medications reduced severe (VAS>7) post-operative pain at 24 hours from 34 to 14% (Audit 3) and improved the number of patients who felt they could cope at home (33% up to 72%). Satisfaction scores were maintained at over 95% throughout the audit cycles. The daycase rate for bunion surgery increased from 17% to 32% over the audit cycles.

Conclusion

Post-operative pain is the most significant barrier to performing daycase bunion surgery. A multidisciplinary team used three audit cycles to optimize peri-operative and discharge analgesics and reduce post-operative pain; this resulted in an increase in the rate of daycase bunion surgery. This is an example of how multiple audit cycles and collaboration between pain medicine professionals and other specialties can result in objective improvements in pain parameters and improved daycase rates.

062

EVALUATION OF THE SERVICE PROVIDED TO NEUROPATHIC PAIN PATIENTS TREATED WITH GABAPENTIN GEL, GABAGEL(TM)

Category: Management (Audit)

Authors: Dr Valentina Jansen - Department of Anaesthetics Royal Gwent Hospital, Newport, Wales, UK, Dr Sarah Hiom - Department of Pharmacy University Hospital of Wales, Cardiff, UK, Dr Sharmila Khot - Department of Anaesthetics and Pain Management University Hospital of Wales, Cardiff, UK

Background

Neuropathic pain remains a challenging condition to manage. Gabapentin is a voltage-gated calcium channel blocker which is licensed and commonly administered orally for the management of neuropathic pain. It may however be associated with intolerable side effects in some patient groups which prevents therapeutic doses from being achieved.Topical drug delivery is considered a safer, viable alternative to oral dosing where lower doses can be delivered directly to the site of action. GabaGel(TM) is a topical presentation of gabapentin which has been developed and manufactured as a "Pharmaceutical Special" and subsequently trademarked, in collaboration with St Mary's Pharmaceutical Unit, a NHS pharmacy manufacturing unit. Patients who present with neuropathic pain which is refractory to conventional therapies, are treated with GabaGel(TM) if deemed clinically appropriate. To assist with future prescribing of this product, a service evaluation was designed to assess efficacy, tolerability, and patient and disease groups who are responders.

Aims

Our aim was to assess the demographics of patients prescribed GabaGel(TM), including age, indication for GabaGel(TM) and concomitant analgesia used by patients. We also assessed efficacy, tolerability, duration of efficacy, reasons for discontinuation and impact on quality of life measures.

Methods

Regulatory approval was obtained in the form of service evaluation where no ethics approval was required. Patients attending the pain clinic and treated with GabaGel(TM) (n=148), between 2012 and 2015 were identified through pharmacy records. A postal questionnaire was developed and posted to patients. This included questions on current use of GabaGel(TM), initial and current efficacy, duration of efficacy, concomitant medications and their effects on pain severity, reasons for discontinuation, side effects experienced, and quality of life impact. Patients were sent a letter alongside the questionnaire informing them of the rationale behind the evaluation. They were also informed of planned telephone follow-ups in 3 months' time for incomplete or non-returned questionnaires. Data from returned completed questionnaires was uploaded on a spreadsheet and analysed using IBM SPSS Statistics Package. Any queries from patients regarding ongoing GabaGel(TM) supply were referred to the Pain Clinic.

Results

Return rate was 50% (74/148). Indications included general neuropathic pain (GNP) 35.1% (26/74), postherpetic neuralgia (PHN) 14.9% (11/74), trigeminal neuralgia (TGN) 8.1% (6/69), chronic facial pain (CFP) 5.4% (4/74), and complex regional pain syndrome (CRPS) 10.8% (8/74). Pain relief of greater than 30% at one month was seen in CFP 50% (2/4) patients, CRPS 25% (2/8) patients, Peripheral Diabetic Neuropathy (PDPN) 100% (1/1), GNP 34.6% (9/26) patients, PHN 45.5% (5/11), and TGN 33.3% (2/6). Ongoing pain reduction of over 30% was seen in GNP 30.8% (8/26), PHN 45.5% (5/11), and TGN 33.3% (2/6). Of the patients still using GabaGelTM , 73.7% (14/19) continued to experience between 40-100% pain relief. GabaGel(TM) continues to be used by 25.7% (19/74) respondents while 51.4% (38/74) discontinued due to lack of efficacy. Severe nausea was cited as a reason for stopping in 1.4% (1/74), and local irritation in 5.4% (4/74).

Conclusion

The interim results are encouraging. A mixed response pattern is emerging, possibly attributable to inclusion of patients with a diverse range of pathologies unresponsive to standard medications. Refractory PHN and TGN appear responsive to GabaGel(TM). The overall incidence of systemic and local side effects is low and GabaGel(TM) may be a useful alternative in patients with comorbidities and the elderly. Incomplete questionnaires will be followed up with telephone interview. Patient case notes will also be examined and relevant data pooled to create a responder profile. This survey exposed a lack of a robust mechanism to evaluate unlicensed medications.

063

SIX MONTH TRIAL OF TELEPHONE HELPLINE FOR AIDING MANAGEMENT OF CHRONIC PAIN PATIENTS

Category: Management (Audit)

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Background

Chronic pain is becoming a rising burden on the NHS with increasing numbers of patients being referred into specialist pain services. Alongside this there has been limited, or no expansion of services, giving rise to long waiting lists for appointments. We wanted to explore a strategy to see if the need for face to face outpatient appointment, with either a consultant or nurse specialist, can be alleviated. This would mean the ability to respond in a more timely manner to patient issues, prompt formulation of treatment plans and hopefully improving experience of care.

Aims

Trial of a dedicated, non-urgent helpline run by clinical nurse specialists for current chronic pain patients. Aim to form part of the treatment package, reducing need for follow up outpatient appointments.

Methods

Helpline number distributed to current chronic pain patients on all of their correspondence from the chronic pain department. It was also used as part of the discharge pathway, where patients being discharged from the service continued to have access to this resource

for up to six months. This number accessed an answerphone, where a message is left and the patient is called back within five days by a nurse specialist. All the messages were logged, notes reviewed, patient contacted and treatment plan formulated and then a letter dictated. After six months the service was reviewed with all of the cases examined in detail to establish whether this service had reduced a need for an outpatient appointment.

Results

93 patients contacted the service over six months, of these 43 were deemed not appropriate as they were outpatient enquiries for other specialities, and not counted in further analysis. Of the 49 appropriate referrals, 15 contacts (31%) did not save an outpatient appointment. These were either checking details of upcoming appointments or clarification of details which a patient would not have made an outpatient appointment for. 34 contacts (69%) were deemed to have saved the patient an outpatient appointment, treatment plans were formulated and distributed to the patients and their GP. 8 of these contacts required discussions between the nurse specialists and the consultants.

Conclusion

This helpline offers a way of providing valuable patient support in a time and cost effective manner. Majority of patients already use the service appropriately, and this number could be improved with a number of minor changes. Nearly 70% had a clinical need that was met, reducing waiting times. It also provided security for discharged patients by giving another element of a coping strategy. To ensure the continuation of this service secure funding is needed for the nursing time required. This type of service is offered within other disciplines and we believe the efficiency of our service can be demonstrated.

064

AN ANALYSIS OF SECONDARY AND TERTIARY PAIN SERVICES FOR THE BRITISH FORCES GERMANY COMMUNITY

Category: Management (Audit)

Authors: Daniel Graham - Department of Anaesthesia Critical Care and Pain Medicine University of Edinburgh, Jane Heywood - Department of Anaesthesia Critical Care and Pain Medicine University of Edinburgh

Background

Secondary and tertiary healthcare services for patients with non-malignant persistent pain in the British Forces Germany community are provided by three independent organisations: Guys and St Thomas' NHS Trust (GSTT) and Defence Medical Rehabilitation Centre (DMRC Headley Court) in the UK, and Evangelisches Krankenhaus Bielefeld (EvKB) in Germany. Civilians are referred to GSTT and service personnel to DMRC which forms part of a separate military healthcare pathway. Both civilian and military patients may be referred to EvKB. Inherent cultural and organisational differences at these providers adds complexity to decision making when considering the most appropriate service for a particular patient. To optimise referrals it would be helpful to have up-to-date knowledge about pain services at each organisation and an understanding of how pain assessment and management is approached. Approaches of interest were related to the biomedical versus biopsychosocial model, and a pain mechanism-based versus patho-anatomical (aetiological) approach.

Aims

To gain up-to-date knowledge about pain services available at each provider organisation and understand how pain assessment and management is structured and approached. To understand how the approaches used at each organisation compare against each other and against recommendations from current UK clinical practice guidelines and the pain management literature.

Methods

Clinical visits of three and four days respectively were made to pain services at GSTT London and DMRC Headley Court in the UK (November 2014), and four days to pain services at EvKB Bielefeld in Germany (January 2015). Information was collected from observations of clinical pain assessment and management activities, informal discussions with clinical staff, and from relevant organisational documents. This was organised into common themes and categorised to produce evidence of approaches used and services provided to inform a reflective review and comparison of pain service provision. Two narrative reviews of the pain management literature (using PubMed, CINAHL and PsychINFO, 2010-April 2015) and UK clinical practice guidelines for persistent non-malignant pain in adults were undertaken. These aimed to gauge the extent of evidence supporting use of the biomedical versus biopsychosocial models and a patho-anatomical (aetiological) versus mechanism-based approach. Reflective accounts of clinical visits were compared with these narrative reviews.

Results

Residential pain management programmes are offered by all three organisations. These vary in length, leadership, structure and setting. Outpatient pain clinics and various tertiary pain services are also provided, the most extensive range of which are from GSTT. EvKB and DMRC use a Cognitive Behavioural Therapy approach whereas GSTT uses an Acceptance and Commitment Therapy approach. All organisations use a biopsychosocial approach to assess and manage persistent pain despite variations in service structure, staffing and culture. The degree to which all professions within a service use biopsychosocial principles varies and some services predominantly use a biomedical approach. Evidence supports clinical application of a biopsychosocial approach. Both mechanism-based and patho-anatomical approaches are considered at all organisations, but this varies according to clinician role, background and education. Evidence supporting a mechanism-based approach is growing but requires further development for its clinical potential to be realised.

Conclusion

Pain management at each organisation is led by a different profession, each equally successful. Whilst all organisations use a biopsychosocial approach the extent to which this extends to less specialist staff in the same service requires further research. A mechanisms-based approach is considered important by many clinicians but a patho-anatomical approach appears equally popular. Addition of a mechanism-based approach to existing patho-anatomical practices may allow for more individually tailored pain management in some clinical areas. Effects of cultural differences on patients should be considered prior to referral.

Management (Research)

065

NATIONAL SURVEY OF MULTIDISCIPLINARY PAIN SERVICE PROVISION IN THE UNITED KINGDOM AND IRELAND

Category: Management (Research)

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Background

Chronic pain places a substantial socioeconomic and health burden on society across the globe. Indeed, the prevalence of chronic pain in Europe is reported to be 19%. The scale of the problem is set to increase in-line with the aging population and this is compounded by a trend towards increasingly complex pain disorders, making the need for a multidisciplinary team (MDT) approach more critical than ever. This has been acknowledged by national standards that highlight the imperative for multidisciplinary working and underlined by the National Pain Audit in 2012. Inconsistencies in the availability and quality of services have been noted, as have lengthy waiting times for appointments and lack of awareness of the Pain Clinic role. Sadly, the profound misperception that there are no immediate health consequences from deficiencies in chronic pain service delivery has led to chronic pain funding provision falling behind other long-term conditions.

Aims

This survey was performed in order to gain a pragmatic snapshot of current service provision in all known adult chronic pain clinics in the UK and Ireland, and to gauge what variations in multidisciplinary staffing provision and frameworks exist in this age of austerity.

Methods

The questionnaire was developed by the authors to assess and compare the pain service provision across the UK and Ireland. The aim was explore the provision of multidisciplinary working and the presence and roles of different healthcare professionals. The questionnaire utilised the website www.surveymonkey.com. Using the National Pain Audit search tool we identified 188 clinics in England, Scotland, Wales and Northern Ireland and 15 clinics in the Republic of Ireland. In addition, we maximised data capture and clinic inclusion by emailing the Pain Consultants Google Group, which has approximately 500 members, the vast majority being based in the UK. Two of the authors contacted clinics directly by telephone and email to facilitate completion of the survey. The authors spoke directly with Pain Medicine Consultants or Pain Nurse Specialists via the telephone in order to complete the survey. Data was collected over a three-month period from June-August 2015.

Results

The survey was completed by 137 of the 188 clinics contacted (response rate of 72.8%). 85% of pain clinics surveyed had a multidisciplinary-team (MDT) clinic. MDT clinics often include team meetings to discuss complex cases to utilise the expertise of the different professional groups. Of our survey responders, 3% had daily MDT meetings, 42.5% had weekly meetings, 22% had monthly meetings, 4.5% had them sporadically and 28% had no structured MDT meetings. 78% of responders found the MDT meetings helpful to their practice, while 17% did not and 4% were undecided regarding their usefulness. The survey examined numbers of staff that constituted the MDT. The median numbers (and range), for various health professionals were: pain consultants 4(0-21), physiotherapists 2(0-7), specialist nurses 3(0-20), psychologists 1(0-7) and psychiatrists 0(0-2.5). Of non-consultant led clinics, 74% of clinics had specialist pain nurse led, 48% physiotherapist led and 47% had psychologist led clinics.

Conclusion

The 2013 NHS England report, states that specialist pain services must offer multispecialty and multidisciplinary pain clinics. This survey provides a snapshot of pain service provision nationally and has a high response rate, giving it relatively high validity. The majority of Pain Clinics utilise a MDT approach. However, the provision of critical components such as regular MDT meetings is highly variable as is the composition of clinicians from the respective disciplines within each clinic. This survey highlights the need for incorporation of greater MDT working locally and nationally and allocation of appropriate resources to facilitate this.

066

A BLINDED RANDOMISED TRIAL OF ACUPUNCTURE COMPARED WITH A 'PLACEBO' NEEDLE ON THE SYMPTOMS OF OSTEOARTHRITIS OF THE KNEE

Category: Management (Research)

Authors: Emad Tukmachi - Rheumatology Birmingham University

Background

Acupuncture has profound lasting effects on pain and stiffness of knee osteoarthritis, alone or with conventional drugs. Our previous Randomised Controlled Trial (1)* allows us to continues a research programme that dissects out the relative importance of the various components of the treatment process. (1)* Tukmachi E, Jubb R, Dempsey E, Jones P. (2004) The effect of Acupuncture on the symptoms of knee osteoarthritis-an open randomized controlled study. Acupunct Med 22(1); 14-22.

Aims

Objectives: To compare the effect of acupuncture with that of a 'placebo' needle on patients with osteoarthritic knee pain and disability who are blind to the treatment.

Methods

Methods: Acupuncture naïve patients with symptomatic and radiological evidence of osteoarthritis of the knee were randomly allocated to a course of either acupuncture or sham acupuncture using a sheathed 'placebo' needle system. Acupuncture points for pain and stiffness were selected according to acupuncture theory for treating Bi syndrome. Both manual and electrical stimulation were used.

Response was assessed using the WOMAC index for osteoarthritis of the knee, self-reported pain scale, the Euroquol score and plasma Beta-endorphin. The effectiveness of blinding was assessed.

Results

34 patients in each group. The primary end point was in WOMAC pain score change after the course of treatment. Comparison between treatment groups gave a significant improvement with acupuncture (mean difference 60, 95% confidence interval (CI) 5 to 116, P= 0.035). Within the acupuncture group there was a significant pain improvement (baseline 294, mean change 95, 95% CI 60 to 130, P< 0.001) which was not seen in sham acupuncture (baseline 261, mean change 35, 95% CI -10 to 80, P =0.12). Similar effects within group, but not between groups, were seen with the secondary end points of WOMAC stiffness, WOMAC function, and self- reported pain scale. One month after treatment the between group pain difference had been lost (mean difference 46; 95% CI -9 to 100, P= 0.10) although the acupuncture group was still benefiting compared to baseline (mean difference 59; 95% CI 16 to 102, P= 0.009).

Conclusion

Conclusions: Acupuncture gives symptomatic improvement for patients with osteoarthritis of the knee, and is significantly superior to sham acupuncture. The study did not confirm earlier reports of release of plasma endorphin during acupuncture.

067

IMPLEMENTING 'MINDFUL MOVEMENT' IN PAIN MANAGEMENT

Category: Management (Research)

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Background

Kinesophobia is well recognised as a contributing factor in chronic pain [1]. Traditionally, physical based exercise has been performed without the recognition of such fear and avoidance to movement. Therefore, following the initiation of feedback from patients and clinicians on the physical based stretch class the concept of mindful movement was explored. Mindful meditation and movement strategies have been demonstrated to reduce pain and can improve quality of sleep, fatigue levels and overall quality of life in patients with chronic pain [2-3]. Mindfulness based stress reduction programmes (MBSR) are typically 8 weeks in duration and can be taught in conjunction with mindful movement to fulfil the physical exercise component of a PMP. To date there is no literature looking at a mindful movement group session within a PMP.

Aims

To design and evaluate the introduction of mindful concept into physical based exercises as part of a Pain Management Programme (PMP).

Methods

Components that constitute mindful movement were identified in the literature and these were implemented into a class named 'Your Move'. The class runs for 30 minutes 3 times per week over 3 weeks as part of a residential PMP. 'Your Move' includes three main principles: body scanning, breathing focus and exploring gentle movements and is inclusive of all levels of functional ability. A training programme for clinicians delivering the class was completed prior to implementation. Twenty four patients attended the 'Your Move' class as part of the PMP. Qualitative data was collected through patient satisfaction questionnaires and clinician feedback. Quantitative data was also gathered through the multidimensional assessment of interoceptive awareness survey (MAIA) [4] pre and post PMP.

Results

Analysis demonstrated high levels of both patient and clinician satisfaction in the delivery and format of the 'Your Move' class. Early analysis of the MAIA outcome tool indicated a statistically significant difference in the constructs for Attention Regulation (mean difference = 0.51, t=2.120(23), p=0.045, [95%CI 0.012-0.998]), Self-Regulation (mean difference = 0.823, t=3.602(23), p=0.002, [95%CI 0.350-1.296]), Body Listening (mean difference = 0.806, t=2.887(23), p=0.008, [95%CI 0.228-1.383]) and Trusting (mean difference = 0.848, t=3.404(23), p=0.002, [95%CI 0.333-3.404]) pre and post PMP. All other constructs were not statistically significant (p=>0.05).

Conclusion

Mindful movement can be useful in enhancing physical wellbeing in chronic pain. 'Your Move' can be easily implemented within a class based setting and by any member of the MDT. Further analysis is required on larger cohorts to establish its clinical effectiveness.

Methodology

068

A FEASIBILITY STUDY TO EVALUATE THE POTENTIAL OF MULTIMODAL IMAGING SYSTEMS IN COMPLEX REGIONAL PAIN SYNDROME

Category: Methodology

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Background

Complex Regional Pain Syndrome (CRPS) is a chronic pain condition which predominantly occurs after injury to a limb. It is

characterised by intense pain disproportionate to the initial trauma, and is associated with motor, sensory, trophic and autonomic changes. Pain in the absence of a peripheral cause, or disproportionate to the injury is thought to arise from central mechanisms. Studies have shown a direct relationship between perceived pain and the extent of cortical remapping, with pain reducing as the changes on the somatotopic map start to reverse. The structures vulnerable to cortical remapping are also integral to the motor planning system. A combination of non-invasive imaging measures of function and structure in the human brain are most effective to investigate central processing. The symptoms of CRPS, such as allodynia (a painful response to a normally non-painful stimuli) may limit tolerability of traditional imaging techniques.

Aims

To establish if patients with CRPS can tolerate multimodal imaging protocols. To refine these for future studies; functional Magnetic Resonance Imaging (fMRI), Magnetoencephalography (MEG), structural Magnetic Resonance Imaging, diffusion Magnetic Resonance Imaging. To collect preliminary data on motor and sensory function over time, informing the design of future studies.

Methods

Participants met CRPS type I Budapest research criteria, unilateral upper limb, $\geqslant$ 25 years and $\leqslant$ 58 years. Written informed consent was obtained and the study approved by relevant ethical committees. Data were collected on two or three time points at the Cardiff University Brain Research Imaging Centre, a minimum of 3 weeks apart to establish the feasibility of multiple imaging sessions over time. Outcome measures included pain quality and severity, body perception disturbance, handedness and vividness of movement imagery. Quantitative sensory testing assessed allodynia and sensory discrimination. Parietal lobe function and ability to perform motor imagery tasks were evaluated. MRI was performed on a 3 Tesla General Electric HDx scanner for 60-90 minutes per visit. Structural and functional data were acquired; the latter comprising participants performing and imagining paced movements. Participants were presented with tactile stimuli during a 60 minute MEG protocol. Total data collection period was 6 hours.

Results

Ten participants (age range 32-58 years, 7 female; disease duration 6-60 months) completed the study. n=7 attended two visits, n=3 attended three visits. Data were collected over a 41 month period. Mean pain severity, measured using Brief Pain Inventory (scale 0-10), was consistent over time: Time 1 (T1) = 6.5 (range 3.3-8.8), Time 2 (T2) = 6.3 (range 2.8-8.5). The mean Bath CRPS Body Perception Disturbance Scale (maximum score 57, with a higher score indicating a greater disturbance) was also consistent over time: T1= 30.9 (range 19-41), T2=27 (range 10-40). Functional MRI data displayed activation of the contralateral motor system for finger-tapping, and a more widespread network for motor imagery. The corticospinal tracts on both sides were reconstructed from DTI data, and a number of metrics recorded (fractional anisotropy, radial diffusivity, mean diffusivity etc). Both the functional activations and tract metrics were consistent for each subject over the two sessions.

Conclusion

Individuals with CRPS can tolerate multi-modal imaging techniques and longitudinal, high quality MR imaging data can be acquired. Due to the relative rarity of CRPS, necessary imaging exclusion criteria and requirement to collect data from the same imaging devices, the time planned for recruitment and data collection can be considerably longer than with more common chronic pain groups. It is recommended that future CRPS imaging studies accommodate an extended recruitment period, comprise shorter participant visit duration, with MRI and MEG acquired at separate visits. In addition future studies should have demographically matched healthy controls.

C McCabe funded by NIHR CDF.

Neuropathic Pain

069

NEUROPATHIC PAIN IN MULTIPLE SCLEROSIS – PREVALENCE, SIGNIFICANCE AND MANAGEMENT IN A SPECIALIST MS CLINIC IN 2012 AND 2015

Category: Neuropathic Pain

Authors: Laura Edwards - Rehabilitation Medicine Nottingham University Hospitals NHS Trust, Cris Constantinescu - Division of Clinical Neurology University of Nottingham

Background

Neuropathic pain is a common, significant and often disabling problem in people with multiple sclerosis (PwMS). The NICE guidelines for neuropathic pain management are directed at non-specialist settings, so there is perhaps less standardisation of treatment recommendations in specialised MS clinics.

Aims

To assess the prevalence of neuropathic pain in patients attending an MS clinic.
To assess the current and planned management of neuropathic pain in PwMS and how this corresponded with NICE guidelines (CG96 in 2012 and CG173 in 2015).

Methods

A validated questionnaire for assessing neuropathic pain (DN4) was completed by 70 randomly selected patients attending the MS clinics in Nottingham. Clinic documentation was reviewed for details of symptoms and management for all PwMS attending MS clinics over the space of 1 week in September 2012 and September 2015.

Results

57% of clinic patients scored >/= 4 on the DN4, indicating the presence of neuropathic pain. 48 sets of documentation were reviewed for the 2012 cohort; 66 for 2015. Similar rates of current / previous neuropathic pain were reported in the clinic documentation between 2012 (48%) and 2015 (59%). Neuropathic pain symptoms were most commonly reported in the lower limbs, followed by head, neck and face (including trigeminal neuralgia and Lhermitte's phenomenon). There was a significant increase in the use of tricyclic antidepressants, a non-significant increase in the use of pregabalin, and a non-significant decrease in the use of gabapentin between 2012 and 2015. A wider range of medications appeared to be being used in

2015 versus 2012. The majority of patients had first line management with amitriptyline or gabapentin / pregabalin and second line with the alternative. Third line management was less clear.

Conclusion

Rates of reported neuropathic pain are high in the MS population. Tricyclic and GABA-modulating medications are most commonly prescribed and used, although carbamazepine remains used, particularly in cases of trigeminal neuralgia. Although MS clinics are arguably not a "non-specialist area", the NICE guidelines for first and second line management are mostly followed, but third line treatments are more variable and could perhaps benefit from standardisation.

070

THE EFFECT OF ATP INJECTION ON MALADAPTIVE STRUCTURAL PLASTICITY IN THE DORSAL HORN

Category: Neuropathic Pain

Authors: Storm Lonsdale - Neuroscience and Trauma The Blizard Institute, Barts and The London School of Medicine, Yi Zhang - Neuroscience and Trauma The Blizard Institute, Barts and The London School of Medicine

Background

The conditioning injury has demonstrated a promising therapeutic mechanism for the regenerative failure of severed central axons. Peripheral nerve lesions induce a regenerative state in dorsal root ganglion neurons, characterised by an upregulation of growth-associated proteins. This expression enables bridging regrowth of axons across a fresh central lesion. Whilst this approach is not clinically translatable, it has recently been observed that sequential dual injection of ATP into the sciatic nerve mimics this effect. Following ATP treatment, injured central ascending afferents grew across a dorsal column transection site. It is not yet known whether this novel treatment additionally promotes maladaptive plasticity in the noiciceptors of the lumbar spinal cord, which may lend to neuropathic pain sensations.

Aims

To determine if structural changes in nociceptive afferents occur in response to sciatic ATP injection in rats, and whether these changes, if present, correlate with behavioural analysis.

Methods

To determine if structural changes in nociceptive afferents occur: immunohistochemistry for Substance P, CGRP, Isolectin B4 and GAP43 was performed on L4-5 spinal cord sections. Immunostaining for regeneration-associated proteins was also performed to illicit whether a response is induced in motor neurons.

Results

No difference was observed in nociceptive-marker immunoreactivity between ATP injected animals and controls. This was consistent with behavioural analysis indicating no sustained hyperalgesia. GAP43 upregulation was observed in the deeper dorsal horn.

Conclusion

This is inconsistent with conditioning injury outcomes but in accordance with the differential effect of ATP on c-fibre and a-fibre sprouting. Motor neurons did not exhibit upregulation, which may imply that effects are achieved through local mechanisms. Overall, our results suggest that ATP injection, whilst triggering central axonal regeneration, does not stimulate maladaptive nociceptive growth and thus does not encourage the development of neuropathic pain sensations.

071

RELIABILITY AND VALIDITY OF AN ARABIC VERSION OF THE LEEDS ASSESSMENT OF NEUROPATHIC PAIN SYMPTOMS AND SIGNS (LANSS) PAIN SCALE FOR USE ON DIABETIC PATIENTS IN LIBYA

Category: Neuropathic Pain

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Background

Neuropathies are a common complication of diabetes among Libyans. Not all neuropathies lead to neuropathic pain but there is evidence that neuropathic pain is prevalent among diabetic patients worldwide. There is a need to develop tools for screening neuropathic pain for use in Libya, because neuropathic pain is rarely assessed in patients with diabetes. The Leeds Assessment of Neuropathic Pain Symptoms and Signs (LANSS) pain scale is a screening tool to estimate the probability of a pain condition to be neuropathic in nature. There is an Arabic version of the self-completed LANSS (S-LANSS) but no Arabic equivalent of LANSS for use in Libya. In addition, both tools were not validated for use on diabetic population in Libya.

Aims

The aim of this study was to create an Arabic version of LANSS and to assess it validity and reliability on diabetic patients in Benghazi, Libya.

Methods

LANSS was translated into Arabic by three physicians fluent in English and Arabic and back translated to English by an academic to check for accuracy. The validity and reliability of the Arabic version of LANSS was assessed on 110 patients attending a Diabetes Centre in Benghazi. Concurrent validity was tested compared with the S-LANSS, which has previously been validated in the Libyan population. Test- retest reliability was tested by repeating the Arabic LANSS assessment 1-2 weeks later. Internal consistency and inter-class correlation (ICC) between total score of LANSS and SLANSS was also tested.

Results

Cronbach's alpha values suggested acceptable internal consistency within first completion of the Arabic LANSS (0.793), and this was similar to that of the Arabic S-LANSS (0.796). Cronbach's alpha was 0.795 on the second completion of the Arabic LANSS. ICC between total score of first completion of the Arabic LANSS and the Arabic S-LANSS was 0.999 ($p<0.001$). Test-retest reliability (ICC)

between first and second completions of the Arabic LANSS was = 0.999 (P<0.001). Kappa measurement of agreement between the two Arabic LANSS completions and S-LANSS was very high on all 7 items (Kappa >0.95, p<0.0001).

Conclusion

The Arabic version of LANSS pain scale was valid and reliable for use on Libyan diabetic patients. This study also provided results suggesting that S-LANSS could also be used on diabetic patients.

072

PROFILING OF PATIENTS WITH IATROGENIC INFERIOR ALVEOLAR NERVE INJURIES MANAGED WITH TOPICAL VERSATIS (5% LIDOCAINE) PATCHES OR COGNITIVE BEHAVIOURAL THERAPY

Category: Neuropathic Pain

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Background

Iatrogenic inferior alveolar nerve injuries (IANI) remain common and present a complex clinical management. These injuries have significant negative effects on the patient's quality of life. This is often due to the plethora of symptoms experienced by these patients, such as neuropathic pain, numbness and paraesthesia.

Aims

This study describes the causes, symptoms, mechanosensory results, and functional problems of 122 patients who experienced iatrogenic inferior alveolar nerve injuries, in relation to their management; focusing on patients managed by topical Versatis patches (5% Lidocaine) and/or Cognitive Behavioural Therapy (CBT).

Methods

Of the 322 patients referred into the department with IANI, 122 patients were deemed to require further medical management consisting of topical Versatis patches or CBT. Of these, 54 patients were prescribed topical Versatis patches and 101 were offered CBT. Of the 101 patients prescribed CBT, 33 patients were also offered the topical Versatis patches. The cause of injury, symptoms, mechanosensory results and functional problems of patients were analysed using SPSS statistical software (IBM, SPSS).

Results

Patients prescribed Versatis patches mostly had permanent injuries (90.6%). Of those IANI patients who were prescribed CBT, 89.5% of the injuries were permanent. The cause of injuries prescribed Versatis or CBT included third molar surgery (35.2% and 34.7% respectively), implant treatment (20.4% and 17.8% respectively), local anaesthetic administration (14.8% and 15.8% respectively) and endodontic treatment (13.0% and 9.9% respectively). Patients prescribed Versatis patches or CBT suffered from allodynia (90.7% of cases and 60.4% respectively), numbness (61.1% and 74.3% respectively) and spontaneous pain (37.0% and 25.7% respectively). Functional hindrance for those prescribed Versatis or CBT was mostly experienced with eating (86.0% and 78.3% respectively) and kissing (73.3% and 83.9% respectively).
Mechanosensory testing of patients prescribed Versatis patches or CBT indicated hyperalgesia upon sharp blunt testing (57.9% and 41.9% respectively).

Conclusion

The management of iatrogenic IANI is a complicated issue due to the high range of patient symptoms and functional problems experienced by patients. The permanent nature of these injuries suggests further follow-up work is required to see which therapy or combination of therapies provide the necessary control in the patient's opinion.

073

PATIENTS' EXPERIENCES OF A PRE-IMPLANT NEUROMODULATION PMP

Category: Neuropathic Pain

Authors: Dr Shoma Khan - Pain Management Centre UCLH, Diarmuid Denneny - Pain Management Centre UCLH, Denise Colbeck - Pain Management Centre UCLH, Sarah Corker - Pain Management Centre UCLH

Background

The pain management centre at UCLH has developed a new treatment pathway for patients considering neuromodulation. This pathway includes a multidisciplinary assessment followed by an interdisciplinary pain management programme to prepare patients prior to implant. The pain management group programme has been named Action Potential Living or APL run over 4 days. Six APL groups have been successfully facilitated between September 2014 and December 2015.

Aims

APL PMP aims:

1. Provide information about neuromodulation, patients' devices, and opportunities for questions.
2. Discuss expectations of life post-implant and begin goal development.
3. Review and revise self-management strategies to maximise patient's achievement of life goals alongside their stimulator.
4. Provide learning via feedback from post-implant patients.

Methods

Measures are taken at the multidisciplinary assessment, end of APL group, and post-implant follow ups.

- Coping Strategies Questionnaire item (CSQ) Rosenstiel and Keefe 1983;
- Pain Catastrophising Scale (PCS) Sullivan et al., 1995;
- Depression Anxiety and Positive Outlook Scale (DAPOS), Pincus et al., 2004;
- Brief Pain Inventory- short form (BPI) Dr. Charles S. Cleeland, 1991;
- 1 minute sit to stand test;

- Expectations of Change qualitative questionnaire;
- medications list.

Patients are also asked for feedback at the end of their participation on the APL via self-report feedback questionnaires.

Results

Patient feedback questionnaires have highlighted several themes of their experience of the APL PMP. These include: appreciating information about the device, wanting to see their consultant again prior to implant, finding pain mechanisms information helpful, appreciating time to think over their decision to proceed, learning that self-management is still required.Results from other measures are being analysed.

Conclusion

Patient feedback suggests patients attending the APL PMP take away several key messages around the mechanism of neuromodulation and chronic pain, the importance of self-management, realistic expectations, and have better informed consent prior to implant.

074

CORTICAL PREDICTORS OF CENTRAL NEUROPATHIC PAIN (CNP) IN SUB-ACUTE PATIENTS WITH SPINAL CORD INJURY (SCI)

Category: Neuropathic Pain

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Background

Patients with Spinal Cord Injury (SCI) suffer from various impairments to the physiological and neurological systems. Chronic neuropathic pain (NP) is a secondary consequence of the injury. In SCI patients, the NP can be at or below the level of SCI[1]. It is believed that below level NP (bNP) has a central origin, and it is therefore referred to as Central Neuropathic Pain (CNP). More than 41% of SCI patients experience bNP after the first six months following SCI[2], in these patients Electroencephalography (EEG) based studies show a relationship between EEG and CNP, in particular over the primary motor cortex (M1)[3,4]. It is however still debatable whether EEG changes are predictors of, or a consequence of CNP. Defining EEG predictors of pain could lead to the development of preventive treatment of CNP in SCI patients, in particular those with no sensation who have absent additional sensory symptoms of CNP.

Aims

This study aimed to define dynamic EEG predictors of CNP in sub-acute SCI patients who have not yet developed physical symptoms of CNP.

Methods

Fifteen sub-acute SCI patients (incomplete and complete, tetraplegic and paraplegic) participated in this study (12 M, 3 F; age: 46.8 ±16.7). Inclusion criteria were age between 18-75, 6 months post-injury, and no nociceptive chronic pain. Five patients already had diagnosed and treated CNP (>4 on visual numerical scale) and 10 patients did not have CNP at the time of EEG recording. Five out of 10 developed pain within the first year post- injury. Patients were asked to imagine moving their Right Arm (RA), Left Arm (LA) or Feet (F) every time they see a cue on a computer screen, and to repeat each task 60 times for averaging purposes. Their EEG was recorded with 44 electrodes. EEG analysis was based on Event-Related Desynchronisation/synchronisation (ERD/ERS), a numerical method which shows changes in EEG across different frequency bands. For MI task, SCI patients with chronic CNP have abnormal patterns [4].

Results

We found that while imagining movement of upper or lower limbs, patients who went on to develop pain following EEG recording (all had pain in lower limbs, tetraplegic also in upper limbs) had stronger alpha (8-12 Hz) activity than those who had not developed pain. On the contrary, patients who already had short-term (few months) CNP at the time of EEG recording had a 'shift' of maximum ERD from the alpha towards lower, theta (4-8 Hz) band. Patients in our previous study on CNP in chronic SCI [4] had ERD stronger than able-bodied and patients with no pain and it was present in both alpha and theta bands. Current results indicate two possible phases: EEG changes that preceded physical symptoms of CNP (stronger alpha ERD) and changes that follow pain symptoms (shift in frequency). Intensity of ERD is proportional to activity of neuronal substrates, in this case indicating stronger activity in M1.

Conclusion

This study reveals a complex dynamics of EEG changes related to CNP, separating for the first time an EEG signature that is a predictor and consequence of CNP. The study is still running and more patients will be recruited in the study to confirm these initial findings.

075

THE EFFECT OF PAIN ON HEALTH RELATED QUALITY OF LIFE AFTER SPINAL CORD INJURY

Category: Neuropathic Pain

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Background

Chronic pain is one of the most common secondary complications post spinal cord injury (SCI), the prevalence is 61% and often surpasses the negative impact of other consequences post injury. The presentations of nociceptive pain (musculoskeletal, visceral and other), neuropathic pain (at level, below level and other) and other

pains may simultaneously co-exist post injury. Currently chronic pain post SCI is largely refractory to current treatment approaches. Patients experiment with a surplus of medications and non-pharmacological agents yet the majority report minimal relief from pain. Pain can have an all-encompassing, detrimental effect, resulting in depression, sleep disturbances and poorer life satisfaction post injury. Pain post SCI also has links to poorer health related quality of life (HRQoL). No quantitative data currently exists on the profile of pain or HRQoL post SCI in Ireland or on the effect that different pain types have on HRQoL.

Aims

To obtain, by survey, data relating to the national prevalence of nociceptive pain, neuropathic pain (NP) and health related quality of life in long standing SCI in Ireland. To compare HRQoL in those who report no pain compared to those who report any pain, nociceptive pain and NP.

Methods

Members registered to the Spinal Injuries Ireland database (n=1,574), a national support group for those with SCIs, were surveyed. Surveys were coded to protect the anonymity of members. Ethical exemption received from UCD Human Research Ethics Committee. The survey pack comprised questions relating to demographics and SCI characteristics, The Douleur Neuropathique 4 (DN4) (interview) recorded the prevalence of NP. The International Spinal Cord Injury Pain Basic Data Set (v. 1.0) recorded pain characteristics and The World Health Organisation (WHO) QOL Bref documented respondent's HRQoL. Scores were calculated into four weighted domains of physical health, psychological health, social relationships, and environment. Surveys were entered into SPSS statistical program (Version 20) and subsequently cleaned. Mann Whitney U tests compared HRQoL scores between respondents presenting with no pain, NP and nociceptive pain. Significance was set $p<0.05$.

Results

A total of 43% (661) responded. Mean age was 52 years (SD 14.4) and 69% (455) were male. Mean time with SCI was 16 years (SD 12.4), 69% (458) reported pain in the last week and 36% (236) had scores on the DN4 which indicated NP. Respondents with no pain had higher scores on all domains of the WHO QoL Bref when compared to those with pain in the last week; physical (13 (7-17) vs 12 (5 -18), P<0.001), psychological (15 (9 -19) vs 13 (6-18) P<0.001), social (15 (5-20) vs 13 (4-20), P<0.001) and environmental (16 (8-20) vs 14 (4-20), P<0.001). Respondent's with nociceptive pain had higher scores for all domains when compared to those with NP; physical (13 (5 -17) vs 12. (7 -18), P=0.01), psychological (13 (7-18) vs 13 (6-18) P<0.001), social (13 (4-16) vs 12 (4-20), P=0.004) and environmental (15 (6 -14) vs 134 (4-20), P<0.001).

Conclusion

This is the first documentation of pain and HRQoL in Irish SCI individuals. Those experiencing pain demonstrated significantly poorer HRQoL scores than those without pain and those with NP reported significantly poorer HRQoL scores than those with nociceptive pain. It is evident from this data that pain and more specifically NP has a significantly negative impact on HRQoL life after SCI. This highlights the improved perceived HRQol that could be possible for SCI individuals if their pain was alleviated. Further research is needed to analyse treatments which have the most effect of diminishing pain and improving HRQoL post SCI.

076

A PILOT STUDY ASSESSING THE FREQUENCY OF SPINAL CORD STIMULATION ("SCS") REPROGRAMMING

Category: Neuropathic Pain

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Background

Since 2002, consultants in pain medicine at Chelsea and Westminster Hospital have been implanting SCS. SCS is an effective analgesic therapy1 and the number of implants here has increased over the last decade. Similarly, in the Laxmaiah et al (2009) report, a 159% increase in SCS was demonstrated from 1997 to 2006.2 SCS with conventional management has shown to be cost-effective compared with conventional management for particular painful conditions including CRPS.3 However, there is currently no research assessing the frequency of SCS reprogramming following both trial and implant which could have negative cost-implications. Furthermore, there is also no research examining the increase healthcare resource allocation as a result of SCS reprogramming. Subsequently, a new database was developed to collect reprogramming information from March 2015. This provides data on how many patients are reprogrammed following an SCS trial or implantation.

Aims

The primary aim of this pilot study was to assess the frequency of SCS reprogramming of both trial and implanted patients. Additionally, the secondary aim was to assess the total time spent reprogramming these patients.

Methods

Prospective data was collected over a 9-month period (1st March 2015 to 1st December 2015). A clinical nurse specialist (CNS) in pain management kept records on the database of the patients' demographics, the date of reprogramming and the model of SCS. Furthermore, it was noted whether the patient was being reprogrammed during a trial of SCS or following implantation.

Results

Total-number of SCS trials performed-during-the 9-month period was 16. Of these, 12 patients (75%) proceeded to implant and 4 patients (25%) did not. For these 16 patients, 11 reprogramming sessions (RS) were arranged (45 minutes per session). In total, 8.25 hours of SCS representative and CNS's time was required for reprogramming. Three patients (27%) were reprogrammed during their 2-week trial period; each requiring 1 RS. The number of RS calculated per patient was 0.19 for trials. If reprogramming is required during a trial period, then there is a 66% likelihood that these patients will not proceed to implant. However, this projection is limited by the sample size of 3 trial patients; where only 1 who required reprogramming proceeded to implant. Three implanted patients required further RS. Of these, 1 patient received 4 RS and 2 patients received 2 RS each. The number of RS per patient was 0.67 for implants.

Conclusion

Sixteen SCS trials, 12 implants and 2 implant revisions were performed during the 9-month period. 11 SCS reprogramming sessions

were arranged. However, it is important to highlight the recurrence of the same patients who were reprogrammed following implant. Eight reprogramming sessions were arranged for 3 implant patients. Future research to assess the reasons for increased frequency of SCS reprogramming of particular patients would need to account for these findings. Examining pre- and post- trial and implant 'pain detect' and 'pain catastrophising' scores may help pain services predict the likelihood of patients requiring frequent SCS reprogramming following insertion of SCS implant.

077

AN EVALUATION OF A WEB-BASED PAIN MANAGEMENT PROGRAMME - 'PATHWAY THROUGH PAIN': FINDINGS FROM INTERIM ANALYSIS

Category: Neuropathic Pain

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Background

There is a growing body of evidence supporting the effectiveness of web-based cognitive behavioural interventions. However, evidence for use of web-based treatments for chronic pain is still developing (Macea et al. 2010).This is a 3-year mixed method project using a non-randomised comparison of an experimental and control group.

Aims

The objectives were to examine pre-post changes in clinical outcomes and the impact of technology on scores of quality of life, depression, disability and anxiety.

Methods

Patients were referred by healthcare workers within community-based services. Referral suitability was determined through a screening process carried out by a clinician working within the Buckinghamshire Chronic Pain and Fatigue Management Service (CPFMS). Outcome measures included disability (ODI), depression (PHQ-9), anxiety (GAD-7) and quality of life (EQ-VAS). The main reason people were not offered treatment was because they did not return the required screening forms. In this conference we will report the first 190 completers with pre- and post-intervention data available. Recruitment for the evaluation has been completed; final analysis of all completers is expected in April 2016. Qualitative information was collected from completer and non-completer patients using three sources; focus groups, semi-structured interviews, and written feedback. Two focus groups were conducted for completers (n=11) and one for non-completer groups (n=4). Due to a low response rate from the non-completer group, a further six semi-structured interviews were conducted

Results

Significant improvements were reported for all of the outcomes measured. Patients completing the web-based pain management programme showed significant improvements in disability (ODI, $p = 0.000$, effect size = 0.26), mood (PHQ-9, $p= 0.000$, effect size = 0.44), anxiety (GAD-7, $p = 0.000$, effect size = 0.39), and quality of life (EQ-VAS, $p=0.000$, effect size = 0.41). Follow up data (one month post-intervention) is available for 74 of the patients; significant improvements were maintained for anxiety and depression. Those who completed the online programme reported feeling more motivated and willing to try different avenues to manage pain. They felt they benefited from taking part in the programme and reported improved quality of life. Those who did not complete the programme reported that parts of the programme were not relevant to them at that time. Both groups reported feeling 'invisible' and that previous clinicians have not taken them seriously.

Conclusion

This interim analysis of an on-going evaluation showed significant pre-post improvements in all outcome measures with small to medium effect sizes. Patients completing the online programme reported that they learnt new ways to cope and improve their quality of life, and the programme was relevant and touched on areas of importance in their life This improved safety through appropriate patient selection, engagement with the programme, review of progress and follow-up for those completing and failing to complete the programme. Integrating of the web-based programme with existing pain services created increase patient choice and access to pain management.

078

BEE VENOM: A POSSIBLE TREATMENT FOR CHRONIC REGIONAL PAIN SYNDROME? A CASE REPORT

Category: Neuropathic Pain

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Background

Introduction
This report describes the case of a 48 year old right hand dominant male engineer diagnosed with chronic regional pain syndrome (CRPS) who had a significant improvement in CRPS symptoms following an accidental bee sting and sought deliberate bee venom inoculation to the affected limb.

Aims

Case
The patient presented with bruising to medial right elbow and swelling to forearm after feeling a painful 'pop' whilst lifting heavy object. He underwent a distal biceps tendon repair after an ultrasound scan which confirmed a full thickness rupture of the distal biceps tendon.

Methods

Case – continued
There were no intra-operative complications and his post-operative recovery was uneventful. At 10 days post-surgery the wound healed well without infection. He underwent routine rehabilitation physiotherapy and review at 7 weeks post-op he had good limb function so he returned to work with light duties. At review 4 months later, he described symptoms of increased pain in his right forearm distal to the scar which radiated down the dorsal aspect of the hand with associated swelling in his hand and forearm. There were associated sensory changes with sensation of 'prickly heat' and increased sensitivity and dysesthesia over the dorsoradial aspect of the forearm as well as weakness of finger extension and intrinsic hand muscles. Neurophysiology studies (EMG) indicated a diagnosis of CRPS. He was commenced on oral gabapentin and began a course of patient specific desensitisation physiotherapy.

Results

Case – continued
At the following review 2 months the dysesthesia previously reported had migrated further distally. Fourteen months after onset of CRPS symptoms he reported a dramatic improvement after accidently being stung by bees on the wrist. Following this accidental sting which led to a reduction in pain and other symptoms, the patient then engaged in actions to purposefully be stung by the bees. He continued with this practice for a sustained period of time, with him reporting decrease in symptoms after each subsequent sting. Further review six months later there was nearly complete resolution of CRPS features.

Discussion

Only one paper in the literature reports use of bee venom in a human subject to treat CPRS. It is well known that bee stings lead to pain and inflammation of the affected area however bee venom or apitoxin can also be used as analgesia.

Conclusion

Discussion – continued
The main components of apitoxin are adolapin, Melittin, apamin, phospholipase A2 and other components including histamine and protease inhibitors. Melittin and apamin have roles in synaptic transmission modulation and cell lysis. Adolapin inhibits cyclooxygenase having an analgesic, anti-inflammatory and anti-pyretic effect whilst possessing analgesic properties.

Conclusion

Further research is required into the components of apitoxin as a potential treatment for CRPS.

Non-Pharmacological Pain Management

079

CAN PAIN MANAGEMENT PROGRAMMES BE IMPORTED TO THE CARIBBEAN?

Category: Non-Pharmacological Pain Management

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Background

Patients with chronic pain in the Cayman Islands are managed by a single handed pain physician with referrals to other specialties for care when appropriate. However, many affected patients could benefit from the coordinated multidisciplinary approach of a group based Pain Management Programme (PMP). PMPs are not available in the Caribbean where individual island populations are relatively small and specialist expertise is not always available. The authors of this project sought to determine if UK based practitioners could successfully translate and deliver an outpatient PMP based on the cognitive behavioural therapy model (CBT), by assessing clinical and financial outcomes.

Aims

To determine if a CBT based PMP can be imported to the Cayman Islands and whether this resulted in decreased healthcare spending. Main outcomes measured were:

1. clinical: pain, mood, cognitive factors, acceptance, self-determined tasks/goals and physical;
2. pain related service utilisation: primary health and specialist services.

Methods

Adults with frequent appointments, struggling to live well/ achieve goals, who had exhausted medical management, were identified as candidates early 2012. The following were administered prior to, and on completion of, the Cayman PMP (CPMP) and then again at follow ups of 11 weeks and 11 months after completion:
Brief Pain Inventory (BPI), Pain Self Efficacy Questionnaire (PSEQ), Pain Catastrophising Score (PCS), Fear Avoidance Beliefs Questionnaire (FABQ), Depression Anxiety and Positive Outlook Scale (DAPOS), Chronic Pain Acceptance Questionnaire (CPAQ), Task Specific Scale and the Sit to Stand Measure. Means of the scores were calculated and two-tailed Student's t-tests identified significance at the 5% level. Healthcare spending collected by the Cerner electronic record was accessed by business intelligence software, PSCI (Vitreos, TX). Charges made for one year prior and following the CPMP were examined individually and for all patients. The difference in spending was compared to the cost of the programme.

Results

Ten patients (nine female) presented with various conditions including low back and widespread pain. The following means reached 5% significance.

- BPI pre- and post-CPMP: improvement for interference of pain was 4.813 ($p=0.0035$) and pain severity 3.738 ($p=0.0024$).

At eleven months, an improvement in pain severity (2.350, p=0.0488).

- PSEQ. Improvement pre- and post-CPMP (18.375, p=0.0146).
- FABQ. Physical activity improvement pre- and post-CPMP (9.250, p=0.0009).
- PCS pre- and post-CPMP sub-scores all improved
  1. rumination 3.125 (p=0.0388)
  2. magnification 3.750 (p=0.0128)
  3. helplessness 6.875 (p=0.0101).
- DAPOS pre- and post-CPMP:
  1. depression improved 6.250 (p=0.0135)
  2. anxiety improved 4.380 (p=0.0240)

At eleven months, improvement in anxiety (2.830, p=0.0228).

- CPAQ had no change initially but at eleven months, improvement of 13.5 (p=0.0306).
- Sit To Stand did not show improvement until eleven months (9.917, p=0.020).

Despite a reduction in healthcare spending, this did not reach significance.

Conclusion

This PMP had similar clinical effects to others, and improvements were sustained eleven months later. The major limitation was the small numbers and this being the first of a kind makes conclusions speculative. Compounding this was poor attendance at the eleven month follow-up (six of ten). This initial selection of patients likely included the most severely affected where lasting benefits may be difficult. Assessing healthcare with the financial impact doesn't capture the entire picture: this didn't assess the effects on productivity, caregivers and medications. The programme may also have paid for itself if patients were followed longer.

080

EFFECT OF MUSIC THERAPY ON EPISODIC MIGRAINE

Category: Non-Pharmacological Pain Management

Authors: Stéphane Guétin - Neurology University Hospital and Montpellier School of Medicine

Background

Migraine is a frequent pathology, highly linked to anxio-depressive factors. Non-pharmacological approaches are an integral part of the therapeutic treatment. Music therapy expands in hospital services and specialised ambulatory centres.

Aims

The main objective of this study was to assess the effect of receptive music therapy (i.e., MUSIC CARE software utilising the « U » technique) on migraine frequency in patients suffering from episodic migraines. Secondary objectives were to effects on migraine intensity, duration, emotional effect (HAD score), functional impact (HIT-6 score), and hospital administration for acute treatment.

Methods

A monocentric prospective study utilising a pre-post design carried out at the department of chronic pain of the CHU Sud Reunion hospital, involving a group of 20 patients. All patients received the intervention for three months. Migraine attacks and their impact data were compared the month before administration of the intervention, and the third month after its beginning.

Results

Analysis showed that 55.56% of patients involved were responding to the music therapy technique, according to the International Headache Society criteria (decrease of at least 50% monthly frequency). Furthermore, critical drug administration decreased by 31.77% on average, and the attack duration by 27.90%. HAD scores improved by 27.84 %, and HIT-6 scores by 6.37%. Changes in migraine attack severity were statistically not significant.

Conclusion

This pilot study suggests that the « U » technique shows efficiency similar to disease-modifying medical treatment, and non-drug approaches already used in episodic migraine prophylaxis.

081

EFFECTS OF MUSIC THERAPY ON THE CHRONIC PAIN EXPERIENCED BY PATIENTS UNDERGOING SPA THERAPY: A MULTICENTRE STUDY (N=1151)

Category: Non-Pharmacological Pain Management

Authors: Stéphane Guétin - Neurology University Hospital and Montpellier School of Medicine,

Background

Numerous studies have demonstrated the value of music therapy in the treatment of acute and chronic pain. The MUSIC CARE technique enables its standardised use [1].

Aims

To evaluate the impact of music therapy on the pain and satisfaction of patients undergoing specific spa therapy for fibromyalgia in three thermal establishments in France (Lamalou-les-Bains, Saint-Laurent-les-Bains and Barbotan-les-Bains: Chaîne Thermale du Soleil).

Methods

This was a prospective, open-label, multicentre study. Each patient completed at least one, 20-minute session of music therapy according to the validated "U" sequence protocol. The principal endpoint was the level of pain evaluated before and after each session using a visual analogue scale (VAS).

Results

Over a period of 12 months, 1151 patients benefited from music therapy, during a total of 2627 sessions. The short-term effect on pain, as from the first session, was confirmed by immediate changes to their scores after music therapy sessions (P<0.001).

Conclusion

MUSIC CARE is a standardised music therapy technique that could enable a significant reduction in pain levels among patients undergoing specific spa therapy.
[1] www.music-care.com

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ENHANCING PATIENT EXPERIENCE THROUGH GROUP MANAGEMENT OF MYOFASCIAL TEMPOROMANDIBULAR JOINT DYSFUNCTION

Category: Non-Pharmacological Pain Management

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Background

Persistent myofascial temporomandibular joint dysfunction (TMJD) not only disturbs oral function but like other chronic orofacial pain conditions can significantly impact on quality of life potentially leading to psychological distress and social impairment. Considering the implications myofascial pain can have on quality of life, the research shows that 75 to 90%, of patients successfully respond to early management using simple techniques including education and advice. In an attempt to build on this principal, an interactive session was introduced to explore the use of group therapy techniques in treating patients with myofascial pain. This encouraged self-management through the provision of early education, counselling and conservative treatments. The use of patient reported outcomes has driven the development of this approach.

Aims

To identify and address patient expectations and needs, whilst delivering care and advice to increase patients' confidence in pain self-management. To improve the effectiveness and efficiency of managing patients with myofascial pain using a group therapy approach to encompass the multifactorial nature of TMJD.

Methods

The existing management strategy for TMJD referrals within the department was determined through a three-week prospective pilot study. An alternative patient care-pathway was designed and introduced for those patients who, at initial consultation, were diagnosed with myalgic TMJD. This took the form of a group based interactive session encouraging active involvement of up to 6 participants per session. Included is a 15 minute video and oral presentation with time set aside for discussion, the option for further one-to-one consultation with the clinician and fit of prefabricated bite-raising-appliances, if required. Feedback forms are given at the start and end of each session to evaluate patient satisfaction. To capture patients' priorities and attitudes towards their myofascial pain, a questionnaire relating to desired outcomes and expectations was given to each patient before and after the group session to identify whether these had been satisfactorily met.

Results

The preliminary pilot study showed that 84% of all TMJD referral in the department were diagnosed as myofascial pain. There was no clear management strategy within the department with significant variation amongst clinicians. A trend for multiple review appointments was apparent with delivery of inconsistent advice and minimal clinical time for patient education. To date, 45 patients in total have attended the group session. Of these 42 reported an improvement in degree of knowledge, understanding and confidence in self-managing their myofascial pain after attending the group session. All of the patients' expectations that were identified prior to the session were met. Feedback is positive with the majority of comments relating to the benefits of the group setting where patients felt that meeting others and discussing shared experiences was helpful. Most patients opted to be discharged at the end of the session with only 7 requesting further review in secondary care.

Conclusion

Targeted conservative management using explanation, reassurance and advice for patients with simple myofascial pain is being successfully delivered through this group-approach. All patients accepted this care-pathway and reported high levels of satisfaction with the content and delivery and benefitted from the group interaction. Recognising patients' attitudes before the session was fundamental in meeting all their identified expectations. The delivery of consistent education and counselling resulted in patients reporting an increase in knowledge and understanding about their pain diagnosis. The self-reported improvement in patients' confidence in self-managing their pain following this session was reflected by the significant reduction in follow-up requested.

083

ASSESSMENT, DIAGNOSIS AND MANAGEMENT OF HEMIPLEGIC SHOULDER PAIN: A UK-WIDE ONLINE SURVEY OF PHYSIOTHERAPY AND OCCUPATIONAL THERAPY PRACTICE

Category: Non-Pharmacological Pain Management

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Background

Hemiplegic shoulder pain (HSP) is a common complication of stroke that can lead to functional dependency and reduced quality of life. HSP can develop at any time from the early weeks after stroke to several (3-6) months after onset. Approximately 65% of patients with chronic stroke have HSP six months after stroke. HSP is multifactorial in nature and interventions for shoulder pain are very varied but are generally unsatisfactory. Therapists play an important role in the management of HSP and therefore outcomes may often depend on their practice in assessment and selecting appropriate treatments. With lack of recommendations for management of HSP in national guidelines, it is important to determine what is current practice.

Aims

The primary aim of the present study was to identify how HSP is assessed, diagnosed and managed in routine clinical practice by

physiotherapists (PTs) and occupational therapists (OTs) in the UK. A secondary aim was to identify the challenges to services in the management of HSP in the UK.

Methods

A questionnaire was developed from similar surveys of musculoskeletal/neurological practice, a review of the literature and consultation with researchers and clinicians. Draft surveys were initially distributed to and commented upon by members of the research team and subsequently were distributed to PTs and OTs in local clinical practice also. A total of three iterations of the survey were developed and refined in this way before the final, fourth version was agreed upon. The survey was distributed online to potential participants (PTs and OTs) working in stroke rehabilitation via professional bodies' interest groups (Association of Chartered Society of Physiotherapy in Neurology and College of Occupational Therapy Specialist Section Neurological Practice). In addition, the survey was distributed to PTs and OTs involved in the treatment of HSP following stroke via the university database (email contact list) of South West Clinical Educators.

Results

Sixty seven responses were received from PTs (60%) and OTs (40%). The majority (84%) of participants worked in the NHS, 52% at Band 6 level and 42% had less than 5 years of experience in stroke rehabilitation. The respondents gained knowledge in HSP management through in-service training, clinical supervision and reading (80%). They reported routinely checking for HSP (89%); spending 10 minutes (mean time) on assessment. Commonly used assessments were glenohumeral subluxation (94%), strength (76%), range of movement (67%), spasticity (79%) and palpation (63%). Only 15% reported referring patients for diagnostic ultrasound to investigate the cause of pain. Usual rehabilitation duration (including HSP management) was 6-8 weeks; patients were discharged when treatment options were exhausted (80%). Interventions offered included education, exercise and self-management. Time constraints (62%); lack of diagnosis (54%) and lack of training in managing HSP (60%) were the major challenges in providing appropriate care for people with HSP.

Conclusion

HSP is routinely addressed in clinical practice, however, there is lack of consistency in both assessment and treatment approaches for this debilitating problem. Reported assessments excluded specific shoulder biomechanical, altered sensation and neuropathic pain assessments. The results suggest that a wide range of approaches are utilised by clinicians and that patients are potentially receiving treatment irrespective of the underlying problem due to lack of comprehensive assessment and accurate diagnosis of the cause of HSP. A comprehensive diagnostic protocol including appropriate referral to imaging services and additional training specific to HSP are required to improve the patients' outcome.

084

DO PATIENTS REDUCE THEIR PAIN-RELATED HEALTHCARE USAGE AFTER A SPECIALISED PAIN MANAGEMENT PROGRAMME? A SELF-REPORT STUDY

Category: Non-Pharmacological Pain Management

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Background

Healthcare usage by individuals with persistent pain is known to be high. For example, the National Pain Audit found that 20% of respondents had visited A&E for help with their pain in the previous six months. All respondents had seen their GP, and 66% had had more than three appointments with healthcare professionals in relation to pain in the previous six months. Abdomino-pelvic pain is the most common diagnosis for a pain-related admission to hospital, with 289,700 admissions in England for this from 2012-2013 (HSCIC 2013). Pain management programmes (PMPs) focus on helping patients to live a better life, rather than reducing pain, aiming for outcomes such as improved mood, increased physical functioning, and better management of flare-ups. In addition, some studies have shown that both planned and unplanned visits to healthcare facilities reduce after attending a PMP (e.g. Clare et al., 2013; Cipher et al., 2001).

Aims

Patients with abdomino-pelvic pain at UCLH can attend a specialist multidisciplinary PMP ('Link'), a well-established programme with good outcomes in cognitive, physical and emotional functioning. We sought to determine whether patients who have attended Link also reduce their healthcare usage, in particular pain-related visits to A&E, hospital and GP's.

Methods

The study uses self-report data collected from 116 patients who took part in the Link PMP from 2009 to 2014. Participants were asked how many visits to GP's they had made to talk about pain over the last three months; how many hospital appointments they had had in the last six months about pain; and how many visits they had made to A&E in the last six months for pain. Data were collected at the beginning and end of Link, and at one=month and nine-month (final) follow-ups. Due to the time context of the questions, only data from baseline and final nine-month follow-up was analysed. 81 participants were female and 35 were male; their mean age was 46. The median duration of pain was nine years, and the most common diagnoses were chronic pelvic pain, endometriosis and pudendal neuralgia. 43% had undergone surgery for pain.

Results

At baseline, participants had made an average of 2.3 visits to their GP about pain over the previous three months. By nine-month follow-up this dropped to an average of 1.5 visits. 23% of participants had made four or more visits to their GP regarding pain in the three months before Link; at nine-month follow-up only 9% had done this. Before the programme, 22% had had no hospital appointments for pain during the previous six month. At nine-month follow-up this increased to 58%. The average number of hospital appointments about pain over the previous six months was 3.1 at baseline, and 0.9 at nine-month follow-up. In the six months before Link, 19% of participants had visited A&E at least once for pain; this reduced to 8% at nine-month follow-up. The total number of A&E visits reduced by nearly half from baseline to nine-month follow-up.

Conclusion

Attending a specialist PMP has a reductive effect on pain-related healthcare usage. GP visits decreased, although this decrease is limited due to prescription reviews. Hospital appointments and A&E

visits reduced to a greater extent. The study used self-report data due to the difficulty of accessing reliable medical records for patients attending this national specialist service. Future work could replicate the study using patient healthcare records. These reductions in GP, hospital and A&E visits represent financial savings for the health service, and can be taken into consideration when calculating the cost-effectiveness of PMP's.

085

INTERDISCIPLINARY PAIN MANAGEMENT PROGRAMMES FOR CHRONIC PAIN: A SYSTEMATIC REVIEW OF EFFECTIVENESS AND DEVELOPMENT OF A PROGRAMME FOR PALLIATIVE CARE

Category: Non-Pharmacological Pain Management

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Background

The prevalence of pain in cancer and non-cancer palliative care populations is estimated between 50-80%. As patients live longer with life-limiting conditions and present earlier to palliative care services, the prevalence of chronic pain from previous treatment, disease, indirect symptoms and/or co-morbidities will increase. The complexity of elderly patients with advanced disease challenges traditional medical management of pain in this population, due to hypersensitivity to analgesia, multi-pharmacy, under-reporting of pain, fear of addiction and side effects, and ineffective use of opioids for chronic pain. This suggests a potential chronic pain crisis in palliative care as the population changes over the next twenty years, enhancing the need to widen the adoption of interdisciplinary and non-pharmacological approaches for successful management of chronic pain in patients with life-limiting conditions. Interdisciplinary programmes offer a comprehensive management approach for chronic pain, in which the treatment target may be to improve function without changing symptom intensity.

Aims

This review aimed to evaluate the effectiveness of interdisciplinary pain management programmes (PMP) on pain intensity, psychological wellbeing, physical function and quality of life in patients with chronic pain in all chronic pain populations. Findings will inform a programme for study in palliative care.

Methods

Studies were identified from systematic searches of Medline, Embase, Cinahl and PsycINFO databases to October 2014, citation searches, conference proceedings and previous systematic reviews. Included studies were randomised controlled trials for all conditions and causes of chronic pain, where PMPs consisted of a physical and psychosocial component. Exclusion criteria included patients with acute pain, back-schools, use of work-based outcomes and people aged under-18. Data extracted included study design, population, intervention, comparator, outcomes, timing, results, and study strengths and weaknesses. Quality assessment was carried out using the Cochrane Collaboration tool for assessing risk-of-bias. Narrative synthesis and intervention synthesis was performed. The 'single-trial-based choice' method was used to select an intervention for future study in palliative care.

Results

Twelve studies involving a total of 1528 participants (age 26-95 years) met the inclusion criteria across low-back pain (five studies, n=607), fibromyalgia (two studies, n=338) and chronic pain of mixed-origin (five studies, n=583). Four of the later studies were in older adults aged over-65. There was a moderate and high risk-of-bias in two and ten studies respectively. Where reported effect sizes ranged from 0.14?0.43 for pain intensity, 0.05?0.95 for physical function and 0.37-0.93 for psychological outcomes including quality of life. For all conditions, where the primary outcome was a measure of physical function, the most favourable improvements tended to follow moderate-intensity PMPs. A moderate-intensity PMP used in older adults (Nicholas et al. 2013) was selected for adaptation for use in palliative care.

Conclusion

Interdisciplinary PMPs can lead to improvements in physical function and aspects of quality-of-life in people living with chronic pain, which do not necessitate a concurrent reduction in pain intensity. Heterogeneity and methodological limitations limit the strength of current evidence. Broader exploration of the transferability of such PMPs to the palliative care setting is warranted, as a means to help improve patient care and possibly reduce the potential increased burden on health and social care services as a result of chronic pain in advanced disease. Further modelling and feasibility testing of moderate-intensity PMPs is required to begin evaluation within palliative care.

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A PILOT STUDY OF AN URDU SPEAKING AND CULTURALLY ADAPTED MULTI-DISCIPLINARY PAIN MANAGEMENT PROGRAMME

Category: Non-Pharmacological Pain Management

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Background

One fifth of Bradford's population is of Pakistani ethnicity. Some patients are unable to sufficiently comprehend the Pain Management Programme (PMP) in English, not only due to language, but cultural differences. Some have a belief that long term pain is the result of punishment from Allah (God), or that it should be endured and not relieved. One of the cultural values dictate that the sufferer should be looked after by family members, further reinforcing a dependence and physical deconditioning. Acceptance is the main obstacle in engaging with this patient group, utilising cultural/religious awareness as a way of breaking down barriers, increasing patient compliance and engaging patients with long term self-management of living with pain

Aims

To pilot an Urdu culturally adapted MDT led PMP consisting of a Physiotherapist, Clinical Psychologist, GP with Special Interest (GPwSI) in Pain Management and Chaplaincy Services

Methods

Patients assessed by the Living with Pain Team where Urdu was their first language and would benefit from increasing their understanding of self-management of living with pain were referred into the pilot group. 6 patients started the 8 session PMP (1 male, 5 female). The PMP included an overview from the Trust's Muslim Chaplain of his role on the PMP, and how Islamic teachings promote self-management, compassion, physical activity and dispelling of cultural myths. The GPwSI discusses pain medication management within holistic care, the physiotherapist emphasises the biopsychosocial approach of the PMP, including gentle increases in exercise. Psychology sessions focussed on how pain can affect patients emotionally and emphasised how patients could increase their self-kindness. As literacy is a common problem, audio and video material in Urdu were utilised which supported the education of standard PMP concepts. SEQ and HADS outcome measures were administered pre and post PMP

Results

Patients made improvements in self-efficacy, anxiety and depression following the programme. There was a statistically significant change in anxiety ($t(3)=4.7$, $p<0.01$), depression ($t(3)=5$, $p<0.01$), and self-efficacy ($t(3)=-8.18$, $p<0.001$) following the programme The Reliable Change Index (RCI) was used, and this found that 25% of patients made a reliable change in anxiety and 75% of patients made a reliable change in depression. Change is considered clinically significant when patients make both a 'reliable change' and are below the clinical cut off for the measure used. In this case, 25% of patients made clinically significant change in anxiety and 75% of patients made a clinically significant change in depression following the programme. Subjectively patients reported that they had understood their persistent pain for the first time within their cultural context

Conclusion

The pilot study presents preliminary results that suggest there is value in delivering a language specific and culturally adapted MDT led PMP for the South Asian community. It has been able to engage patients to break down cultural barriers but also increase.

087

EXPERIENCES OF SLEEP PROBLEMS IN PATIENTS WITH CHRONIC MUSCULOSKELETAL PAIN: AN EXPLORATIVE MIXED METHOD STUDY

Category: Non-Pharmacological Pain Management

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Background

Sleep problems are highly prevalent in the chronic musculoskeletal pain population. They are associated with pain intensity, fatigue and mood disorders. Current evidence is not supporting sleep hygiene education alone as effective in treating sleep problems. Subgroup identification is needed to determine the effectiveness of sleep hygiene education alone in the chronic musculoskeletal pain population.

Aims

To explore the experiences of sleep problems in patients with chronic musculoskeletal pain (1). To determine which subgroups of patients with chronic musculoskeletal pain behave similarly regarding sleep hygiene (2) and benefit from a sleep hygiene intervention (3).

Methods

A total of 111 patients with chronic musculoskeletal pain were recruited from a secondary pain centre in Oxford (UK). All participants completed questionnaires aimed at assessing sleep hygiene, sleep problems, pain, fatigue, depression and anxiety. A linear regression analysis was used to determine the best-fitting model to explain the variability in sleep hygiene scores. A single focus group session with six participants was carried out to explore the experiences of having sleep problems. The verbatim transcript of this session was analysed using a two-step coding procedure.

Results

The analysis of the focus group session produced four themes: the difficulties of falling and staying asleep, my sleep problems affect my partner, I need a break from constant pain, and the difficulties of breaking a habit. Depression scores, age and gender explained 26% of the variability in sleep hygiene scores ($R2 = .26$; $p < .001$). A sleep hygiene intervention did not result in any significant improvement.

Conclusion

Sleep problems can affect the partner and have a negative influence on the patient's quality of life. Sleep related habits are hard to break and need specific treatment to change. Sleep hygiene intervention does not influence sleep hygiene scores. Younger males with mood disorders have worse sleep hygiene and would be a subgroup to target with sleep hygiene intervention studies.

088

INTEGRATING DIGITAL TECHNOLOGY INTO A CHRONIC PAIN PATHWAY

Category: Non-Pharmacological Pain Management

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Background

Chronic pain is a Long Term Condition. It is estimated that 14 million people live with chronic pain in England alone (1). 41% of people attending pain clinics reported their pain prevented them from working and 13% reduced their hours (2). Four out of 12 of the most disabling conditions from the Global Burden of Disease study into years lost to disability are persistent pain conditions (low back / neck pain, migraine, arthritis and other MSK conditions) (3). Pain is one of the most common causes of why people visit their GP who often lack the time and training to be able to assist patients to begin the self-management process. ADI & SBRI/NHS England funding develop the Pain Toolkit and Pain Management Plan Apps.

Interoperability between the app and the patient, linking with N2 network via our partnership with inHealthcare. Self-Assessment can be uploaded in to the EPR in Systm1 & EMIS.

Aims

To integrate innovative digital technology into a care pathway to promote a biopsychosocial approach to pain management by both clinicians and patients. Success will be shown in reduced referrals to secondary care, reduced GP consultations ad reduced opioid prescription. Better outcome, self-care and new tried and tested approaches been proven digitally.

Methods

ADI, commissioners, GP's and lead clinicians from Leeds were tasked to review the pathway to improve the patient journey with an aim of reducing Rx, secondary care referrals/GP appointments. GP's would initiate the patient onto the app. This was to promote a self-management process amongst the GPs and their patients and give the community pain services more information to assist the triage process. GP's felt there was not enough time to be able to instigate the self-management process so a change was implemented. Telephone assessment service was set to the scene and release the token to complete independently or attend for assisted screening prior to their second assessment. 50% of people are choosing to complete their assessments prior to their initial appointment. Patients fill the assessments in periodically through their treatment allowing reviews to take place over the phone, reducing the need for patients to attend clinics but still being able to track their progress.

Results

40% of GP's are generating tokens prior to referral, indicating an increase of awareness in the self-management process. 50% of patients referred into the community pain services are choosing to complete the information prior to their first appointment. Reducing appointments with the health care trainers by 50% which increases their capacity for 1-1 sessions for pilates, tai chi, relaxation and supporting groups. 66% reduction in secondary care referrals. Indicating an increase in those being managed in primary care and reducing costs from the CCG. Using average data of 1 assessment and 4 follow up appointments per patient at a cost of £120per appointment this indicates a £720,000 saving on yearly appointments not including the costs due to reductions in spinal injections and other interventions. It will also reduce the waiting list for secondary care for both new patients and follow ups which in some areas is well in excess of 18weeks.
Stats

- A 66% reduction of new patient referrals to the secondary care pain service
- 40% of GP's are generating tokens to initiate the self-management process in primary care
- 50% of patients are completing their assessments prior to their initial appointment which reduces the need for a screening appointment to set the scene and assist patients in completing the assessments
- On average 300 tokens are being generated a month

Conclusion

We have had to react quickly to the feedback of the clinicians, primarily the GP's who have been less keen to take a lead in the initiating the self-management process, this then changed the way in which the service providers were required to work. Clear communication and regular meetings between all stakeholders was key to the change The Leeds project was a large and ambitious project and with such projects come teething problems which after a few months these have settled and the staff and patients are much happier with the processes. After 6 months of the new pathway being introduced the early patients are beginning to be discharged, as a result of this the full impact of the pathway change and digital integration is not currently available but the early stats which we do have are positive.

089

INCREASING PHYSICAL ACTIVITY IN OLDER ADULTS WITH CHRONIC PAIN (IPOPP): DEVELOPMENT OF A WALKING INTERVENTION AND ASSOCIATED TRAINING PROGRAMME FOR PRIMARY CARE

Category: Non-Pharmacological Pain Management

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Background

90% of all pain complaints in people aged over 65 years of age are related to the musculoskeletal (MSK) system. Older adults and those with chronic MSK pain have reduced levels of everyday physical activity, despite evidence of benefits such as improvement in pain, quality of life and functional independence.

Aims

To develop a primary care based intervention delivered by Health Care Assistants (HCAs) to promote walking activity in adults aged 65 years and over with chronic MSK pain, and develop the associated training programme.

Methods

An implementation of change model was employed to develop the intervention and training. A "concrete proposal" for the intervention was devised using a stakeholder workshop (n=10) and a nominal group (n=11). Those with a special interest in the intervention (e.g. primary care practitioners, third sector workers) participated in the stakeholder workshop to share views on delivery of the intervention in primary care. Individuals aged 65 years and over with chronic MSK pain identified from community groups (e.g. Age UK) participated in the nominal group in which a combination of written responses and face to face discussion was employed to refine the intervention. A focus group with HCAs (n=4) was undertaken to identify current practice and determinants of behaviour change required to deliver the intervention. Data were analysed thematically, then mapped to the Theoretical Domains Framework. Training needs and techniques to address determinants of HCA behaviour were integrated into the training.

Results

The agreed intervention consists of an initial face-to-face consultation in general practice, and involves a motivational and action planning component including goal setting, provision of a pedometer and walking diary. A follow-up consultation a week later (either face-to-face or via the telephone) focuses on re-visiting/adapting the goals set, providing support and signposting to local walking opportunities. Motivational prompts via text, postcard or email are then sent for 8 weeks. HCAs in the focus group understood the proposed intervention but expressed concerns over confidence and competence to deliver it. Issues related to capabilities and professional roles were highlighted such as lack of knowledge and skills to advise older people with MSK pain to increase walking, engaging them with the intervention, and delivering the intervention in a brief consultation. The two day training of the HCAs covered patient-centred consulting, skills to facilitate goal-setting, identification of barriers to change and working with resistance.

Conclusion

An implementation of change model was applied using a stakeholder workshop, a nominal group and focus group. This approach has enabled the co-design of a brief and simple primary care based walking intervention for older people with chronic MSK pain, and the development of a training programme for HCAs. The intervention is now being tested in a pilot and feasibility trial.

090

THE SCALE AND IMPACT OF FATIGUE IN PEOPLE WITH SEVERE CHRONIC PAIN

Category: Non-Pharmacological Pain Management

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Background

In the history of pain treatment, fatigue was not traditionally regarded as a centrally important outcome or variable – it was not included in the 2003 IMMPACT core outcome measures. This was remedied in 2008 after studies of patient priorities for treatment. However, despite patients arguing for its importance, fatigue is still seldom reported as a key outcome for pain trials or as a centrally important clinical variable. Clinicians will usually acknowledge the presence of fatigue in people with chronic pain, and the potentially fatiguing nature of many analgesics; however, this is not matched by attention in the contemporary research literature.

Aims

To examine the impact of fatigue in patients who struggle with long-term, treatment refractory pain. To study absolute levels of fatigue in this population, its relationship to distress and function, and whether its influence is independent of pain intensity.

Methods

184 patients consecutively attending for treatment at a tertiary national specialist pain rehabilitation programme completed a range of self-report questionnaires before treatment. They reported levels of (1) absolute fatigue, (2) fatigue-related interference and (3) fatigue-related distress. They also completed a range of self-report measures that included indices of depression, disability and mindfulness.

Results

Despite this population being clinically selected for high levels of treatment-resistant pain, absolute levels of fatigue (7.5/10; 0 – 10 NRS) were higher than levels of pain (7.3/10 – 0 – 10 NRS). Higher levels of fatigue significantly correlated with higher disability, depression and lower levels of mindfulness. Correlations with psychosocial disability accounted for twice as much variance as those with physical disability, suggesting that fatigue is not simply a consequence of physical limitation. Of course, questions of causation remain. We examined the influence of fatigue on distress and functioning, after controlling for the influence of pain using hierarchical multiple regression. Fatigue accounted for a significant and independent amount of the variance in both cases. Despite pain being in the equation first, fatigue accounted for an equal amount of the variance as pain in the prediction of disability, and for a greater proportion of the variance in the prediction of depression.

Conclusion

Although fatigue has always been regarded as part of the chronic pain picture, it has not been a central recent focus in chronic pain research. These preliminary data argue that this fatigue should be taken more seriously in empirical research, in line with research on patient priorities. Even in a population selected for their high pain levels and with long histories of pain treatment, fatigue is very high, associated with poor functioning and mood, and has an influence that is independent of pain. Compared to pain, it accounts for twice the amount of variance in the prediction of depression levels. These results recall the Rheumatoid Arthritis literature, where the prominence of fatigue as a symptom and a target of treatment has been acknowledged more in the last decade.

091

SEX DIFFERENCES IN PSYCHOLOGICAL THERAPIES FOR PEDIATRIC CHRONIC PAIN: IMPACT ON PAIN, DISABILITY, AND PSYCHOLOGICAL DISTRESS

Category: Non-Pharmacological Pain Management

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Background

Sex differences influence a number of factors related to the treatment of chronic pain, including treatment-seeking behaviours, treatment response, and patient-provider interactions. Sex

differences in chronic pain emerge during adolescence, with girls experiencing higher rates of chronic pain than boys. However, it is unclear whether sex differences also extend to responses to treatment. Girls and boys have been found to cope differently with chronic pain, with girls reporting the use of more social support seeking and boys using more distraction techniques, likely due in part to the gender roles they have been socialized to. Given such differences, the efficacy of psychological interventions teaching coping strategies for pain management could be impacted by the sex and gender of the patient. However, the majority of clinical trials of psychological therapies for chronic and recurrent pain in children and adolescents have sample sizes that are too small to detect sex difference effects.

Aims

We conducted a systematic review and meta-analysis of clinical trials to examine whether the efficacy of psychological therapies for pediatric chronic pain differs between boys and girls.

Methods

Searches from two existing Cochrane reviews of randomized-controlled trials examining the efficacy of psychological therapies for chronic and recurrent pain in children and adolescents were updated. Forty-six articles were eligible for inclusion, and data was extracted for boys and girls separately regarding pre-treatment, post-treatment, and follow-up outcomes in the areas of pain, disability, anxiety, and depression. None of the included studies reported outcome data separately for boys and girls, and authors of all included studies were contacted to provide data. Data was obtained from 17 studies, with a combined total of 1164 participants (848 girls and 316 boys). A meta-analysis was conducted for each outcome, with sub-analyses examining sex differences in treatment efficacy.

Results

There were more than twice as many girls that participated in clinical trials of psychological therapies for chronic pain than boys. At pre-treatment, girls reported greater psychological distress (i.e., increased self-reported symptoms of depression and anxiety) than boys. In studies of interventions for headache, girls reported significantly greater pain severity at pre-treatment. Girls and boys in the treatment conditions appeared to experience similar post-treatment and follow-up gains. However, a sex difference was observed in post-treatment disability in children with non-headache pain conditions: girls who received psychological therapy reported significantly lower disability at post-treatment than girls in the control groups, but no such treatment effect was reported in the sample of boys.

Conclusion

Sex differences were found in pre-treatment headache pain and psychological distress. Rates of enrolment into clinical trials differed substantially between boys and girls. Interestingly, with the exception of post-treatment disability in children with non-headache painful conditions, few differences were found in how girls and boys responded to treatment on the measured outcomes. Future research should examine whether mechanisms of treatment efficacy differ between boys and girls, and consider the impact of pre-treatment sex differences on response to treatment.

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A REGISTRY STUDY TO ASSESS THE DURABILITY OF ACTIPATCH® - A NOVEL OTC NEUROMODULATION THERAPY FOR CHRONIC PAIN

Category: Non-Pharmacological Pain Management

Authors: Ian Rawe - Clinical Research BioElectronics Corporation

Background

Chronic pain continues to be a major health concern due to its high prevalence, detrimental effect on patient quality of life and high healthcare cost. Chronic low back alone accounts for more than £12 billion in direct and indirect costs every year in the United Kingdom. The main stay of pain management continues to be a pharmacological approach. However, there are many drawbacks including limited efficacy, adverse side effects and a high cost. ActiPatch® is an economical, safe, noninvasive neuromodulation therapy for the treatment of chronic pain and is available over the counter. ActiPatch® is a specific type of electroceutical device which utilises electromagnetic fields to allow non-invasive penetration of the stimulus into the tissue and produce the desired pain relief. Electromagnetic pulses are repeated at 1,000 times a second, resulting in a desensitisation of pain pathways and prevents adaption to the therapy.

Aims

Randomised control trials have shown efficacy for pain for ActiPatch® and a large registry study has shown effectiveness of the device in the community. The goal of this study was to further assess the durability of treatment over a 6 month use period for chronic pain sufferers.

Methods

An invitation to join an observational study was sent to subjects who had completed the trial of an ActiPatch® 7-day trial device and responded in an assessment that they would definitely purchase the retail ActiPatch® device (30 day - on/off). Therefore, continued uses of the ActiPatch® by each subject depended on individual purchase of the retail device and, therefore, were proactive users and positive responders to ActiPatch® therapy. Further assessments were carried out at 3, 4 and 6 months and included pain levels, cause, location and duration, impact on pain medication use and quality of life (QOL) assessment on a 7 point scale. Recruitment was done from 3 separate groups with 91 agreeing to complete the study in group one, 84 in group two and 130 in group three. Data collection from group 1 has been completed while group 2 and 3 data collection is ongoing.

Results

In group 1, 79 of the 91 completed the study (87%). Gender distribution was 57% female and 43% male. Aetiology of pain was from a wide variety of reported was causes including osteoarthritis (28%), rheumatoid arthritis (10%), post-surgical (11%), fibromyalgia (8%), sports injury (11%), tendonitis (3%), neuropathy (9%) and other causes (40%). Ninety two percent reported having chronic pain with a median duration of 2–5 years. Average baseline visual analogue pain (VAS) scores (0–10) were 8.19 in the 7 day assessment which reduced to 3.11 after trial device use. At 3 months, average pain was

2.95, 4 months 3.19 and 6 months 3.14. Pain medication use was reduced by 92% of the subjects with 22% reporting a complete elimination. QOL improvement were reported with 92% reporting a moderate to a great improvement in QOL, 94% reported improved sleep and 96% reported increased physical activity.

Conclusion

For positive responders to the therapy who were recruited for this study, the effectiveness of ActiPatch® is maintained over a 6 month period for the majority of the subjects who also reported improved quality of life, better sleep, were more physically active and required less pain medication.

Funding for the study by BioElectronics Corporation.

Older People

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A SYSTEMATIC REVIEW OF PAIN IN OLDER PEOPLE WITH WELL-CHARACTERISED FRAILTY

Category: Older People

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Background

Pain is common amongst older people with prevalence rates of persistent pain in older adults in the community at over 40%. The conceptualisation of frailty as an abnormal health state related to the ageing process that results in increased vulnerability to minor stressors has emerged over the last 15 years and robust models have been developed and validated to identify and severity-grade frailty. The two principle models of frailty are the phenotype and the Cumulative Deficit Model (CDM). Approximately one in ten people over 65 years, and between a quarter and a half of those aged over 85 years are frail. It is unclear whether pain is more prevalent in older people with frailty and how it might influence frailty trajectories.

Aims

The aim of the systematic review was to identify cohort and cross-sectional studies that reported pain outcomes in older people with well-characterised frailty (fit, pre-frail, frail) from validated frailty measures, and any reported associations between frailty and pain.

Methods

A structured search strategy using controlled vocabulary and text words to search databases including CINAHL, MEDLINE, Embase was developed. We combined search terms for 'pain' and 'frailty' and 'elderly'. We identified cohort and cross-sectional studies reporting pain in community-dwelling older people (mean age >65 years) that had included a validated frailty measure such as the phenotype model, or the CDM. We excluded studies that only reported a frailty indicator measure, for example gait speed, or the timed up and- go test as they have poor specificity and are therefore unsuitable for epidemiological research. Analgesic outcomes were also identified.

Results

4,756 titles were identified and screened. 55 full papers were reviewed. We identified seven relevant studies. The mean age of participants ranged from 71 to 82 years. The proportion of frail participants in the studies ranged from 9% to 32%. The limited data from the seven studies indicated that pain prevalence was higher in older people with frailty compared with people characterised as pre-frail or not frail. Five studies reported significant differences. There was little information regarding the causes of the pain other than one study reporting musculoskeletal pain, and one which only recruited participants with osteoarthritis of the knee and hip. Two studies reported analgesic outcomes by frailty status. In one study, opioid use was higher in frail men compared with pre-frail and not frail men. Another study reported a significant increase in analgesic use for increasing levels of frailty.

Conclusion

The presence of pain is higher in older people with frailty compared with people characterised as pre-frail or not frail. Thus older people reporting pain are more likely to be frail. However, a lack of prospective data precludes inferences about the direction of the relationship: that is whether pain or frailty is the antecedent. Future prospective cohort studies of older people that include robust measures of frailty and pain will help determine whether pain is a potential stress factor which contributes to the development or acceleration of frailty or, alternatively, if frailty predisposes to pain.

094

USEFULNESS OF MUSIC THERAPY AMONG PATIENTS HOSPITALISED IN CONVALESCENT AND REHABILITATION UNITS FOR THE ELDERLY

Category: Older People

Authors: Stéphane Guétin - Neurology University Hospital and Montpellier School of Medicine

Background

Music therapy using the "U" sequence technique has demonstrated its usefulness in relieving acute and chronic pain, notably in the context of Alzheimer's disease. Use of the MUSIC CARE method enables the standardised application of music therapy.

Aims

To evaluate the impact of music therapy on pain and anxiety among patients in convalescent and rehabilitation units.

Methods

This was a prospective, open-label study performed in 50 hospitalised patients who were followed over a 2-week period: an initial visit

followed by five sessions organised at minimum intervals of two days. The principal endpoint was pain evaluated before, at completion of and then one hour after each session, using a visual analogue scale (VAS).

Results

The results showed a 47% short-term reduction in the pain score, and a 39% reduction in anxiety ($p<0.001$). One hour after the session, the pain score was still 25% lower than baseline ($p<0.01$).

Conclusion

This preliminary study showed that the MUSIC CARE technique enabled a significant reduction in pain and anxiety among patients hospitalised in convalescent and rehabilitation units, even after the first session of therapy.

Other (Audit)

095

EVALUATION OF PATIENTS MANAGED IN JOINT PAIN AND SUBSTANCE MISUSE CLINIC

Category: Other (Audit)

Authors: Nilu Bhadra - Anaesthetics Blackpool Teaching Hospitals NHS Foundation Trust

Background

Chronic pain affects 8 - 60% of population. High risk drug misuse is estimated to affect approximately 1% of the population. Chronic pain is common in patients with substance misuse problems but undertreated because of lack of evidence, lack of expertise, poor communication between different health professionals and preconceived negative attitudes to these patients.Both addiction and pain are complex syndromes influenced by biological, social, psychological and environmental factors. Drugs of abuse evoke reward pathways which adapt and develop tolerance and result in the phenomenon of withdrawal on cessation. Withdrawal produces fear leading to behaviours to gain relief. Chronic pain is an emotional experience ranked as a strong motivational driver for change. It produces fear leading to behaviours to gain relief. Blackpool has high incidence of patients with high risk drug misuse, significant numbers of which experience chronic pain. We report using a multi-disciplinary team approach.

Aims

Our aim is to encourage our patients to stop illicit drug use while optimising their pain relief deploying joint expertise provided by pain and substance misuse teams consisting of pain and substance misuse consultant, psychologist and community worker.

Methods

Inclusion criteria: Patients with chronic pain, expressing motivation to decrease illicit drug use attending either substance misuse or pain service. At each clinic patients were assessed from chronic pain, substance misuse as well as psychological perspectives. Each patient completed a questionnaire pack encompassing number of medications taken, sleep diary, nature of pain (Short McGill Questionnaire), anxiety and depression (Hospital anxiety and depression Scale), Self Efficacy (pain Self efficacy questionnaire), illicit substance misuse and functioning (TOP). Patients were seen 6 weekly in the clinic with support provided by community worker in between. Tailored methods of pain relief as well psychosocial interventions to help patients address the addiction issue were adapted. Pain management was emphasised rather than reliance on drugs. Patients were encouraged not to take illicit drugs and if they succeeded to slowly decrease their opioid replacement therapy (ORT). The patients were discharged when pain relief and ORT optimised.

Results

We present data of 8 patients seen in the clinic. The patients ranged in age from 38-60; 2 were female and 6 were male. Patients visited the clinic on average 4 times. As a result of attending the clinic, five showed improvement in their overall pain. Four had reduced symptoms of depression and developed self efficacy to do activities of daily life despite the pain. Of the four patients who completed the treatment outcome profile measures at the first and last appointments, three clients noted improvements in their Psychological, Physical and overall Quality of Life scores. Sleep quality and quantity displayed limited change. Anxiety for three patients increased. Two patients were able to come off their ORT successfully. One was able to reduce buprenorphine dose. Two patients who refrained from illicit drug use relapsed after discharge. One patient had to be discharged from the clinic due to non-attendance.

Conclusion

Guidelines have been published regarding managing pain in patients with addiction but we have found there is no absolute right way of managing these patients. We believe these patients need an individualised, structured and supportive treatment care plan provided by combined expertise from pain management and addiction services. Our data indicates that multidisciplinary management could be effective in decreasing pain, alleviating depression and improving confidence and we plan to continue to develop the service. Anxiety did increase in some patients but this could be attributed to reduction in methadone as it does have anxiolytic properties.

096

PAIN-FREE: A QUALITY IMPROVEMENT PROJECT ON THE UNDERSTANDING AND MANAGEMENT OF PERIOPERATIVE PAIN

Category: Other (Audit)

Authors: Angeline Lee - Nuffield Department of Anaesthetics John Radcliffe Hospital, Oxford, Theodore Muth - Nuffield Department of Anaesthetics John Radcliffe Hospital, Alexandra Fottinger - Clinical School University of Oxford, Jane Quinlan - Nuffield Department of Anaesthetics John Radcliffe Hospital

Background

Pain is one of the most common symptoms experienced by surgical patients perioperatively. Multidisciplinary healthcare professionals who all have a responsibility to ensure that patients are given adequate analgesia staff surgical wards. Junior doctors are usually the first to be called to manage patients with pain, but they are given limited teaching about pain management. The John Radcliffe and Churchill hospitals in Oxford utilise electronic prescribing (EPR), and prescribing errors can occur due to technical problems in

addition to human error. Patients' perception of their illness and hospital stay is directly related to their experience of pain, and appropriate recognition and management of their pain is vital to ensure that patients are comfortable and safe.

Aims

This quality improvement project aimed to improve perioperative pain management in surgical wards at the John Radcliffe and Churchill hospitals in Oxford.

Methods

Initial audit standards were based on Trust pain guidelines and input from consultants in the pain team. Foundation year 1 (F1) doctors at the end of their F1 year (July 2015) were surveyed on their confidence and accuracy at managing perioperative pain. During the same period, randomly selected patients in the surgical wards at the John Radcliffe and Churchill hospitals were approached over 1 week with a verbal questionnaire about their experiences with pain in the perioperative period. The patients' EPR drug charts were audited to gather information about prescribing practices, and pain team referrals were noted. Interventions took place in August 2015, and these included a teaching session and a simulation session on pain management for new foundation doctors, and updated intranet guidelines for pain management. A re-audit was carried out in September 2015 after the interventions were put in place.

Results

In both audits, there were no statistically significant differences in the baseline characteristics of patients, including severity and location of pain. The first audit revealed gaps in the junior doctors' (n=25) knowledge and confidence in the management of patient-controlled analgesia (PCA) and epidurals, and the role of the inpatient pain team. 93% of patients (n=99) reported that their pain was well controlled. 75% were satisfied with their pain management. Prescribing errors occurred in 5% of drug charts. The second audit was carried out just after new F1 doctors (n=20) began their first rotations. Their confidence with all areas of pain management was understandably lower than their predecessors, but gaps were identified in the same areas. Interventions were tailored to suit these educational needs. 99% of patients (n=71) reported that their pain was well controlled, and 85% were satisfied with their pain management. There was a 1% reduction in prescribing errors.

Conclusion

This quality improvement project has successfully improved patient satisfaction in the management of their perioperative pain and reduced prescribing errors. Junior doctors' confidence and performance were improved by tailoring the interventions to the gaps in their knowledge, and information gathered from this project has guided the design of further interventions. Further work is ongoing to develop a mobile application for pain prescribing, and to pilot drop-in sessions for questions on pain management.

097

DEVELOPING A TRIAGE ASSESSMENT PROCESS TO STRATIFY THE CARE PATHWAY IN A SECONDARY CARE PAIN MANAGEMENT PROGRAMME (PMP) TEAM

Category: Other (Audit)

Authors: Fraser Gething - Pain Management Programme (PMP) Team Newcastle Upon Tyne Hospitals NHS Foundation Trust

Background

A stratified care pathway by means of an accurate triage process would improve patient care by ensuring the right patient is seen at the right time for the right treatment. The numbers of referrals have increased over time to the PMP service and there was recognition that not all patients required the full interdisciplinary PMP service. It was suggested that it might be possible to make an assessment at the paper triage stage of the pathway as to whether the patient was tier 2 or tier 3 of clinical complexity. Treatment for Tier 3 would be individual interdisciplinary assessment and treatment and possible progression onto a full Pain management Programme and Tier 2 would be the Pain Management plan approach delivered by a psychologically informed physiotherapist working within the PMP service (Lewin & Cole, 2010).

Aims

To establish the accuracy of the principle triager in determining whether or not the paper referral is assessed for the tier 2 or tier 3 pathway within our service.

Methods

Assessment of the triage process involved two stages. Two key measures, the PSEQ and TSK, were used to assess their level of complexity (tier 2 or 3). For the PESQ, tier 2 was between 20-40 and tier 3 below 20 (Lewin & Cole, 2010). For the TSK, tier 2 was below 35 and tier 3 above 35.

Stage 1:
A retrospective triage assessment was conducted on 30 randomly selected patient referrals where PSEQ and TSK data was already available unseen by the triager. The triager then assessed the referral letter to be tier 2 or 3 based on the clinical information in the letter. A comparison of the pre-existing scores was made to assess the accuracy.

Stage 2:
The same process was then conducted prospectively for 30 new patient referrals. A triage rating was made and then on completion of the key questionnaires, the grading was checked to assess accuracy.

Results

In Stage 1 (the retrospective triage), the triager was 75% accurate in matching the tier levels to the scores on the TSK (measure of fear of movement or (re)injury) and the PSEQ (measures how confidently people can perform different activities despite their pain). If referrals regarded as having "insufficient data" were excluded, this accuracy increased to 80%.In stage 2 (the prospective triage), the results showed 73% accuracy once the referrals with insufficient information were excluded. We noted that the triager's accuracy was more consistent with the PESQ scores.

Conclusion

This novel approach enabled us to establish that the triager was 73-80% accurate in deciding whether a patient was classified as tier 2 or tier 3 as defined earlier. This enabled us to see the right person at the right time with an appropriate treatment package (pain management plan). It also highlighted the need for good information in referral letters and that feedback to referrers is required to ensure that the

standard is maintained. Ultimately this approach will shorten the patient's care pathway without affecting the quality of their care.

098

A PROSPECTIVE AUDIT OF RESPONSE TO CAPSAICIN 8% PATCH TREATMENT IN A DISTRICT GENERAL HOSPITAL IN NORTH WALES

Category: Other (Audit)

Authors: Fiona Owen - chronic pain Ysbyty Gwynedd

Background

Capsaicin 8% was first made available for patient use in 2009. This poster will explore the patient experience of this treatment used within the chronic pain service for specific conditions with patients experiencing neuropathic pain. We have set up a service for using capsaicin 8% in an out-patient setting. This prospective audit is designed to see the impact, and size of service required, of capsaicin patch treatment on patients with post herpetic neuralgia, scar pain and chemotherapy induced neuropathy. Currently, patients are seen on an ad hoc basis. A patch clinic is organised when up to 9 patients are listed. They are then treated at the clinic, thus reducing the cost by providing multiple treatments from a single patch in one session.

Aims

The aim of this study was to evaluate the effect of capsaicin 8% on our patient population after the inception of a new service in Ysbyty Gwynedd, and to assess what volume of patients require this treatment.

Methods

This is a prospective, rolling audit of all patients going through the capsaicin 8% patch clinic. This service was set up in December 2012. The patients have a range of diagnoses- post herpetic neuralgia, chemotherapy induced neuropathy and scar pain. An initial assessment of pain severity, sleep disturbance, mood and activity is made prior to treatment. This is followed up after six weeks with the same questions as well as enquiries about side effects, improvement or otherwise from the patch, and perception of benefit in response to the treatment.

Results

This data is collected by the clinical nurse specialist at the time of clinic. There has been a 100% response rate because of this. To date there have been 41 treatments carried out. 85% of the patients treated report some relief from their pain. 66% of the patients reported improvement in their sleep, 61% reported elevation of their mood following treatment, and 54% state that they have been able to increase their activity level post treatment. The most successful treatments have been, in concordance with the research, for post herpetic neuralgia. There have been 2 patients cured of their pain symptoms, both with this condition. Recently we treated a patient with chemotherapy induced neuropathic pain with improvement in all aspects of enquiry.

Conclusion

This study has found that capsaicin patch has a beneficial effect on sleep. This has not previously been reported and may be worth further enquiry in conjunction with sleep studies. We have concluded that, due to the beneficial results with the capsaicin 8% patch treatment, this treatment will continue to be offered in Ysbyty Gwynedd. We are currently considering that it would be optimal to plan three monthly clinics rather than organising a clinic in response to patients on the waiting list. This will provide better service for the patients needing re-treatment in a timely manner.

099

BUZZING THROUGH PAIN: AUDIT OF A NURSE LED TENS SERVICE

Category: Other (Audit)

Authors: Dr Dee Burrows - Pain Management Services Torbay and South Devon NHSFT, Dr Ruth Day - Pain Management Services Torbay and South Devon NHSFT, Miss Mollie Wrathall - Pain Management Services Torbay and South Devon NHSFT

Background

More than 14 million people in the UK live with chronic pain (Bridges, 2011). Over two-thirds (68%) report that medication is inadequate at times (NFO Worldgroup, 2003). Transcutaneous Electrical Nerve Stimulation (TENS) offers an alternative approach with a degree of pain relief if the device is used correctly (Johnson, 2001). Treatments can be self-managed, thus reducing reliance on health services. TENS was offered some years ago in South Devon, but abandoned for a variety of reasons. With expertise in TENS, the two Nurses who joined the Chronic Pain Service in 2013 were keen to re-institute a service. A number of devices were purchased and protocols agreed for both TENS and External Neuromodulation (ENM) delivered via a TENS device.

Aims

1) To facilitate pain relief through the use of TENS and ENM.
2) To reduce reliance on medication, primary and secondary care practitioners by facilitating appropriate and timely self-management.

Methods

The two Nurses discussed TENS/ENM with their patients and invited referrals from other members of the MDT. The equipment was demonstrated, mode of action discussed, placement of electrodes considered and anticipated pain relief and individualised functional outcomes agreed. An information sheet and loan device was sent to patients. Outcome was reviewed 8 weeks later:

- No, small, moderate or significant benefit as predetermined by patient and clinician
- Patient purchasing their own device or children and those on low incomes receiving a long-term loan
- Discharge or next step in treatment pathway.

An excel spreadsheet was used to input individuals names (n=207 to June 2015), location of pain, TENS &/or ENM, length of loan and outcome. Audit followed a recognised cycle aimed to inform future care delivery and a case for ongoing equipment purchase. Preliminary results are presented below; the full dataset to end of 2015 will be included in the published results.

Results

71% obtained benefit from TENS for low back, neck, shoulder, knee or leg pain. Of these, 50% purchased a device, while 21% were provided with a long-term loan. These individuals obtained moderate to significant pain relief with evident functional improvement. 10 experienced unwanted side-effects including: aggravated pain/sensation, pads and wires got in the way, struggled to use due to hand function, difficult to sustain consistent benefit. Just 1 patient had an allergic reaction to the pads; they successfully transferred to hypoallergenic electrodes.65% of those trialling ENM for occipital neuralgia, migraine, lower limb, back, facial and neck neuropathic pain obtained moderate to significant benefit (n=22 complete datasets). All purchased their own device or were given one on long-term loan. The incidence of unwanted effects was lower in this group, however the numbers were small (n=3) and completed analysis is required before further comment can be made.

Conclusion

Most patients obtained pain relief and improvements in functional activity. For some this was in the face of intractable pain; one 72year old had his first pain free period since birth and discharged himself. The opportunity to engage in self-managed non-pharmacological pain relief proved popular. Benefits are consistent with national findings. Costs are generally covered by discharge or via reductions in pain medication. However, this data has not been subjected to an economic analysis; a course of action we would recommend. TENS / ENM are now an accepted and integral part of the local Service.

100

PELVIC PAIN: A DISTRICT GENERAL'S PERSPECTIVE

Category: Other (Audit)

Authors: Ramy Mottaleb - Anaesthetics and Pain Epsom and St Helier University Hospitals, Sara Bustamante - Pain and Anaesthesia Epsom and Helier University Hospitals

Background

The European Association of Urology defines chronic pelvic pain as, "chronic or persistent pain perceived in structures related to the pelvis of either men or women" which has been present for more than 6 months. It is often associated with negative and detrimental cognitive, behavioural and emotional consequences. Studies from the United States estimate that of 6.3% of males and up to 14.7% of women of a reproductive age suffer from pelvic pain. These figures are comparable to patients suffering with asthma. Most would accept that this group of patients are best managed within a multidisciplinary team of specialists who have an interest in pelvic pain.

Aims

To try to establish the prevalence of clinically significant pelvic pain and the resources that these patients utilise in a hospital in South West London without a specialist pelvic pain service.

Methods

A retrospective observational audit was performed at Epsom and St Helier University Hospitals in the month of October 2014. A total of 1623 patients attended colorectal surgery, urology and gynaecology outpatient clinics and were included in the study. Electronic notes were trawled and patients who had pelvic pain for more than 6 months, that was not attributable to cancer related pain, had a subgroup analysis. A pre-set pro-forma was completed on each of these patients to try and gauge how much clinical time and input was being utilised on these patients with regards to outpatient appointments, investigations, surgical procedures and referrals to other specialities.

Results

A total of 1623 patients attended both new and follow up appointments in the month of October 2014. 54 patients (3%) had pelvic pain for a duration of 6months which was not attributable to cancer pain. 42 (77%) of these patients were women. Of these 26 patients were from the gynaecology clinic, 25 from the urology clinic and 3 were from the colorectal group. 32 of the 54 patients (59%) had been seen by another speciality with the same complaint and 15 of those patients had been seen by more than 2 specialities. Only 2 of the 32 (6%) had been seen by the pain team. 18 patients (33%) had made an attendance to accident and emergency with their pelvic pain, with 12 of those (66%) making more than one attendance. Most patients had either a CT or MRI scan and 38 patients had surgical intervention.

Conclusion

Our study revealed a lower prevalence than some other population studies. This could be due to the method of our data collection, where by only patients in secondary care were identified. Nonetheless it does highlight that this group of patients are a significant health burden and that their management should be within a multidisciplinary team with pain services with appropriate personal. With this data we aim to secure funding for specialist physiotherapists and have a regular specialist pelvic pain clinic within our trust which will work closely with our surgical colleagues to optimise patient care.

101

A CLINICAL AUDIT OF HORMONE LEVELS ON PATIENTS ON LONG TERM OPIOIDS

Category: Other (Audit)

Authors: Mrs Heather Riggs - Pain Medicine West Suffolk Hospital NHS Foundation Trust, Dr Simon Law - Pain Medicine West Suffolk Hospital NHS Foundation Trust, Dr Louise Jeynes - Pain Medicine West Suffolk Hospital NHS Foundation Trust, Dr M Schofield - Pain Medicine West Suffolk Hospital NHS Foundation Trust, Mrs Dawn Pretty - Pain Medicine West Suffolk Hospital NHS Foundation Trust, Mrs Jayne Sainsbury - Pain Medicine West Suffolk Hospital NHS Foundation Trust, Mrs Jo Hunter - Pain Medicine West Suffolk Hospital NHS Foundation Trust

Background

Opioid-induced hypogonadism and endocrine suppression has been highlighted as a common complication with higher doses of therapeutic or illicit opioid use (1). The potential consequences of hypogonadism include decreased libido and erectile dysfunction in men, oligomenorrhea or amenorrhea in women, and bone loss or infertility in both sexes (2). Information about the effect of opioids on hormones is not routinely measured and the incidence of opioid-related hormone

abnormalities in Pain Clinic is unknown. This is the first time to our knowledge that pituitary and peripheral endocrine hormone levels have been collected on patients attending a Pain Clinic who were on monitored doses of opioids used therapeutically in chronic pain.

Aims

To assess if patients with chronic persistent pain who are prescribed opioid medication on a regular basis have evidence of reduced endocrine function Since 2010 over 300 patients with a variety of chronic pain diagnoses attended a specialist Pain Clinic (opioid clinic) for education about possible risks and side effects of opioids; and to ensure safe prescribing (as per BPS guidance (3). Domains measured include analgesic efficacy, at risk behaviour, titration of opioids or a switch to another opiate. Adverse outcomes were also collected. Information as to baseline status across several domains were collected. 253 patients subsequently had bloods taken to measure DHEA, SHBG, Testosterone, LH, FSH, Oestradiol and Vitamin D. These levels were recorded along with the opioids prescribed and dosage. Vitamin D data was analysed separately.

Methods

Pituitary and peripheral hormone levels have been recorded for patients attending a specialist opioid initiation and monitoring clinic. Patients had hormones measured if they had clinical complaints of endocrine abnormality (clinical hypothyroidism, reduced sex drive, abnormal menstrual cycles, subfertility) or if they were taking high dose (>100mg/24 hours MEQ) opioids. Those patients who were opioid naïve and were having opioids initiated were also measured for baseline measurements. Patients receiving hormone suppression for prostate cancer were excluded from analysis.

Results

Over a 5 year period 250patients attended the opioid clinic and had their blood levels measured. Bloods compared to normal laboratory reference ranges. Testosterone levels and morphine equivalent doses were recorded for 69 male patients. Graphs show a clear trend line for reduction of testosterone at higher doses. The results show a dose-dependent reduction in testosterone levels in otherwise healthy males at higher doses of opioids.

Conclusion

This is the first example of routine monitoring of patients taking therapeutic opioids for chronic pain that has been published. The results suggest that there are clinically important effects of opioid suppression of endocrine hormones which may contribute to increased pain reporting, low mood and other problems such as sub-fertility and loss of libido. The outliers in our results may indicate individuals who are either immune to the endocrine suppression effects of opioids; or possibly that the reported doses are not being taken. This raises the possibility of supply diversion and/or stockpiling. Based on these results, a more robust system of monitoring patient's compliance with taking opioids as prescribed could be suggested which may include random quantitative opioid levels and/or pill counts.

102

STRONG OPIOID TREATMENT FOR PERSISTENT NON-CANCER PAIN: A PROSPECTIVE EVALUATION OF PREVALENCE FROM A SECONDARY CARE MULTIDISCIPLINARY PAIN CLINIC

Category: Other (Audit)

Authors: Peter Keogh - Department of Pain Medicine Barts Health NHS Trust, Jayne Gallagher - Department of Pain Medicine Barts Health NHS Trust, Kristin Ullrich - Department of Pain Medicine Barts Health NHS Trust

Background

For more than a decade the adverse effects of chronic opioid use for the treatment of persistent non-cancer pain have been well publicised. Those working in the field of pain medicine have sought to highlight some of these negative physiological and psychological associations that include: tolerance, induced hyperalgesia, neuroendocrine dysfunction, and deleterious immune modulation,[1 2] amongst others. Furthermore, there exists little quality evidence that the risk of these potentially serious adverse effects are outweighed by the efficacy of their use in either reducing pain or increasing function and quality of life in the long-term.[3 4]Barts Health NHS Trust is the largest Trust in the UK.[5] Anecdotally, a significant proportion of patients we see are on long-term strong opioids for their chronic pain conditions. Our outpatient pain service operates within the model of a multi-professional, multi-disciplinary team and its clinicians are committed to responsible opioid prescribing.[2]

Aims

Firstly, to evaluate a cross-section of our patient population, identifying the number of patients on strong opioids. Secondly, to describe this patient cohort and better delineate the features associated with their strong opioid use. Thirdly, to make comparisons to those not taking strong opioids to guide further service development.

Methods

A prospective audit. The relevant permissions to perform the data collection were sought form the Trust's Clinical Effectiveness Unit. The data collection tool, which consisted of 20 questions, was designed, refined, and publicised during our department's regular academic meetings. A two-week window in November 2015 was chosen to roll out the audit. Patient information was collected during the outpatient consultation by structured interview with the attending pain management consultant or specialist pain nurse. No patient identifiable information was recorded. Data sets were collected for all patients who presented to our outpatient services across our multiple sites and within the data collection period, regardless of whether they were on strong opioids or not. General demographic data and more detailed information regarding strong opioid use was collected and analysed by a clinician who was not involved with the data collection.

Results

142 outpatient encounters were recorded. 27% of patients were on a strong opioid. In both the strong opioid and non-strong opioid groups, 37% were male and 63% were female. The median age range group in both cohorts was 50 to 69 years. In both strong opioid takers and non-strong opioid takers, the mode duration of patients' pain was over 10 years (44% and 38% respectively). The median duration of strong opioid use was 3.5 years (range 6 months to over 20 years). Median oral morphine equivalent daily dose was 67.5mg (range 10mg to 500mg). 68% of patients suffered at least one self-reported side effect from their medication in the strong-opioid group. Patient judged effectiveness (0 not effective, 10 maximally effective) of their strong opioids in relieving their pain symptoms was 6.1.

Conclusion

We see a significant proportion of patients on strong opioids for the treatment of their chronic pain. Evidence is lacking as to the efficacy of opioids in chronic non-cancer pain, especially at higher doses. We must be acutely aware of the potential for the serious adverse effects of these medications in this particular patient population. We postulate that patients receiving strong opioids might be more effectively served with a focused opioid clinic to better understand the complex issues they present and, to collect further detailed information on how we may best serve them.

103

RE-AUDIT OF RADIATION EXPOSURE FOR COMMON CHRONIC PAIN PROCEDURES

Category: Other (Audit)

Authors: Mohammed Sajad - Anaesthesia and Pain The Dudley Group NHS Trust

Background

Patients undergoing chronic pain intervention under fluoroscopy guidance are exposed to ionising radiation. Consent for risks of radiation is not commonly taken but can have both deterministic and stochastic effects. Little protective measures are in place to prevent patients from excessive exposure whilst staff protective equipment is common place. No real guidance has been published on the recommended screening time and radiation dose to be expected for commonly performed procedures. It was seen as pertinent to look at such common procedures and see how total exposure could be minimised. Changes to current practise would NOT eliminate risk but would reduce this risk whilst improving awareness among those involved. Our departmental audit in 2012 allowed us to collect data on two commonly performed procedures whilst review of literature helped devise reasonable exposure limits.

Aims

To re-Audit and evaluate changes in radiation exposure to patients undergoing interventional procedures bilateral lower three (L3/4/5) lumbar median branch blocks (MBB) and unilateral sacroiliac joint (SIJ) injections by measuring screening time (ST) and dose area product (DAP) of radiation. Recommendations implemented in attempt to decrease exposure after initial audit.

Methods

Data was collected from 38 patients who received MBB and 50 patients who received SIJ injections in an audit carried out in 2012. The reference limit for MBB at the 3 levels L3/4/5 was screening time of 60 seconds and DAP - 2.5 Gy.cm2 and the reference limit for unilateral SIJ was screening time - 43 seconds and DAP - 1.63 Gy.cm2. A collection of data sample of ST and DAP taken before and after implementing a number of changes to practice. Practice changes included:

1. Limit the amount of radiation by avoiding continuous screening
2. Focusing X-ray beam to area of interest with the help of the laser guide
3. Minimising scatter of radiation by moving radiation source away from patient
4. Using collimation
5. Use of protective glasses and dose meters
6. Consultants to keep a log of the radiation exposure used in their patients
7. Education of relevant staff

Results

For lumbar median branch blocks, the initial audit revealed a mean DAP of 4.15 Gy.cm2 and mean ST of 62.5s. This equates to approximately 57 plain chest x-rays. After implementation of recommendations this had improved to a mean DAP of 1.6 Gy.cm2 and mean ST of 27.1s, equating to 23 plain chest x-rays. For sacroiliac joint injections first audit revealed a mean DAP 2.6 and mean ST of 37s, approximately equivalent to 36 chest X-rays. This had improved to mean DAP of 0.75 Gy.cm2 and mean ST of 12.6s, approximately 11 Chest Xrays. Furthermore, the proportion of patients falling outside the reference ranges had fallen from 68% to 5% for median branch blocks and a fall from 50% to 10% for SIJ injections.

Conclusion

There was a significant drop in both dose and screening time of radiation. Highlighting the negative effects of radiation to the staff increased awareness without compromising patient care. Responsibility to minimise exposure to both staff and patients should lie with all participants in the procedure. There is benefit in having recommendations in achieving goal of minimising radiation but clear national guidelines are required. We propose a regular audit of practice and a larger prospective study looking at all common procedures in pain and establishing reference levels of radiation exposure for common procedures.

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LOW DOSE NALTREXONE USE IN FIBROMYALGIA SYNDROME AND CHRONIC WIDESPREAD PAIN

Category: Other (Audit)

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Background

Naltrexone is a competitive antagonist at opioid receptors and has been used clinically for more than 30 years in prevention of relapse in opioid dependence with a successful safety profile at doses of 50mg. At much smaller doses, in the range of 3mg to 5mg, it has been used as a treatment for fibromyalgia syndrome (FMS); leading to the term low dose naltrexone (LDN). The proposed mechanisms of action in FMS include enhancing production of endogenous opioids and via effects on microglial cells in the central nervous system (CNS). LDN administration may reduce FMS symptoms and daily pain severity when compared to placebo and improve life satisfaction and mood. Current treatments for FMS are limited both in terms of evidence base and success. Therefore additional options are to be welcomed, especially for those patients who do not derive adequate benefit, or experience intolerable side effects, from their current medications.

Aims

This audit aimed to record effects of LDN prescription in patients with FMS or chronic widespread pain (CWP) attending a secondary care chronic pain clinic.

Methods

Selected patients diagnosed with FMS or CWP affecting the neck, back and at least two limbs were offered a twelve week course of LDN after review by a consultant pain physician. An initial (t0) set of validated questionnaires was completed and this process was repeated at six (t6) and twelve (t12) weeks after commencing LDN. Any side effects experienced were also recorded. In order to be offered LDN patients must have failed to report benefit or experienced intolerable side effects from other more conventional medications such as tricyclics, gabapentinoids, serotonin–norepinephrine reuptake inhibitors (SNRIs), selective serotonin reuptake inhibitors (SSRIs), or weak opioids. If patients were not willing to discontinue opioids they were not prescribed LDN. Patients took a 4.5mg LDN capsule once daily for twelve weeks along with their other regular medications. The local drug and therapeutics committee were approached and LDN was approved as a therapy option.

Results

Nine patients have completed the trial of LDN. Seven (77.8%) were female. The mean age was 47 years. Three were currently still attending work. Four patients did not complete all questionnaires. Mean scores improved for the patients (n=5) who completed three questionnaire sets and are presented below as score at t12 minus score at t0.

- Quality of life short form: physical component score +3.3/ mental component score +9.4
- Beck Depression Inventory-II: -19
- Beck Anxiety Inventory: -14.8
- Pain Self Efficacy Questionnaire: +17.6
- Pittsburgh Sleep Quality Index: -4
- Brief Pain Inventory Short Form: pain severity index -1.9/ function interference index -3.9

Two patients reported no benefit at t12 so stopped LDN but did not complete t12 questionnaires. Three (33%) patients reported no side effects (SE's). Six (66%) patients reported SE's, two patients stopped LDN at t6 due to these. Reported SE's included nausea, headache, insomnia and dizziness.

Conclusion

Patients with FMS and CWP that is intractable to usual pharmacological and non-pharmacological therapies are commonly seen in secondary care chronic pain clinics. LDN is generally well tolerated and may provide benefit. More research is need to confirm the cohort that is most likely to benefit, however given the limited options and potential for some benefit with minimal risk then LDN should be considered as part of the armamentarium

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DOSE-RESPONSE ANALYSIS OF ONABOTULINUMTOXIN A IN CHRONIC MIGRAINE

Category: Other (Audit)

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Background

The PREEMPT programme demonstrated the efficacy and tolerability of Onabotulinum toxin type A (BoNT-A) in adults with chronic migraine. The PREEMPT dose and injection paradigm includes fixed-site, fixed-dose, intramuscular injections across seven specific head/neck muscle areas (corrugator, procerus, frontalis, temporalis, occipitalis, cervical paraspinal and trapezius) totalling 155 units (U). Additional follow-the-pain injections, up to 40 U, can be administered depending on the locations of the patient's predominant pain, making the maximum total dose 195 U. However, there were no clear indications whether the follow-the-pain strategy provided additional benefit compared to the standard injection paradigm. Moreover, in recent prospective studies assessing BoNT-A in chronic migraine management, the treatment was limited to the standard fixed-site, fixed-dose injection paradigm.

Aims

To assess whether the follow-the-pain strategy improves clinical outcomes compared to the fixed-site, fixed-dose (155 U) paradigm in chronic migraine patients treated with at least two cycles of BoNT-A.

Methods

This study is part of a broad, retrospective, real-life audit of patients who attended the Guy's and St Thomas' Headache Service between 2010 and 2015 to assess the efficacy of BoNT-A in the management of chronic migraine. Patients' diaries were used to establish the number of headache days, migraine days, headache-free days and headache load. Data regarding adverse events and the use of abortive medications were also collected. Patients with medication overuse were not excluded. Disability was measured using the Headache Impact Test (HIT-6). A patient global impression of change scale (PGIC) was also used to measure their subjective improvement after each BoNT-A. Patients received a variable number of BoNT-A units, between 155 and 185 U according to the PREEMPT paradigm.

Results

Patients were divided in two groups: those treated with an average number of BoNT-A units between 155 and 164 (n = 56) and those treated with an average of 165-185 units (n = 41) of BoNT-A. In both groups BoNT-A therapy significantly reduced the number of headache days, migraine days and headache load compared to baseline ($P \geqslant 0.026$). The group of patients that received >165 U did not show a significant reduction in headache days compared the group who received 155 U ($P \geqslant 0.306$). Patients receiving higher number of BoNT-A units did not report additional side effects compared to those who received fewer units.

Conclusion

Our preliminary results showed that, in a real-life clinical setting, the follow-the-pain strategy may not offer additional benefits compared to the standard injection paradigm. The analysis of a larger group of patients may be required to confirm this finding.

Other (Research)

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DEVELOPMENT OF RESEARCH PRIORITIES IN PAEDIATRIC PAIN AND PALLIATIVE CARE

Category: Other (research)

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Background

Priority setting for healthcare research is essential; the rigorous and systematic process required, facilitates a high quality of research within a fiscally challenging environment.

Aims

This project aimed to prioritise clinical therapeutic uncertainties in paediatric pain and palliative care in order to encourage and inform the future research agenda and raise the profile of paediatric pain and palliative care in the UK.

Methods

Clinical therapeutic uncertainties were identified and transformed into PICO format (P: Patient, Population or Problem; I: Intervention; C: Comparison; O: Outcome) and prioritised using a modified Nominal Group Technique by the Clinical Studies Group in Pain and Palliative Care within NIHR CRN-Children (including PPI members). Whether the research questions were uncertain was confirmed by reference to published systematic reviews. The databases searched included the Cochrane Library (http://www.thecochranelibrary.com/view/0/index.html), NHS Centre for Reviews and Dissemination (http://www.crd.york.ac.uk/CRDWeb) and Prospero (http://www.crd.york.ac.uk/PROSPERO). The WHO International Clinical Trials Search Portal (http://apps.who.int/trialsearch/) was searched to identify any ongoing trials. Uncertainty was confirmed if there was: (1) no review, (2) one or more recent, relevant and reliable review(s) indicated an equivocal answer or (3) an out-of-date review (over 3 years old) indicated an equivocal answer. Confirmed uncertainties were entered into the UK Database of Uncertainties about the Effects of Treatments (UK DUETs).

Results

The "top 5" research priorities identified were:

1. Is gabapentin safe to use and effective for reducing pain with neuropathic characteristics in children (6-18yrs) with chronic pain?
2. Are intravenous NSAIDS safe to use and effective for reducing pain after surgery in preschool children (0-5yrs)?
3. Are opioids safe to use and effective for reducing acute pain at home in children (0-18yrs)?
4. In children (6-18yrs) with chronic pain, do multicomponent CBT interventions safely and effectively improve function and quality of life immediately after treatment and during long-term follow up?
5. Is amitriptyline safe to use and effective for reducing pain with neuropathic characteristics in children (6-18yrs) with chronic pain? The 'top 10' priorities included investigating non-pharmacological and pharmacological interventions to improve pain and symptom management in palliative care (e.g. methadone, ketamine, fentanyl buccal, massage using the "m" technique).

Conclusion

The present top 10 list of research priorities for paediatric pain and palliative care was generated using a systematic, transparent and inclusive method. The research priorities covered a wide range of therapeutic uncertainties of importance to field and it is hoped that the findings will lead to future research that will address the uncertainties identified. Priority setting is an ongoing process and increased awareness of priorities and priority setting processes should encourage clinicians and other stakeholders to engage in such exercises in the future.

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INDIVIDUALS' PERCEPTIONS AND EXPERIENCES OF BEING BOTH OVERWEIGHT AND LIVING WITH PERSISTENT MUSCULOSKELETAL PAIN

Category: Other (research)

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Background

Independently, overweight/obesity and persistent musculoskeletal pain (PMP) are prevalent conditions that have widespread implications for individuals, health care resources and the economy. Overweight/obese adults are more likely to experience PMP than people with normal weight, which adds to the complexity of managing either condition. For example, for overweight/obese people, physical activity is advocated as part of weight management, yet physical activity can be limited by poorly managed PMP. Surveys have shown links between weight and pain but they are limited in describing in depth the complexities of the relationship. Qualitative studies, which would have the scope to do so, are few and far between. Thus, we designed this study to gain insight into how overweight/obese individuals actively seeking to manage their weight understand the relationship between their weight and pain and the wider biopsychosocial aspects of living with both.

Aims

The study aim was to explore individuals' perceptions and experiences of being overweight/obese and living with persistent musculoskeletal pain (PMP). A particular objective was to explore their understanding of issues related to physical function, weight-loss effort, self-efficacy and mood.

Methods

This was a qualitative design based on interpretative phenomenological analysis (IPA). Using purposive sampling, we recruited participants who met the following inclusion criteria: men and women ⩾18 years old; BMI >25; attending a commercial weight loss service; and self-reporting PMP (British Pain Inventory average pain score >4 most days for the past 3 months or longer). 18 participants (16 women) aged 29-71 were recruited. They participated in face to face semi-structured interviews, which were recorded and transcribed verbatim. NVivo10 computer software was used to manage data. Thematic analysis was used to look for emerging themes.

Results

The complexity of the relationship between weight and pain was apparent. From our preliminary analysis three themes emerged; 'pain- motivator and barrier to weight loss'; 'fear of weight causing more damage' and 'activity is positive'. Findings show that pain motivates some individuals to lose weight while simultaneously inhibiting efforts to do so by reducing their ability to engage with activities that promote weight loss or even contributing to behaviour resulting in weight gain. Overweight contributes to fear and catastrophizing in some participants who believe that even during minimal physical activity, e.g. walking short distances, the extra pressure caused by their weight will further damage joints. This fear is often exacerbated by health care professionals' descriptions of musculoskeletal damage or their attitude towards overweight people with PMP. Conversely, individuals acknowledged the benefits of becoming more active e.g. reduced pain and increased positivity which facilitated healthier choices.

Conclusion

Overweight/obese adults with co-existing PMP who are actively trying to lose weight find their efforts hampered by pain or fear of causing harm or increasing pain. Weight-loss services need to acknowledge these fears and employ strategies to support individuals to gradually increase physical activity and gain confidence. Health care providers need to ensure the language they use with this group does not cause or exacerbate fear of normal movement.

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DEFENSIVE HIGH-ANXIOUS INDIVIDUALS DEMONSTRATE DIFFERENT RESPONSES TO PAIN MANAGEMENT TO THOSE WITH LOWER LEVELS OF DEFENSIVENESS AND ANXIETY

Category: Other (research)

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Background

Chronic pain affects approximately 14 million people in England, of these, 25% reported that their pain stopped them from completing daily activities including work. Within the UK, back pain is estimated to cost £12.3 billion per year, the equivalent of 22% of the annual NHS budget. Chronic pain is a complex condition with a significant social and economic impact and a better understanding of the factors affecting pain management is required to inform best practice. Studies have identified differences between individuals with high or low trait-anxiety which predispose individuals to respond to pain related stimuli differently. However, findings are equivocal and may be due to other factors. The inclusion of defensiveness alongside trait-anxiety (personality type) has highlighted differences in how individuals respond to treatment and outcomes in chronic illness populations. Few studies have considered the effect of Weinberger et al.'s personality types in the management of chronic musculoskeletal pain.

Aims

The aims were to (i) identify whether personality type affects the relationships between pain intensity, cognitive factors and disability at three- and six-months post baseline; and (ii) identify whether personality type affects the likelihood of achieving a minimal clinical important change in pain intensity or disability at three and six-months.

Methods

Participants were recruited from a hospital based pain management programme and had suffered from chronic pain for a minimum of 3 months. Patients completed a set of validated questionnaires assessing depression, catastrophising, self-efficacy, kinesiophobia, pain intensity, and disability at 3 and 6 months post baseline (entry to the study rather than a specific epoch in their treatment / management). The minimal clinical important change (MCIC) from baseline to three and six months for disability and pain intensity were calculated for the defensive high-anxious and non-extreme groups separately. For the purpose of this study, the MCIC for pain intensity, was considered to be a reduction of 2 points on the eleven point scale and for disability a reduction of 3 points on the Roland Morris Disability Questionnaire.

Results

For the defensive high-anxious group at three months, higher pain intensity ($\beta = 0.62$, $p < 0.05$) and kinesiophobia ($\beta = 0.28$, $p < 0.05$) and lower self-efficacy ($\beta = -0.65$, $p < 0.05$), were related to greater levels of disability. At 6 months, higher pain intensity and kinesiophobia were related to greater levels of disability for defensive high-anxious individuals; however self-efficacy was no longer significantly linked. In contrast, within the non-extreme group at three months lower self-efficacy was related to greater levels of disability none of the factors offered significant relationships at 6 months in the non-extreme group. Analysis of the minimal clinical important change demonstrated that a greater proportion of the defensive high-anxious individuals reported improvement for both pain (3 month 25%; 6 month 38%) and disability (3 month 35%; 6 month 50%). This group also showed stronger links between improvements in pain and disability and baseline psychological factors than the non-extreme individuals.

Conclusion

The study highlights important differences between the defensive high-anxious and non-extreme personality types. The findings suggest that current treatments are more effective for defensive high-anxious patients. Furthermore, the high proportion of defensive high-anxious individuals previously found within chronic

musculoskeletal pain populations highlights the need for psychologically based interventions to be delivered earlier in the care process. Stratifying the population based on personality type may allow for more targeted interventions, which could be more cost effective and reduce the number of patients remaining in the care system.

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WIDESPREAD HYPERALGESIA AND RADIOGRAPHIC OSTEOARTHRITIS: RELATIONSHIP TO PRE-OPERATIVE PAIN AND OUTCOME AFTER TOTAL HIP AND KNEE REPLACEMENT

Category: Other (research)

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Background

Assessment and diagnosis of osteoarthritis commonly involves radiographs to visualise structural joint changes. However, radiographic results do not always correlate with symptoms, and there is discordance between pain severity and radiographic osteoarthritis severity. The relationship between structural joint changes and long-term pain outcomes after joint replacement is also complex, as patients with less severe structural joint changes prior to surgery are more likely to report long-term pain post-operatively. One possible factor contributing to the relationships between radiographic osteoarthritis and pain severity before and after joint replacement is central sensitisation. This refers to changes in central pain processing that occur when large amounts of peripheral noxious input lead to hyperexcitiability of neurones and amplification of pain signalling. Reduced pain thresholds at a body site distant to the painful joint, known as widespread hyperalgesia, is one indication of the presence of central sensitisation and can be assessed experimentally using Quantitative Sensory Testing.

Aims

To investigate whether the interaction between pre-operative widespread hyperalgesia and radiographic osteoarthritis was associated with pain severity before and after total hip replacement and total knee replacement.

Methods

Data were analysed from 232 patients receiving total hip replacement and 241 receiving total knee replacement. These data were collected as part of the Arthroplasty Pain Experience (APEX) trials. Joint pain severity was assessed pre-operatively and at 12 months post-operatively using the WOMAC Pain Scale. Widespread hyperalgesia was assessed prior to surgery through forearm pressure pain thresholds measured using an algometer. The severity of radiographic osteoarthritis was evaluated using the Kellgren and Lawrence scheme. A multilevel model was used to simultaneously investigate the effect of pressure pain thresholds and osteoarthritis grade on pre-operative pain severity and change in pain severity from pre- to post-operative. All analyses were performed separately for hip and knee patients and and adjustments were made for confounding variables.

Results

Pre-operative: In knee patients, there was weak evidence that the effect of widespread hyperalgesia on pain severity was greater in patients with more severe radiographic osteoarthritis compared to patients with less severe radiographic osteoarthritis (Grade 3 OA: ß=0.96 vs Grade 4 OA: ß=4.03). However, in hip patients, the effect of widespread hyperalgesia on pain severity did not differ with the extent of radiographic osteoarthritis (Grade 3 OA: ß=3.95 vs Grade 4 OA: ß=3.67). Post-operative: Patients undergoing knee replacement surgery with less severe radiographic osteoarthritis who had greater widespread hyperalgesia benefitted less from surgery than patients with less widespread hyperalgesia (Grade 3 OA: ß=2.28). Conversely, patients undergoing hip replacement with more severe radiographic osteoarthritis who had greater widespread hyperalgesia benefited more from surgery than patients with less widespread hyperalgesia (Grade 4 OA: ß=-2.92).

Conclusion

Central sensitisation may be a determinant of how much patients benefit from joint replacement, but the effect varies by joint and severity of structural joint changes. This is the first study to investigate the interaction of widespread hyperalgesia and radiographic osteoarthritis on benefit gained after joint replacement, and therefore further research is needed to provide further insight into potential mechanistic pathways. However, these findings could have important clinical implications, through identifying the potential for stratified treatment of pain in patients undergoing joint replacement.

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DOES HORSE RIDING PREDISPOSE TO PUDENDAL NEUROVASCULAR INJURY?

Category: Other (research)

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Background

Pudendal neurovascular injury (PNVI) is a rare but debilitating condition whose principal symptom is chronic pelvic pain. There is no data on the prevalence of this condition but estimates of the prevalence of pudendal neuralgia (a prominent component of PNVI) in the general population range from 0.001-1%. Bicycling is a known cause of PNVI; the mechanism of injury is thought to be repeated contact between the perineum and a hard saddle.

Aims

To establish if horse riding predisposes to PNVI and to assess if this relationship warrants further investigation.

Methods

A questionnaire-based survey was performed with the help of an interviewer over a three-month period at different types of horse riding events. The questionnaire assessed horse riders' demographic features, riding habits and the presence or absence of PNVI symptoms. PNVI symptoms were classified as longstanding perineal pain, genital numbness, sexual dysfunction and urinary symptoms.

Results

A total of 167 complete responses were collected, of which 45 were excluded due to potential alternative clinical aetiology for PNVI, such as vaginal childbirth and post-surgical pain. Of the remaining 122 responses, 26 (21.3%) were found to have PNVI symptoms. This result was greatly in excess of the general population prevalence estimates of 0.001-1%. Statistical analyses of the impact of gender, age, BMI, number of years riding, number of hours riding per week and riding disciplines on the prevalence of PNVI did not achieve a p score < 0.05, except in the case of age, which revealed a significant relationship.

Conclusion

This study suggests that horse riding predisposes to PNVI at a prevalence of 21.3% and that further investigation is therefore warranted. Awareness of this link should be raised within the horse riding community and with the appropriate clinicians.

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TRENDS IN PRESCRIPTION OPIOID ANALGESIC DISPENSING IN THE REPUBLIC OF IRELAND 2003-2011: RESULTS FROM A NATIONAL POPULATION STUDY

Category: Other (research)

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Background

Worldwide prevalence of prescription opioid use has tripled since 1991. The greatest increase in use has occurred in the USA and Canada. Supply of these medications has become a point of debate among healthcare professionals due to the concurrent increase in prescription drug and mortality and morbidity among those taking opioids. Opioids are effective analgesics but are associated with undesirable adverse effects. Older adults are at greater risk of experiencing adverse effects due to a diminished ability to metabolise drugs, altered distribution patterns, polypharmacy and multi-morbidities. Opioid bowel dysfunction (OBD) describes the range of gastrointestinal effects associated with opioids. The occurrence of OBD may be minimised through co-prescribing of laxatives with opioids. Sedation associated with opioids may be reduced by avoiding concomitant use with central nervous system depressants such as anxiolytics and hypnotics.

Aims

The aim of this study is to determine the prevalence of prescription opioids dispensed to adults aged ⩾55 years in the Republic of Ireland over a 9 year period and to determine the prevalence of concurrent laxative and sedating agents dispensed with opioids during this period.

Methods

The Health Service Executive – Primary Care Reimbursement Service (HSE-PCRS) database was the data source for this study. The General Medical Scheme (GMS) is a means tested scheme that provides free health care including medications to approximately 30% of the Irish population and is recorded within this database. Dispensing records of interest were identified using WHO ATC codes. Opioids were categorised as weak, moderate or strong. Dispensing rates refer to the number of adults, aged ⩾55 years, who received at least one prescription opioid per 1,000 GMS eligible population. The number of adults in receipt of >3 dispensings of an opioid was also determined as a method of indicating recurrent use. Concurrent use was defined as a co-prescription of a laxative or sedating agents (benzodiazepines and Z drugs) and a weak, moderate or strong opioid dispensed in the same calendar month in a calendar year.

Results

Moderate opioids were the most prevalent class of opioid dispensed from 2003-2011. The highest rate was observed in 2003, 251.9 per 1,000 (250.7-253.1) and was 212.0 per 1,000 (211.0-213.0) in 2011. Dextropropoxyphene/paracetamol combinations were the most common moderate opioid dispensed from 2003-2005. Upon withdrawal of this formulation from the market in 2006, the prevalence of paracetamol/codeine and tramadol formulations dispensings increased. Strong opioids had the lowest prevalence rate compared to weak and moderate opioids, the highest prevalence of 55.5 (54.9-56.6) per 1,000 was observed in 2011. Among those dispensed strong opioids, there is an increasing use of patches in older age. Concurrent dispensings of sedating agents with strong opioids was greater than that of laxatives with strong opioids. Women had a consistently higher concurrent rate of dispensing of sedating agents with strong opioids than men. Men had a consistently higher concurrent rate of laxative with strong opioids dispensings than women.

Conclusion

The increasing use of tramadol formulations in this study, second to paracetamol/codeine formulations, following the withdrawal of dextropropoxyphene formulations from the market mirrors the trend described in similar studies, however, the prevalence of dispensings in this country does not indicate dramatically accelerated use of these tramadol analgesics at present. While strong opioid use becomes more prevalent with age, patches appear to be a preferential delivery system perhaps to minimise adverse effects However, there appears to be a high rate of potentially inappropriate prescribing of sedating agents and a low rate of good practice prescribing of laxatives.

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DEVELOPING A COMPLEX INTERVENTION FOR PATIENTS WITH LONG-TERM PAIN AFTER TOTAL KNEE REPLACEMENT

Category: Other (research)

Authors: Vikki Wylde - Musculoskeletal Research Unit University of Bristol

Background

Around 20% of patients who have total knee replacement find that they experience long-term pain afterwards. There is a pressing need for better treatment and management for patients who have this kind of pain but there is little evidence about how to improve care. To address this gap we are developing a complex intervention in keeping

with MRC guidance on intervention development. The intervention comprises a clinic to assess potential causes of a patient's long-term pain after knee replacement and onwards referral to appropriate services. Future work will comprise a randomised controlled trial to evaluate the effectiveness and cost-effectiveness of this intervention. The current study comprises the penultimate stage in the comprehensive development of a complex intervention for people with long-term pain after knee replacement. Earlier stages have included a survey of current practice, focus groups with healthcare professionals, a systematic review of the literature and expert deliberation.

Aims

MRC guidance suggests that a series of studies may be required to progressively refine the design of a complex intervention before undertaking a full-scale evaluation. The aim of this study is to conduct the penultimate stage of intervention development, building on previous research and leading to final refinement before evaluation.

Methods

Healthcare professionals from diverse clinical backgrounds with experience of caring for patients with long-term pain after knee replacement were sent a study information pack including a cover letter, information leaflet, consent form, information about the intervention and questionnaire. Professionals who wished to participate were asked to return the questionnaire and signed consent form to the research team. The questionnaire asks participants to rate the appropriateness of different aspects of the assessment process and care pathway from 1-9 (not appropriate to very appropriate). Data were collated and a document prepared, consisting of anonymised mean appropriateness ratings and summaries of free-text comments. This document was then discussed in 4 facilitated meetings with professionals. These meetings were held in the future trial centres (Bristol, Cardiff, Exeter and Oxford). The final stage of this study will involve the summary report and revised care pathway being sent to participants for further comments.

Results

19 professionals completed the questionnaire and 3 meetings with 12 participants have been held, with the final meeting in early 2016. Participants included surgeons, physiotherapists, nurses, pain specialists and rheumatologists. Mean appropriateness scores ranged from 6.6 to 8.4. Taking a score of 7-9 as agreement, consensus was achieved that the assessment should be performed by an extended scope practitioner/nurse, treatment be guided by a standardised assessment of pain, and treatment individualised. There was lack of consensus on the 3 months post-operative timing (6.9), although discussion at the meetings suggested that this would be appropriate if patients were identified at 2 months and treatment began at 3 months. There was agreement that referrals in the care pathway to surgical review, GP and pain clinics were appropriate. Nurse-led/self-monitoring was rated lower (6.6) because of concerns over ensuring that patients receive appropriate support and are followed-up and referred to other services if needed.

Conclusion

This work demonstrates the research methods that can be used to refine the design of a complex intervention. The findings will allow us to finalise an intervention—clinics and care pathway—for patients with long-term pain after knee replacement. The next stage of this intervention development work will be to assess the acceptability and reliability of the assessment process, and the usability of the intervention standard operating procedures. The intervention will then be evaluated by a larger research team in a multi-centre randomised controlled trial, which will begin in Autumn 2016.

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USING A LEARNING COMMUNITY TO MANAGE PAIN: A PARTICIPATORY ACTION RESEARCH STUDY

Category: Other (research)

Authors: Gareth Parsons - Faculty of Life Sciences and Education University of South Wales, Dr Gina Dolan - Faculty of Life Sciences and Education University of South Wales, Dr Stuart Todd - Faculty of Life Sciences and Education University of South Wales

Background

This study evaluated whether, bringing people who have chronic pain together in collaborative learning communities can impact upon the way they manage their condition. Those who have chronic pain are often marginalised and restricted from playing a fuller role in society. These processes can indicate that they may be experiencing a form of social oppression. This justifies the use of PAR methods with this group, as they intend to foster co-operation, generate self-awareness and produce new knowledge that they can put to use in seeking ways to improve their condition. Participatory action research (PAR) has been used with other patient groups, but not with people who have chronic pain.

Aims

The aim of this study was to explore whether bringing people together people who had chronic pain in a collaborative learning community, where participants help each other learn to deal with the problems they face, produces transformation in their lives.

Methods

Participants were recruited from a Pain Clinic and a general practice in South Wales for three learning communities which were supported and evaluated using PAR. Two of these were sustained over the required ten week period. Specifically a Dionysian Inquiry was established in order to promote consciousness-raising among participants in the learning communities (Heron 1996). This approach aims to and seeks transformation by a process of self-reflection and action-taking which leads to empowering participants. The basis on which transformation can occur is through meeting, communicating and cooperating with similar others. This process develops a discourse that allows participants to raise their consciousness of the situation and make choices about whether to act on these altered perceptions.

Results

Three action cycles emerged from the dialectic between participants in the learning communities., 'Communicating with health professionals and others', was common to both learning communities whilst the other two 'Accepting the need to make adjustments' and 'Accepting pain and disability' emerged separately. Consequently individual transformations occurred among participants in the form of individual actions and self-reported changes in feelings. Additional

findings explain that people who have chronic pain experience oppression because:

1. The condition of chronic pain itself, materially restricts the lives of people in pain
2. Responses of others to chronic pain; particularly those in a position of power over patients, shaped by wider attitudes in society to pain, illness and disability exacerbates the situation for people in chronic pain and
3. The response of people with chronic pain, to both their condition and to others, exacerbates and reinforces their oppressed status.

Conclusion

This study demonstrates that a PAR inquiry has the potential to generate transformation in the lives of the participants and is an appropriate way to engage with people in pain. These findings are significant, as the articulation of chronic pain as an oppressive force and the possible structures by which this is enacted has seldom occurred in the literature. Without a discussion around oppression and pain which raises awareness of the various barriers people encounter, people who experience chronic pain are unlikely to overcome these obstructions and attain empowerment.

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AN INVESTIGATION INTO THE EFFECT OF BLOOD FLOW RESTRICTION ON PAIN RESPONSE AND MUSCULAR ENDURANCE IN HEALTHY HUMANS

Category: Other (research)

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Background

Low-intensity resistance training under blood flow restriction (BFR) is used to increase muscle hypertrophy and strength in sport training. One method of inducing BFR is by inflating a pressure cuff over the upper section of the exercising limb, in a manner similar to that used to induce ischaemic pain by the submaximal effort tourniquet test (SETT). SETT has been used as an analgesic assay in healthy human studies to mimic ischaemic pain using cuff pressures above systolic pressure to occlude both arterial and venous vessels (i.e. full BFR). It is difficult to perform movements under full BFR because of the severity of pain and diminished muscle endurance. There have been no studies that have investigated pain and muscle endurance during submaximal exercise under various levels of BFR.

Aims

The aim of this study was to investigate the effect of full BFR (arterial and venous occlusion at 200mmHg), partial BFR (partial arterial and full venous occlusion at 100mmHg) and no (control) BFR during submaximal exercise on pain and muscular endurance.

Methods

A within-subject repeated measures cross-over study was conducted using 20 postgraduate student healthy volunteers (n=20, male=14, age = 22-29 years). BFR was achieved using a cuff placed on the non-dominant upper arm and inflated to 200mmHg, 100mmHg or 0mmHg. Participants completed grip strength repetitions of a bulb dynamometer (60 per minute) at 30% of their one-repetition maximum of grip strength for each BFR condition (full BFR, partial BFR and no (control) BFR). Each condition was presented at one of three experimental visits (sequence randomised) with each visit separated by at least one week to prevent carry-over effects. Outcome measures were average present pain intensity (VAS, 100mm), pain quality (tally of descriptors from the short-Form McGill Pain Questionnaire (SF-MPQ) and the number of repetitions and time to failure to squeeze the dynamometer (i.e. muscle endurance). Data was analysed using various ANOVAs.

Results

Pairwise comparisons found higher VAS scores for full BFR compared with partial BFR (95% CIs for difference = 1.6, 14.0 mm, $t(19)=2.65$, $p=0.016$); and full BFR compared with no BFR (95%CI = 3.2, 17.1 mm, $t(19)=3.04$, $p=0.007$). Participants selected a greater number of sensory pain descriptors following full BFR (tally=68 descriptors including Hot-burning=13 Aching=12, Throbbing=12, Cramping=10) compared with partial BFR (tally=54 descriptors including Throbbing=13, Aching=13) and no BFR (tally=16 descriptors including Tender=11). Participants selected a greater number of affective descriptors following full BFR (tally=18 descriptors including Tiring-Exhausting=7, Sickening=5) compared with partial BFR (tally=11 descriptors including Tiring-Exhausting=9) and no BFR (tally=3 descriptors all being Tiring-Exhausting). Two-way mixed ANOVA found effects for the number of repetitions performed ($F(2,36)=23.94$, $p<0.001$). Post-hoc analysis found that fewer repetitions were performed for full BFR (mean(SD)=81.2(38.0) repetitions) compared with partial BFR (125.1(37.7) repetitions) and for full BFR compared with no BFR (147.6(11.3) repetitions).

Conclusion

Greater BFR produced greater severity of exercise-induced pain and more sensory and affective pain descriptors chosen. Greater BFR produced shorter muscle endurance times and fewer times repetitions of low-intensity exercise. Our study suggests that partial BFR may be a more useful experimental model to study the effect of ischemic pain on movement related tasks because the time to muscle endurance is longer and there is less chance of causing nerve compression block. Partial BFR at 100mmHg resulted in less pain so we recommend that this may be optimal for exercise adherence and muscle hypertrophy during low-intensity exercise.

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PILOTING A SPECIALISED PAIN CLINIC FOR PEOPLE WITH SICKLE CELL PAIN

Category: Other (research)

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Background

Sickle Cell Disease (SCD) is a common childhood-onset genetic disorder, predominantly affecting communities of West African and Caribbean descent. Persistent pain is the most significant feature of SCD, which patients often experience as both a chronic symptom and as acute exacerbations or 'crises' (Edwards et al., 2005). Sickle cell pain has a profound psychological and social impact (Anie, 2005), and requires complex management employing multi-disciplinary approaches (Edwards et al., 2005). The Complex Pain Clinic (CPC) began in 2013 at St George's University Hospital in response to a lack of distinct chronic pain services for sickle cell patients. The CPC is multi-disciplinary (run by a Consultant in Pain Medicine and Consultant Haematologist/Clinical Psychologist), and provides specialised assessment and treatment of SCD patients with complex pain. The clinic was introduced as part of a long-term model of care for people with SCD, seeking to redress health inequalities and provide effective pain management.

Aims

The primary aim was to assess the acceptability and credibility of the CPC as a new pain service for SCD through perspectives of patients and clinicians involved in the clinic. A secondary aim was to describe the population attending the clinic in terms of measures of mood and quality-of-life (QOL).

Methods

A mixed-methods study design was employed, using questionnaires and semi-structured interviews. All patients attending the CPC over 8 months were invited to take part; 12 consented (5 male, 7 female) and completed the questionnaires, while 7 of these completed the interviews. Questionnaires included: Health & Anxiety Depression Scale (HADS), British Pain Inventory (BPI) and CPC Evaluation Form. Three clinical staff were also interviewed. Qualitative data gathered through interviews were analysed using Thematic Analysis; transcripts were manually coded, codes were compared between participants then codes related to the complex pain clinic were grouped into themes reflecting similar ideas. Triangulation was deployed to enhance credibility and transparency of results (Kolb, 2012). Ethical Approval for the study was obtained from the National Research Ethics Services Committee North East - Newcastle & North Tyneside 2. This work was partially supported by a grant from the South West London Academic, Health and Social Care System.

Results

All but two patients (severe; >7/10) experienced moderate levels (4-7/10) of pain. Patients exhibited mild-to-moderate levels of general anxiety and depression. Most patients were satisfied with the content and usefulness of the CPC with respect to pain management. Three major themes were identified from qualitative data:

- CPC as productive for pain – patients liked the fact that the clinic was focused solely on pain, with a clinician from outside of haematology who could bring a fresh perspective and potentially new pain management ideas.
- CPC as therapeutic – the consultation itself was often described as having strong value, with 'expert listening', effective communication, mutual trust and respect being key themes emerging from the data.
- Valuing the multi-disciplinary aspect – the presence of the psychologist was highly valued and patients were pleased the interplay of physical and emotional health was recognised. Patients also felt pleased other departments were taking an interest in sickle cell.

Conclusion

This study suggests the CPC, a novel healthcare initiative, is an acceptable and potentially beneficial service for SCD patients. Key aspects identified by participants were that the service tackled pain exclusively, facilitated patients' access to alternative pain management strategies and provided a positive emotional experience. Although data saturation was achieved, the study was small-scale. However the rich, in-depth data from patients and health care professionals critically informed service development. More generally, the CPC emphasises the success of a biopsychosocial model in practice, supporting arguments led by recent sickle cell research (Anie & Green 2012; Edwards & Edwards, 2010).

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CENTRAL & PERIPHERAL SENSITISATION RESPONSE FOLLOWING PREGABALIN IN PATIENTS WITH FIBROMYALGIA

Category: Other (research)

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Background

Fibromyalgia (FM) is a chronic musculoskeletal pain condition that is often associated with sleep disturbances and fatigue. Current techniques have failed to predict response to treatments used in FM and global outcome measures such as visual analogue scores (VAS) provide only a crude measure of pain experience.

Aims

The aim of this study was to evaluate whether quantitative sensory testing (QST) detects a change in pain in FM receiving pregabalin treatment.

Methods

Fourteen patients, 13 female and one male FM patients received routine pregabalin and QST was measured at baseline and monthly for 12 weeks. Measurement of pressure pain thresholds (PPT) used a pressure algometer. DNIC response was measured using PPT with an inflated cuff in-situ on one arm. Fibromyalgia impact questionnaire (FIQ) was also completed.

Results

Patients with FM demonstrated loss of DNIC, (PPTs 167.2 KPa vs 140.7 kPa). A "normal' DNIC response was observed at one month and this was maintained until the final visit 231 kPa vs 326 kPa. PPT's showed a significant improvement increasing from baseline 141.4 kPa to 213.2 kPa ($p=0.03$). Patients also reported a similar magnitude of improvements in PainDETECT and its impact on daily life by on FIQ ($P<0.01$).

Conclusion

This pilot study reports an increase in PPTs and in the DNIC response with pregabalin, which was maintained at 12 weeks and this was supported by positive pain scores. Pregabalin is a licensed treatment for fibromyalgia in Europe, its response to central sensitisation particularly 'dynamic responses' has not been reported. This is the first study demonstrating reduction in peripheral and central sensitisation as measured by QST in patients with fibromyalgia following pregabalin.

Paediatric

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PAIN AND QUALITY OF LIFE IN YOUNG PEOPLE WITH EPIDERMOLYSIS BULLOSA

Category: Paediatric

Authors: Christina Liossi - Psychology University of Southampton & Great Ormond Street Hospital for Children Foundation Trust

Background

Epidermolysis bullosa (EB) is a rare, inherited group of disorders characterized by blistering of the skin following friction or mechanical trauma. It is estimated that one in every 17,000 children born in the UK will have EB and there are currently an estimated 5,000 people living with it. Pain is a prominent and distressing symptom in young people with EB and most EB-related pain arises from 4 major sources: skin, bone/joints, gastrointestinal tract, and during procedures. Pain is not only unpleasant but contributes to difficulty in general mobility, inability to participate in normal activities such as school, sports and socialising with friends, feeling 'low' or depressed and a general reduction in the quality of life for the young person.

Aims

The aims of the study were to assess pain and quality of life (QoL) in young patients with EB, seen in outpatient clinics at the two UK national EB centres at Great Ormond Street Hospital and Birmingham's Children Hospital.

Methods

133 parent and child (2-18yrs) pairs with EB took part in the study. Young people completed the Pediatric Quality of Life Inventory, Generic Core Scale (PedsQL: a generic paediatric measure assessing health-related quality of life) and the Epidermolysis Bullosa Pain Questionnaire (EBPQ: a measure developed specifically for this study that asks patients to rate how much pain they experienced on average the previous week and also how much they experienced in different body areas and during dressing changes). Parents completed the parent versions of the Pediatric Quality of Life Inventory, Generic Core Scale and the Epidermolysis Bullosa Pain Questionnaire and the Hospital Anxiety and Depression Scale (HADS: a measure of the severity of anxiety and depression symptoms experienced over the past week).

Results

Preliminary analysis showed that across all EB types, QoL was reported as impaired by both parents and young patients (<65). Young patients experienced weekly pain (mean 4.10 out of 10 as reported by parents) and were afraid of pain (mean 3.23 out of 10-self reported). Across all EB types parents did not report abnormal levels of anxiety or depression [HADS anxiety mean = 7.53 (SD=5.3) HADS depression mean= 5.36 (SD=7.78)].

Conclusion

Although appropriate available medications are used, EB is still a painful condition for a number of children. Patients with EB have a broad spectrum of need for pain treatment, varying with the type of EB, the severity within that type, and the particular physical, emotional, and psychological symptom constellation of each individual patient.

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NOT SEEING EYE-TO-EYE: DIFFERENTIAL REPORTING OF CHRONIC PAIN BY CHILDREN AND THEIR PARENTS (PRIME-C)

Category: Paediatric

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Background

The research literature suggests that parents may underestimate and under-report the extent and impact of chronic pain for their children. This can have significant detrimental developmental implications; and may result in a lack of medical validation, and increased child disability, isolation and distress. Understanding inconsistencies between parent and child perceptions of pain on a population level is necessary for the development of national health-promotion strategies to facilitate comprehensive pain assessment and improve the quality of life of children with chronic pain.

Aims

This paper aims to investigate the frequency, determinants and developmental impact of differential reporting of chronic pain by children aged 5 – 12 years living in Ireland and their parents, who participated in the PRIME-C study.

Methods

The PRIME-C study investigated the prevalence, impact and cost of chronic pain among children using child self-report and parental report. Participants completed a quantitative survey to assess health-related quality of life as well as the location(s), quality and intensity of pain. Demographic information and indicators of socioeconomic status were also recorded. Parents and children then completed an open-ended question to provide qualitative insights into their experiences of child pain. Data were collected from 1648 parent-child dyads (55.6% girls, 88.4% mothers).

Results

Correlations between child and parent reports of health-related quality of life and pain-related functioning were weak and non-significant, regardless of whether children reported chronic pain or not. Among parents, only 4% (n = 64) reported that one or more of their children had chronic pain compared to 10% of children reporting pain (n = 150). Only 21% of children who self-reported chronic pain had a confirmatory parental report. Similarly, when parents stated that their child had chronic pain this was not reported by the child themselves in 20% of cases. Qualitative data revealed that children whose parents did not confirm their reports of pain feared that parents would not believe or understand them, and felt that their pain experiences were not validated.

Conclusion

There are significant inconsistencies between children's self-report and parental reports of pain, indicating a need to further understand this mismatch of views. Proxy reports may not provide an accurate representation of child pain experiences. Parents are in a unique position to help their child to understand and cope with emotional, as well as physical, pain – provided children feel able to communicate about their pain and the effects it has on their lives.

Primary Care

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SUPPORTING THE SUPPORT GROUPS

Category: Primary Care

Authors: Jill Whibley - Community Chronic Pain Kent Community Health Foundation NHS Trust, Jill Rowley - Community Chronic Pain Kent Community Health Foundation NHS Trust

Background

A number of National agendas to promote self-management approaches for those living with chronic pain have been offered in recent years. Also, in 2012 chronic pain was recognised as a long-term condition in its own right. In line with this recent evolution of chronic pain service provision, the Kent Community Health Foundation Trust (KCHFT) Chronic Pain team has continually developed diverse but focused multidisciplinary approaches that aim to integrate and promote self-management. The service offers a mixture of biopsychosocial approaches and actively supports the local patient-led chronic pain support groups in east Kent. A number of independent patient-led chronic pain support groups also exist in other regions around the UK. However, no model currently exists to provide them with a tailored information resource regarding the start-up process or ongoing support to help them thrive.

Aims

The ultimate aim of this project was to propose a model for promoting effective patient-led chronic pain support groups, which may be replicated around the UK. The objectives included the identification and evaluation of aspects of effective group process to develop an information manual based upon a reflective developmental framework.

Methods

The project's methodology consisted of two main stages:
Stage one:

- A review of relevant literature that identified aspects of effective support group process and informed the development of a member questionnaire to evaluate each group's practices and organisation.

Group feedback tables were developed to provide supportive and reflective feedback on the overall results from group members' questionnaires. Groups could choose to hold a post-questionnaire discussion and/or gain further assistance to develop any resources or practices.

Stage two:

- The aspects of effective group process identified from the literature were integrated with the reflective group feedback tables. This subsequently informed the development of the dynamic levels of a self-evaluative grid framework that worked towards best practices. This was linked to a supportive information manual to form the proposed model.
- Each group's feedback tables were transferred into the proposed model's self-evaluative grid to demonstrate its possibilities of capturing and replicating each group's experiences.

Results

The project has resulted in proposing a model that has:

- Identified eight criteria of effective group process including group goals, needs and expectations, roles and responsibilities, structure of meetings, use of resources, use of external networking, group guidelines, and decision-making and problem-solving.
- Highlighted key developmental possibilities within the above criteria that could be tracked on a self-evaluative grid working towards best practices called the Group Identity Grid (GIG).
- Integrated the GIG with a supportive information manual; These were linked via group reflection questions based around the GIG criteria that signposted relevant information and activities in the manual.
- Clarified areas of advice and guidance based on effective practices to inform the Chronic Pain Service team in their ongoing support of the groups and to assist any newly forming and existing support groups.

Conclusion

This project has proposed a self-evaluative and self-sustaining model to promote effective patient-led chronic pain support groups. The model was flexible to retain individual group identity but was embedded within a replicable framework supported by a user-friendly and informative tool. These aspects were represented by the Group Identity Grid (GIG) and related information manual. The next step would be to apply the model to a newly forming support group and follow it into an evaluative stage. This process may be facilitated by a workshop approach to explore the possibilities of the support group using the GIG and information manual.

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PATIENT INTRODUCTION TO COMMUNITY CHRONIC PAIN

Category: Primary Care

Authors: Lesley Wright - Community Chronic Pain Kent Community Health NHS Foundation Trust, Deborah Jardine Barnes - Community Chronic Pain Kent Community Health NHS Foundation Trust, Vanessa Savidge - Community Chronic Pain Kent Community Health NHS Foundation Trust

Background

This project was proposed to improve service quality and capacity by reducing the impact of DNA's and to address the numbers of patients who failed to engage with the community pain management service after their initial assessment was completed. All patients in the project area were to be invited to an 'introductory session' and asked to complete a self-efficacy (SE) score. The introductory session is designed to fully inform patients of the ethos of the service; to enable patients to reach a point of self-management through the biopsychosocial approach. We wanted patients to have the opportunity to understand the importance of committing to their pathway. The SE score enables the identification of a demarcation point, enabling the patient to be triaged to the most appropriate assessor; senior clinicians Vs Specialist Nurses. Patients choosing not to engage with the service are discharged to their GP with an explanatory letter.

Aims

To establish if a new way of working can;
Increase the service capacity for first assessments
Reduce waiting times (referral to initial assessment)
Reduce DNA rate, thus improving service efficiency

Methods

The pilot ran for 10 weeks. In that time 8 introductory sessions were run. 8 patients were invited to each introductory group session. This figure was derived from the average number referred to the locality each week. For those who chose to engage, an initial assessment appointment was offered within two weeks of the engagement session. Pts. with a high SE score (>20) will be triaged to the Clinical Nurse Specialist for 1st assessment. Pts. with a low SE score(<20) will be triaged to the Senior Clinician

Results

8 Introductory sessions had a capacity of 64 patients 53 patients were booked onto these 8 sessions 83% capacity 45 patients attended 85% of the 45 patients; 5 self-selected out of the service 40 went on to an initial assessmentof the 40 booked for an initial assessment x2 DNA'd DNA rate for first assessments reduced to 0.8% DNA rate for first assessments for the same week, preceding year, without pilot 34% Wait times for first assessments reduced from 6 weeks to 1 week.

Conclusion

This pilot was successful in meeting its objectives; wait times and DNA rates reduced, improving service capacity. All patients were seen within the planned time frame. Matching patients to the most appropriate clinician with the use of self- efficacy scores may not be the most effective measure for stratifying patients as it is a very subjective score. All patients in the pilot were asked for feedback via a questionnaire which was positive. The pilot has now been agreed a new service model and will adopted across the Kent Community Health NHS Foundation Trust Community Chronic Pain Service area.

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INTRODUCING A REDESIGN OF A THERAPIST-LED PATHWAY FOR AN INNER CITY COMMUNITY PAIN SERVICE

Category: Primary Care

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Background

Hackney is one of the most deprived local authorities in the country with around 68,000 people in Hackney cited to experience moderate to extreme pain (Acorn CACI model 2014). This amounts to approximately 27% of Hackney's diverse population compared with 19% prevalence across 15 European countries (Breivik et al, 2006). The Locomotor Pain Service has provided a physiotherapy and pain service since 2003. Following a gap analysis and patient feedback undertaken in 2013/14 to look at care standards and best practice for pain management, the existing pathway was redesigned. The CCG invested a 30% increase in funding in support of this.

Aims

- Improve quality of life through sustainable self-management
- Access to the full specialist pain team at point of entry, including psychologists, physiotherapists, occupational therapists and prescribers
- Waits under five weeks from referral
- Reduce medical management of chronic pain, including injection therapy, medication, GP and A&E attendances

Methods

Patients were invited to an information session within 5 weeks of referral to facilitate understanding of persistent pain and promote the concept of self-management.? Those that 'opted-in' met with a pain psychologist, prescriber and pain specialist physiotherapist for a comprehensive assessment of their social, emotional and physical well-being. A management plan was then formulated with the patient which may include any combination of the following: an intensive pain management programme (PMP); a shorter Understanding Pain & Possibilities Programme (UPPP) and/or individual treatment with pain psychology; physiotherapy; occupational therapy; a prescriber or pain consultant. Data was collected using Open RiO alongside a set of outcome measure questionnaires completed by the patients at various time points including prior to the information session. Feedback was also collected.

Results

There has been a 51% increase in patients who see multiple professionals compared with 2014/15 prior to the service redesign. 100% of patients referred for the pain service introductory session were offered an appointment within five weeks with 95% being seen also being seen for an initial MDT assessment within five weeks. 95% of patients seen in the new service show improvement in one or more outcome measure or achievement of one or more specific goal. There was also a reduction in reliance on medical and secondary care services which included a 29% decrease in spinal injections and a 57% reduction in GP referrals to secondary care pain management and less than 5% of patients being referred on for secondary care consultation.

Conclusion

The service redesign has demonstrated:

- Access to the pain service within five weeks of referral
- A greater increase in capacity than resource expansion
- A focus on education and self-management at point of entry
- Better triage of patients into optimal treatment pathways
- Earlier identification of health inequalities and psychosocial factors that impact on health and wellbeing? through MDT assessment and collection of outcome measure questionnaire data
- Fewer referrals to secondary care

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CHARACTERISTICS OF NON-CANCER PAIN PATIENTS PRESCRIBED LONG-TERM STRONG OPIOIDS IN PRIMARY CARE: A POPULATION BASED STUDY USING CPRD

Category: Primary Care

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Background

Opioids are some of the most potent analgesics available and their treatment is well established in cancer and acute pain. However, for approaching twenty years the use of opioid therapy for chronic non-cancer pain has been controversial and there have been ongoing concerns regarding their long-term use. There has been limited evidence for long-term effectiveness in chronic non-cancer pain and recent data suggest that opioid consumption over prolonged periods are associated with variety of potential serious adverse effects, overdoses and aberrant drug related behaviours, including abuse and addiction. Despite of this, there have been large increases in the prescribing of opioids in primary care and little information exists on the exposure and characteristics of non-cancer pain patients receiving long-term opioid therapy in the United Kingdom, who may be potentially at high risk of opioid related complications.

Aims

The aims of this study were to describe the demographics and clinical features of non-cancer pain patients prescribed long-term strong opioids, and to identify predictor variables including age, gender, comorbidities and patterns of drug use associated with the prescribing.

Methods

This cross-sectional study used the Clinical Practice Research Datalink (CPRD) from 2000 to 2010. Adult patients (aged $\geqslant$18 years) who were prescribed four strong opioids (morphine, buprenorphine, fentanyl and oxycodone) and without a cancer diagnosis 12 months within the index date were included. Injection, suppositories formulations and buprenorphine 2mg and 4mg were excluded. The total number of prescriptions, prescription day supply and oral morphine-equivalent dose (OMED) were calculated and divided by patient's strong opioid observation duration to derive average values per year. Long-term users were defined as recipients of >90 days/year and OMED>180 mg/day were categorised as high-dose users. Descriptive statistics were used to report users characteristics and co-prescriptions of antidepressants, benzodiazepines and non-benzodiazepine hypnotics, sedatives, and anxiolytics and non-opioid analgesics. A multivariate generalised linear regression model (Gaussian distribution with a log-link function) was used to evaluate factors associated with the average number of prescription issued per year.

Results

There were 135,941 non-cancer patients prescribed a strong opioid, and 32.4% (n=43,972) received long-term therapy with overall mean duration of 3.1±2.3 years. Majority (65.6%) of long-term users were female, and their average age was 64.5±17.1 years. The mean number of pain diagnoses was 3.0±2.2 and average number of co-morbidities was 2.1±1.7. Depression and anxiety were prevalent in 50.0% and 22.1% of long-term users respectively. High doses were prescribed in 13.0% of patients who received long-term strong opioids. The average annual OMED in the high dose, long-term users was 294.7±52.7 mg/day and their mean annual supply was 228±72.7 days. After adjusting for age, gender and geographical region; higher number of pain conditions (β=0.14; 95%CI: 0.07,0.20), medical diagnoses (β=0.27; 95%CI: 0.20,0.33), Townsend deprivation score (β=0.73; 95%CI: 0.36,1.10), smoking (β=1.39; 95%CI: 1.12,1.67), and the use of antidepressants, benzodiazepines and non-opioid analgesics were associated with greater number of strong opioid prescriptions per year.

Conclusion

This study found that a substantial proportion of non-cancer pain patients were prescribed strong opioids in the long-term. These patients were characterized by high number of pain and co-morbid illnesses including common psychiatric disorders. A smaller subset received high opioid doses on a long-term basis. Characteristics for increased strong opioid prescribing included multiple pain conditions and co-morbidities, higher deprivation, smoking and co-prescription of antidepressants, benzodiazepines and non-opioid analgesics. These findings suggest that strong opioids are prescribed to patients that are not necessarily reflective of the population in clinical trials. Future research should consider elderly and high-risk patients.

Psychology

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COMBINED COGNITIVE BIASES FOR PAIN-RELATED INFORMATION IN INDIVIDUALS WITH CHRONIC HEADACHE

Category: Psychology

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Background

Theories of emotional processing (e.g., schema theory) predict a range of cognitive biases (e.g., attention, interpretation, memory) towards information representing an individual's fears and concerns, and in individuals with chronic pain pain-related attentional, interpretation and memory biases have been found. Despite the fact that many cognitive processes are cyclical, cognitive biases have typically been explored in isolation. For example, interpretation of an object as significant leads to greater attention directed towards that object, which in turn may lead to alterations in interpretation. The potential implications of cognitive biases in chronic pain are currently being explored. Considering this, a detailed understanding of whether cognitive biases exist in isolation in chronic pain, or whether the presence of one form of bias is predictive of other forms of bias, is warranted. The present study represents the first in a research programme aimed to answer such questions.

Aims

The aim of the present investigation is to explore the existence of combined cognitive biases in individuals with chronic headache, relative to healthy, pain-free individuals. The specificity of cognitive bias was explored via the use of sensory-pain and disability-related stimuli categories.

Methods

Seventeen individuals with chronic headache (mean age: 38.76) and 20 healthy controls (mean age: 35.55) completed measures of attentional (spatial-cueing task), interpretation (sentence generation task), and memory (free-recall task) bias. Nine ambiguous sensory-pain (e.g., tension), disability-related (e.g., disorder) and neutral (e.g., setting) words were used in the three paradigms. The spatial-cueing task presents each word individually in one of two possible locations. Participants are instructed to ignore the word and indicate the location of a following probe, which is presented in either the same or opposite location. The words are difficult to ignore however, with response times providing an index of attentional engagement with them. In the sentence generation task, participants form a single sentence featuring the ambiguous word once. Two raters blindly categorised each response as either sensory-pain, disability, or benign. In the free recall task, participants were provided three minutes to recall as many words as possible.

Results

Ten healthy participants (mean age = 36.1 years) rated the valence and arousal of the words. Sensory-pain and disability words were significantly less pleasant than neutral words, although no differences were found in arousal. Individuals with chronic headache, relative to healthy controls: (i) produced a significantly higher proportion of sensory-pain responses in the sentence generation task (.097 versus .047), $t(35) = 3.34$, $p = .003$, $d = 1.09$; and (ii) recalled a significantly higher proportion of sensory-pain words in the free-recall task (.469 versus .324), $t(35) = 2.81$, $p = .008$, $d = 0.92$. Within-groups analysis revealed individuals with chronic headache to recall significantly more sensory-pain words than neutral words. No significant differences were found between the two groups on the spatial-cueing task, or for disability-related biases. Across all participants, the proportion of sensory-pain responses provided was correlated with proportion of sensory-pain words recalled ($r = .351$, $p = .033$).

Conclusion

Evidence for significant sensory-pain interpretation and memory biases builds upon former research, and highlights the importance of stimuli specificity as such words (describing headache pain) may be more relevant to individuals with chronic headache than the broader disability-related words. The lack of attentional biases was unexpected and not in line with previous research. This null effect may be due to the paradigm used, which instructed participants to ignore words, or the ambiguous stimuli adopted, which may be less threatening than words used in previous studies. Longitudinal research is needed to explore the causal relationship between different forms of cognitive bias.

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EXPLORING DYSMENORRHEA AND ITS IMPACT ON THE LIFE OF ENGLISH ADOLESCENT GIRLS

Category: Psychology

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Background

Dysmenorrhea is characterised by recurrent, crampy pelvic pain during menstruation (Sager & Laufer, 2013). Despite evidence of high prevalence (<93%), poor management, and limitations to quality of life, (Campbell & McGrath, 1999; Parker et al., 2010; Unsal et al., 2012), research investigating adolescent dysmenorrhea is in its infancy. The majority of studies investigating the impact of adolescent dysmenorrhea on quality of life have been carried out in non-western cultural settings and no studies have been conducted in England. Just two qualitative studies have explored adolescent dysmenorrhea (Aziato et al. 2014; Chen et al., 2006), both of which were conducted in non-western cultural settings. A review of the previous literature and its limitations highlights the need for further, methodologically rigorous research exploring adolescent dysmenorrhea here in the UK. Qualitative methods can be used to provide an in-depth, detailed understanding of dysmenorrhea from the perspectives of the adolescents experiencing it.

Aims

The aim of this research was to explore adolescent dysmenorrhea and its impact on all aspects of life for young adolescent girls (12-18 years).

Methods

Twenty in-depth, semi-structured interviews were used to collect data from a heterogeneous sample of adolescent girls (aged 12-18 years) experiencing dysmenorrhea of any severity. Interview questions focussed on adolescents' experiences of dysmenorrhea (e.g., menarche experience, when the pain started), how they cope with their pain (e.g., self-care strategies, over-the-counter analgesics), and its impact on all aspects of their lives (e.g., psychological, physical, social, and school functioning). Interviews were audio-recorded and transcribed verbatim. Inductive thematic analysis, following Braun and Clarke's (2006) step-by-step guide, was used to analyse the transcripts from a broadly critical realist perspective. Interview transcripts were coded into initial and higher order codes. Higher order codes were then organised into potential themes which were revised and refined into one overarching theme, nine themes, and thirty subthemes.

Results

Overall, dysmenorrhea had a profound negative impact on all aspects of adolescents' lives. Adolescents described various ways in which they coped with their pain (e.g., social support, self-care, prescribed contraceptives) and their medical experiences (e.g., attitudes and beliefs about taking medication). Adolescents also discussed how dysmenorrhea had a negative impact on their psychological (e.g., feeling self-conscious, pain-focus), physical (e.g., sleep disturbances, appetite changes), social (e.g., altered peer interactions, reluctance to engage in social activities), family (e.g., tension among family members, restriction to family activities), school (absenteeism, difficult interactions with school staff), and every-day activities (disruption to hobbies, difficulty engaging with every-day life). Interestingly, several girls also reported a positive impact on family functioning such as improved communication with family members about personal issues. Finally, the many adolescents reported limited understanding (e.g., how to manage the pain) and misconceptions about dysmenorrhea and its cause.

Conclusion

The findings indicate that dysmenorrhea can have a considerable impact on the lives of adolescent girls. Importantly, the use of qualitative methodology made it possible to identify previously unresearched areas that were important to the participants. Novel findings include the emphasis placed on how girls perceived their interactions with school staff and the positive impact that dysmenorrhea had on family functioning. These findings show that interactions between adolescent dysmenorrhea and quality of life are complex and highlight the need for further research investigating dysmenorrhea.

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MATERNAL PERCEPTIONS OF HOW ADOLESCENT DYSMENORRHEA IMPACTS FAMILY FUNCTIONING

Category: Psychology

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Background

Becoming a parent is a significant event that changes every aspect of life. Parenting a child with a chronic or recurrent pain disorder poses many additional challenges to an already demanding role (Palermo & Eccleston, 2009). There is limited research investigating the impact of parenting a child or adolescent with a chronic or recurrent pain condition. The available literature shows that childhood chronic pain conditions have a profound, negative impact on parents' quality of life (Palermo & Eccleston, 2009). Despite the high prevalence of adolescent dysmenorrhea (period-related pelvic pain) and reports that dysmenorrhea can negatively impact on family functioning (Parker et al., 2010), no qualitative studies to date have explored the experience of parenting an adolescent with dysmenorrhea and its impact on family functioning. Addressing this gap in the literature will improve understanding of adolescent dysmenorrhea which is critical to providing the best possible care for adolescents and their families.

Aims

The aim of this research was to explore how mothers experience parenting an adolescent with dysmenorrhea and how dysmenorrhea impacts upon them as individuals, the family unit, and the parental couple.

Methods

Twenty in-depth, semi-structured interviews were used to collect data from mothers of adolescent girls (aged 12-18 years) who were experiencing dysmenorrhea of any severity. Interview questions focussed on mothers' experiences of their daughter's dysmenorrhea (e.g., when daughters' started to experience pain, how they cope with their pain), its impact on all aspects of their daughter's lives (e.g., psychological, physical, social, and school functioning), their own lives, and overall family functioning. Interviews were audio-recorded and transcribed verbatim. Inductive thematic analysis, following Braun and Clarke's (2006) step-by-step guide, was used to analyse the transcripts from a broadly critical realist perspective. Interview transcripts were coded into initial and higher order codes. Higher order codes were then organised into potential themes which were revised and refined.

Results

Overall, adolescent dysmenorrhea had a profound, negative impact on many aspects of the lives of adolescents, mothers, and other family members. Mothers described their daughter's pain (e.g., when the pain started, its duration), ways in which daughters communicated about menstruation and dysmenorrhea (e.g., talking with mothers and female relatives), and how daughters learnt to cope with pain (e.g., mothers giving advice about pain management). Mothers also reported varying levels of knowledge about how dysmenorrhea impacted on their daughters' lives (including physical, psychological, social, and school functioning). Finally, mothers described how dysmenorrhea affected theirs and their daughters' lives, and the lives of other family members (e.g., siblings, fathers) which included school/work absence (e.g., when daughters were absent from school due to dysmenorrhea), family tensions (particularly when more than one female family member was experiencing dysmenorrhea or mothers were menopausal) and finally, limitations to family activities (e.g., days out and family holidays).

Conclusion

The findings indicate that parenting an adolescent with dysmenorrhea can pose considerable limitations in terms of overall family functioning (e.g., parental employment, relationships between family

members, and family activities). These findings support evidence that the impact of paediatric chronic/recurrent pain goes well beyond the individual experiencing it. In addition, the findings highlight condition-specific factors affecting families of girls with dysmenorrhea, including menstrual or menopausal symptoms of other female family members. It is hoped that future research will improve our understanding of adolescent dysmenorrhea and its impact on the quality of life for both girls and their families.

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A PILOT CLINICAL INTERVENTION TO DECREASE PRE-SLEEP COGNITIVE ACTIVITY AND AROUSAL IN PATIENTS WITH INSOMNIA SECONDARY TO CHRONIC PAIN

Category: Psychology

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Background

Insomnia secondary to chronic pain often appears in clinical settings (Bryson et al., 2015). Cognitive models have been applied effectively to insomnia (Edinger et al. 2001), and pain conditions (Vlaeyen & Morley, 2005) independently, providing evidence for a conceptual framework wherein dysfunctional cognitions, such as excessive worrying, ruminating, beliefs about sleep or pain, heightened emotional reactivity, and maladaptive behaviours can exacerbate the onset, maintenance and physiological experiences of insomnia (Bryson et al., 2015). Mindfulness-Based Cognitive Therapy (MBCT; Segal, Williams & Teasdale, 2012) has received growing interest among clinicians. MBCT is a group intervention integrating aspects of cognitive therapy with mindfulness-based techniques. It has been suggested (Larouche, Côté & Bélisle, 2015; Ong, Ulmer & Manber, 2012) that practicing mindfulness could positively affect sleep as it helps participants being with their physical and psychological processes without trying to control them and could reduce their sleep-related arousal at night and efforts to sleep.

Aims

This pre-exploratory clinical study aimed to deliver the MBCT programme by slightly adapting its content for outpatients suffering from insomnia secondary to chronic pain.

Methods

10 participants with insomnia secondary to co-occurring chronic pain were assessed and enrolled onto the group intervention. The pilot programme involved attending 6 weekly sessions in which patients learned MBCT skills to work effectively with vulnerable mind states or to interrupt counterproductive patterns (e.g. pre-sleep rumination). The Pittsburgh Sleep Quality Index (PSQI; Buysse et al., 1989), the Pre-Sleep Arousal Scale (PSAS; Nicassio et al., 1985), and the Perceived Stress Scale (PSS; Cohen, 1983) were completed at the beginning and end of the programme. Participants were followed up three months after the programme had ended, and their views were asked on how the intervention had impacted on their sleep quality.

Results

The PSQI showed that all the participants experienced improvement in their overall sleep quality and in their difficulty initiating sleep. The sleep onset latency (time taken to fall asleep) reduced by 57 minutes in average, and 70% of the participants' sleep onset time fell below 30 minutes after the completion of the programme. Furthermore, the PSAS demonstrated that severe pre-sleep somatic and cognitive symptoms, such as 'worrying about sleep', 'mind-racing' and 'tense muscles' improved in 90% of the patients following the intervention. Also, the majority of the participants reported a positive change in their perceived stress levels and more confidence in handling everyday problems.

Conclusion

This pilot has provided evidence that MBCT for secondary insomnia caused by chronic pain is beneficial. The promising results of this pre-exploratory study suggest that MBCT might be a valuable addition in the treatment of insomnia within clinical settings, given that it focuses on certain cognitive factors that contribute to pre-sleep arousal. This programme works well alongside other chronic pain interventions and could be an effective and empowering treatment for secondary insomnia that alleviates patients' dependence on pharmaceuticals as well as the debilitating effects of their chronic pain.

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DO POSITIVE PSYCHOLOGICAL INTERVENTIONS MAKE A DIFFERENCE TO PEOPLE LIVING WITH CHRONIC PAIN? A SYSTEMATIC REVIEW OF THE LITERATURE

Category: Psychology

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Background

Individuals with chronic pain are at increased risk of experiencing co-morbid psychological distress (McBeth, Macfarlane & Silman, 2002) and impaired quality of life (Breivik, Collett, Ventafridda, Cohen & Gallacher, 2006). A number of psychological interventions have been developed to address associated mental health difficulties, with such interventions typically focusing upon reducing unwanted symptoms and psychological deficits that perpetuate pain-related distress. Recent research has investigated the protective role of positive psychological constructs (such as optimism, hope and resilience) in relation to the promotion of health and increased well-being in individuals with chronic pain (Pulvers & Hood, 2013). From this, positive psychological interventions (PPIs) have been developed for use with chronic pain populations. Whilst the outcomes of well-established interventions (such as Cognitive Behavioural Therapy) are well-researched and documented within the chronic pain literature (Williams, Eccleston & Morley, 2012), little is known about the effects of PPIs within this clinical population.

Aims

The aim of the research was to conduct a systematic review of the literature to investigate the effects of PPIs delivered to adults with

chronic pain. The research was undertaken as part of a Doctorate in Clinical Psychology thesis project at the University of Liverpool.

Methods

A systematic search of five databases was undertaken to capture published, peer-reviewed articles. Databases were searched for studies from inception to October 2015. The search terms were identified taking into account those used in existing reviews of the positive psychology evidence base (Bolier, 2013; Sin & Lyubomirsky, 2009) though were developed to specifically target studies which included only chronic pain samples. The reference lists of included papers were also reviewed, and key experts in the field were contacted for articles not previously identified. Two reviewers independently selected relevant articles in two phases using a screening tool developed in accordance with pre-defined inclusion and exclusion criteria. The included papers were then assessed to evaluate their risk of bias and the overall reporting quality of individual articles. The content and written structure of the current review was based upon the PRISMA checklist (Moher, Liberati, Tetzlaff & Altman, 2009).

Results

The search yielded a total of 3289 records. Duplicated articles obtained in the search process were removed, and the remaining 1655 papers were screened for eligibility. Of these, 1628 were excluded following examination of the title and abstract (phase one) and a further 20 excluded after consideration of the full-text article (phase two). A total of eight studies (reported in seven papers) were included in the final review. Of these, six were quantitative and two employed qualitative methodologies. The demographic details of chronic pain participants varied from study to study, as did the PPI examined and overall quality of the included articles. With the exception of one, all papers were published in 2014 or 2015. Across all of the quantitative studies, pre-post improvements relating to well-being, hope, self-efficacy, happiness and life-satisfaction were evident. Qualitative studies reported themes which encapsulated the enhancement of positive psychological constructs including hope and self-efficacy.

Conclusion

The results suggest that PPIs may have beneficial effects for individuals with chronic pain, in that improvements across a range of positive psychological constructs were observed following intervention. The author acknowledges several limitations of the review, particularly relating to the heterogeneity of studies and a lack of consensus regarding the definitions of PPIs utilised and outcomes assessed. The quality of individual studies also varied considerably. Nevertheless, the review extends existing evidence and offers novel findings with respect to the effects of PPIs used amongst chronic pain samples. Suggestions for future research and implications for clinical practice are discussed.

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WHERE ARE ALL THE MEN?

Category: Psychology

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Background

Pain Management improves quality of life for people with chronic pain (Williams et al., 2012). It is important that men and women are equally able to access this intervention. A survey of people with pain in the general population reported a gender split of 56% women and 44% men (Breivik et al., 2006). However, we noticed a greater number of women than men amongst the people attending Pain Management Programmes in Gloucestershire and Herefordshire. This poster reports two studies undertaken to understand possible reasons for this. First, a cross-sectional approach was used to look at referrals to the service and the gender split in activity in services that refer to Pain Management. Second, a cohort of people were followed from initial referral to Pain Management, to completion of treatment and discharge, in order to compare the uptake of the service between men and women.

Aims

This study investigates gender split in the population of people attending the Pain Management Service.

Methods

Study 1: A cross-sectional study looking at different stages in the pain pathway. Data was obtained from referral and attendance records from the financial year of 2014-2015 using the hospitals patient administration system, PAS. This data included patients from Gloucestershire Hospitals NHS Trust MSK Interface Service (n=1109), Gloucestershire Pain Clinic (n=2057), and referrals to Gloucestershire and Herefordshire Pain Management Service (n=1086) and Pain Self-Management group interventions (n=318).
Study 2: A cohort study following the treatment pathways of alternate patients referred to the Gloucestershire and Herefordshire Pain Management Service between 1.8.14 and 30.10.14 (n=105). Data was obtained from PAS.

Results

Study 1 identified a gender split in the samples as follows, MSK interface 47% men, Pain Clinic 32% men, referrals to Pain Management 27% men, invited to a group intervention 23% men, attended group 23% men, and completed group 24% men.
Study 2 reported a similar gender split as study 1 for referrals to Pain Management, 29% men and 71% women. The uptake of the service was equivalent between men and women. 37% of men and 40% of women were discharged after assessment and 33% of men and 41% women attended a programme. However, it was found that 30% of men compared to 19% of women attended 1:1 appointments, rather than a group programme, as their main course of treatment.

Conclusion

Fewer men attend programmes than expected from general population estimates. Once referred to Pain Management, men and women are equally likely to attend intervention, although a slightly higher proportion of women attend programmes and men are more likely to attend 1:1 interventions. The most significant factor is the high gender split in referrals. This reflects the population attending Pain Clinic, but, interestingly not MSK Interface service which is earlier in the treatment

pathway. Conclusively, the Pain Management Service is equally successful engaging men and women. However, men are not referred as often, potentially limiting their access to helpful interventions.

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STATE VERSUS TRAIT: VALIDATING STATE ASSESSMENT OF CHILD AND PARENTAL CATASTROPHIC THINKING ABOUT CHILD PAIN

Category: Psychology

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Background

Pain catastrophising is a well-established risk factor for adverse pain-related outcomes in both adult and paediatric populations. Significant associations have been found between parents' catastrophic thinking about their child's pain and higher parental distress and child disability. Studies have interchangeably used trait and state versions of catastrophic thinking measures for parents and children without exploring the relative merit of associations between these. Moreover, psychometric testing has not yet been performed on the state adaptations of standard trait catastrophic thinking measures. Evaluation of state catastrophising (measured before, during or immediately after application of noxious stimulation) may provide information distinct from that gained by standard trait measures, which assess individuals' recall of catastrophizing in daily life.

Aims

The objectives of this study were to validate state versions of the Pain Catastrophising Scale for parents (PCS-P) and children (PCS-C); and examine the relative influence of state and trait catastrophising on child pain experiences and parental emotional responses.

Methods

Data were pooled from nine clinical and experimental lab-based pain studies wherein state catastrophizing (measured immediately before application of noxious stimulation) and trait catastrophizing were assessed for community-based and clinical samples of children aged 6 months – 18 years in Dutch or English (N = 771) and their parents (N = 970). Exploratory factor analyses were conducted to explore the underlying factor structure of the PCS-P/PCS-C State. Hierarchical linear regression analyses and regression coefficient comparison were used to explore the relative contribution of state versus trait catastrophising to variance in child and parent pain-related outcomes.

Results

Exploratory factor analysis resulted in a single factor composing the structure of the state assessment of catastrophising about child pain, with 71.76% of variance explained for children and 68.55% for parents. Hierarchical regression analyses indicated that both parent and child state catastrophising were significantly associated with increased child pain intensity and state anxiety, and parental distress and sympathy after child and parent demographic variables were controlled for. Parent and child state pain catastrophizing showed stronger associations than trait scores for most of these pain-related outcomes.

Conclusion

These findings illuminate the importance of assessment of state pain catastrophising for both parents and children in relation to acute pain experiences, particularly in experimental settings. This research provides a basis for robust and valid measurement of child and parent state pain catastrophising about child pain that can be readily implemented in both clinical practice and research contexts.

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IMPACT OF CLINICAL PSYCHOLOGIST IN THE INPATIENT PAIN TEAM

Category: Psychology

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Background

It is normal for people in pain to become distressed when they experience uncertainty regarding their diagnosis, the cause of their pain or doubt their ability to cope. Pain-related distress causes further exacerbation of pain via sympathetic arousal of the autonomic nervous system. This can be misinterpreted by patients as deterioration to their underlying medical condition, causing further pain related distress, in a vicious circle. A recent systematic review found that psychological interventions are effective in reducing pain, disability, psychological distress and catastrophic thinking about pain (Williams, Eccleston and Morley 2013). Based on this and the needs assessment of 20 patients using pain psychometric screening questionnaire, we started a pilot offering brief psychological interventions to the most distressed patients. This abstract outlines the impact of the intervention on patient care in terms of bed days, repeat admissions and patient experience.

Aims

The aim of this pilot pain psychology project was to examine the effectiveness of an inpatient psychological assessment and brief intervention service for patients with problematic pain and high levels of pain-related distress.

Methods

Twenty consecutive patients with problematic pain and pain-related distress were offered psychological assessment and brief

psychological intervention during their inpatient admission. Suitable patients were identified by the acute pain team. They were invited to complete the psychometric screening questionnaires [which included McGill Pain Questionnaire, Roland Morris Disability Questionnaire, Pain Anxiety Symptom Scale, Centre for Epidemiological Studies of Depression and Chronic Pain Acceptance Questionnaire] as an opt-in to seeing the pain psychologist. Health economic data was collected including number of hospital admissions and number of bed days. Twenty patients who completed the questionnaire during the needs assessment phase were used as the control group. Data was collected for this group with treatment as usual. A patient satisfaction survey was posted out to all of the 20 patients who had been included in the intervention group. All surveys were anonymous and included a stamped addressed envelope to encourage return rates.

Results

There was no significant difference between the control and intervention groups in duration of pain or psychometric measures. There were more women in the intervention group (17 Vs 14). In the intervention group the number of admissions decreased from 2.7 (mean) in the twelve months before intervention to 0.68 ($p<0.001$). Number of total bed days decreased from 47.26 to 4.74 ($p<0.000$) and number of bed days per admission decreased from 23.52 to 1.66 ($p<0.001$). The number of admissions in the control group decreased from 4.55 to 2.5 (NS) and the bed days per admission fell from 15.05 to 7.76 (NS). However the total number of bed days pre and post visit by the pain team was 45.45 Vs 19.4 ($P<0.002$). Patient feedback had a 45% response rate. 44% were "completely satisfied", 33% were "not at all satisfied". 67% said they would recommend the pain psychology intervention to friends and family.

Conclusion

Brief psychological interventions in the inpatient setting can have an effect on subsequent admissions, fewer inpatient bed days, shorter admissions. Health economic assessment would suggest saving 42.52 days/patient =8,674/year on average (additional bed days above LOS charged at £204). It is noteworthy that control data also shows inpatient pain team involvement leads to mean reduction 26.05 days = £5,314.20/year. However, psychological intervention is not acceptable to all patients, and some are highly resistant to psychology. Future studies will need to match intervention to "stage of change" and is best suited to identifying those patients who are contemplating self-management.

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FROM "STUCK" TO SUCCESS? ESTABLISHING A JOINT PHARMACY-PSYCHOLOGY MEDICATION REVIEW CLINIC TO ADDRESS THE OPIOID PROBLEM IN LONG-TERM PAIN

Category: Psychology

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Background

Patients with long-term pain have likely tried numerous medications, with doses frequently being titrated upwards. Often, these medications are not reviewed as to whether they are still indicated/ effective. Prescriptions for strong opioids in long-term pain have increased significantly in recent years; however, there is currently insufficient evidence to support their effectiveness in improving long-term pain and function. Instead they may bring unwelcome side effects and can lead to a reduction in quality of life. Many patients enter our service already established on inappropriately high doses of opioids. Despite education on issues of long-term opioid use, many patients fail to make sustained dose reductions; for many, taking medication is their only coping strategy. The complexity of this population suggests that innovative approaches to medication management may be required to facilitate change. Patients may benefit from Motivational Interviewing and Acceptance and Commitment Therapy (ACT) approaches, in combination with medication review.

Aims

- To develop a joint clinic combining the skills of pharmacy and psychology.
- To examine the complexity of patients accessing this clinic.
- To evaluate outcomes in terms of:
  - patient success in rationalising medications
  - increased acceptance of pain
  - decreased pain interference
  - patient satisfaction with service.

Methods

Patients are seen jointly by a specialist pharmacist and clinical psychologist for a 1.5 hour appointment. Current medication is reviewed and patients' concerns about reduction discussed. In-depth discussion is facilitated regarding the risks of long-term use. A Motivational Interviewing approach is used to look at patients' attitude to change, and psychological assessment is conducted using the Pain Matrix (Polk, 2014), underpinned by ACT. Altogether this enables us to establish the needs of the patient within a holistic formulation. The aim is that the patient leaves with a mutually-agreed medication reduction plan, with the offer of telephone follow-up throughout the process from the pharmacist. Patients may also be offered two individual psychology sessions to explore alternative coping strategies based on an ACT model. Prior to clinic, patients are asked to complete the Brief Pain Inventory (BPI), Chronic Pain Acceptance Questionnaire (CPAQ) and the Hospital Anxiety and Depression Scale (HADS).

Results

We have seen 43 patients since the clinic began in January 2014.

- 30 patients returned pre-clinic questionnaires:
  - 22 of 29 rated average pain as 7/10 or greater (mean= 7.1)
  - Mean pain interference = 8.2/10
  - CPAQ (n=27): Activities Engagement (mean= 19.2) and Pain Willingness (mean= 12.6) are low compared to pain research samples
  - Anxiety mean = 12.8
- ? 22 of 30 patients scored in moderate/ severe range for anxiety
  - Depression mean = 12.5
- ? 19 of 30 scored in moderate/ severe range for depression
- 18 patients attended psychology follow-up.

Qualitatively, patients reported:

- Improved understanding of why they need to reduce their medications
- They feel 'listened to'

- They value the opportunity to discuss and gain a different perspective on their pain
- The support offered makes reducing seem more possible

Patient satisfaction and outcome evaluation is ongoing; results expected by March 2016.

Conclusion

Patients accessing this clinic are really struggling with the impact of pain on their lives, and medication may be complicating this. This complexity demonstrates a need for an individualised and comprehensive approach. Our combined pharmacy-psychology clinic provides an opportunity to engage with these more complex patients. Patients are at different stages of readiness to change. For pre-contemplative patients, our intervention provides a different framework to consider the issues associated with their medication and its impact on their quality of life. For patients at the contemplation stage, our intervention provides tools and advice to enable them to take action.

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INVESTIGATING THE EFFECTS OF MULTISENSORY ILLUSIONS ON PAIN AND BODY PERCEPTION IN PEOPLE WITH OSTEOARTHRITIS

Category: Psychology

Authors: Kristy Themelis - School of Psychology University of Nottingham, Roger Newport - School of Psychology, University of Nottingham

Background

Osteoarthritis is a degenerative joint disease and a common cause of chronic pain and functional disability. Research has typically shown discordant association between radiographic hand osteoarthritis (OA) and levels of pain and disability. This suggests that additional underlying mechanisms are responsible for the pain seen in people with hand OA. Recent findings from this group showed that illusory stretching or shrinking of the fingers using a virtual reality device, can modulate pain and perceived hand size in people with hand osteoarthritis.

Aims

The immediate aim of this study was to test previously observed analgesic effects of multisensory body illusions and their effects on hand function and the experience of pain in people with hand osteoarthritis, after controlling for contextual effects.

Methods

28 volunteers with painful hand OA viewed their most painful hand through a virtual reality device in randomized order and under a number of conditions, with illusory stretching of the hand and changes in sensory input. The experiment took place over two visits, consisting of an illusion visit and a control visit, with a 1 week washout period before switching interventions (crossover design). The primary outcome measures were participant' subjective pain ratings, pressure pain thresholds (PPTs) and subjective experience of the illusion, measured on an eight-item questionnaire. Secondary outcome measures included a measurement of grip strength and questionnaires assessing hand pain, stiffness, and hand function. Data were analysed using generalised linear mixed-models, with baseline values as within-subject factors as well as correlation analysis.

Results

The different illusions led to significant changes in perceived hand size and ownership of the most painful hand in the illusion condition, but not in the control conditions measured on a 7-point Likert scale. However, there were no statistically significant differences for subjective ratings of pain or average pressure pain threshold between the conditions and compared to baseline. Finally, there was a significant correlation between pain at baseline and effect of the illusion, with people self-reporting moderate pain experiencing the strongest illusion effects.

Conclusion

We found that multisensory illusions can alter body representation in people with hand osteoarthritis, after controlling for contextual effects, but this did not influence subjective pain ratings or PPTs. Subjective pain ratings at baseline significantly predict illusion strength, which might explain the large variability in responses to the illusion.

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A SYSTEMATIC REVIEW AND META-ANALYSIS OF MEMORY BIASES FOR PAIN-RELATED INFORMATION IN PATIENTS WITH CHRONIC PAIN

Category: Psychology

Authors: Daniel Schoth - Academic Unit of Psychology University of Southampton, Dr Christina Liossi - Academic Unit of Psychology University of Southampton

Background

Research and theory highlight the important role cognitive factors play in the experience of pain, with a major area of investigation focusing on the links between memory and pain. Studies typically show poorer memory performance in patients with chronic pain relative to healthy controls, including reductions in working, spatial, verbal, and semantic memory. Memory plays a critical role in the management of chronic pain, including the recall of therapist instructions, and where clinical assessment is largely based on the patient's ability to recall their pain experience. Further to this, theoretical models of both emotional processing and chronic pain predict memory biases favouring pain-related information in those with chronic pain relative to healthy controls. Although many studies have been conducted over the past two decades exploring such biases, a synthesis of current results is lacking.

Aims

The aim of this review is to provide a synthesis and meta-analysis of studies exploring memory biases for pain-related information in patients with chronic pain relative to pain-free individuals.

Methods

The following databases were searched from inception until 24th July 2015: Medline, PsychINFO, Web of Science, CINAHL, and Cochrane Library databases. Search terms were memory, recall, recognition, and bias*, intersected with the term pain. The names of

known researchers in the chronic pain cognitive bias field were also used as search terms in the databases. Lastly, inspection of the reference lists of all obtained articles was conducted.

Results

Nineteen eligible studies were identified and included in the review. The majority of studies explored memory biases via free recall of previously presented words. Five studies reported significantly greater recall of sensory-pain words in chronic pain patients compared to healthy controls, whereas five studies did not. Six studies explored biases for affective-pain words, none of which provided evidence for enhanced recall in those with chronic pain. Eleven studies adopted broader stimuli categories incorporating pain-, illness- and health-related words, although only three reported significant between-group differences favouring greater recall in chronic pain patients. The meta-analysis revealed no significant between-group differences in recall of sensory-pain words, nor in the broader category of illness-related words. Contrary to expectation, chronic pain patients, relative to healthy controls, recalled significantly fewer affective-pain words (k = 3, Hedges' adjusted g effect size = 0.34).

Conclusion

The results of this review revealed inconsistent evidence for the presence of pain-related memory biases in patients with chronic pain. There is considerable variation across studies in terms of stimuli encoding conditions, experimental instructions, and patient characteristics however, with further research needed exploring the relative contribution of these factors to patterns of memory bias. The finding that chronic pain patients recalled significantly fewer affective-pain words than healthy controls highlights the importance of stimuli specificity. Future research is needed as avoidance of affective-pain information in patients with acute pain has been shown to be predictive of the development.

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PAIN COMMUNICATION: IS THERE A DIFFERENCE BETWEEN STRANGERS, FRIENDS AND ROMANTIC PARTNERS?

Category: Psychology

Authors: Rhiannon Edwards - Psychology University of Bath, Christopher Eccleston - Health University of Bath, Edmund Keogh - Psychology University of Bath

Background

Progress has been made in our understanding of the biological and psychological mechanisms involved in reporting pain, but there is limited research on the social influences on pain. Research suggests that the relationship between individuals experiencing pain and observers can impact on how pain is communicated; for example, children express their pain differently depending on who is present. However, given the differences in the way men and women communicate their pain, and the differences in social support, there is limited research on the social influences on the reporting of pain in adults.

Aims

We investigated the role of strangers, friends and romantic partners on the reporting of pain. This was conducted over a series of three independent studies; study 1 compared strangers vs. friends, study 2 compared same-sex friends vs. opposite-sex friends, and study 3 compared opposite-sex friends vs. romantic partners.

Methods

An experimental design was adopted, with a Cold Pressor Task used for the experimental pain induction. For all three studies the methodology was the same. Participants were recruited in dyads; one completed a Cold Pressor Task and one observed. The participant completing the pain induction task completed it once with an observer absent, and once with one present (which was counterbalanced throughout the study). Participants indicated when they first felt it was painful and withdrew their hand when they could no longer tolerate it, and these two time points were recorded. Participants completed several relationship closeness questionnaires, and it is worth noting that the friends in study 1 were incidentally all of the same sex.

Results

Interesting results emerged but overall, males had a higher pain threshold and tolerance than females. In study 1, the presence of an observer increased pain threshold and tolerance levels, and pain tolerance was higher in the friend's condition than in the stranger's condition. However, in study 2, pain tolerance was higher when the observer was male compared to when the observer was female. Further analysis revealed the biggest increase in pain tolerance was observed in male-male friends. In study 3, the presence of an observer resulted in an increase in threshold and tolerance, however, the dyadic relationship did not matter. Therefore, overall, male-male dyads were the least sensitive to pain.

Conclusion

These results suggest that individuals may tolerate more pain in the presence of others, and the relationship between the person experiencing pain and the observer should be considered. For example, individuals may suppress their pain more with a same sex friend, in comparison to if they were with an opposite sex friend, stranger or romantic partner. These studies collectively add a new dimension to previous work, and suggests the social contextual influences on pain should be considered in more depth. The next step is to investigate why males and females communicate their pain differently, and why the dyadic relationship matters.

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"A MARATHON WITH HILLS AND VALLEYS": JOURNEYS OF ACCEPTANCE IN CHRONIC PAIN

Category: Psychology

Authors: Toni Miles - Pain Management Unit The Ipswich Hospital NHS Trust, Dr Susan McPherson - Health and Human Sciences University of Essex

Background

In spite of growing understanding of chronic pain, including Melzach & Wall's pain gate theory (1965), people with chronic pain often encounter views from professionals and society that pain is "all in the head". These views are likely to have emerged from outdated but

once dominant models of pain such as specificity theory which assumed that 'real' pain is associated with identifiable tissue damage, combined with psychosomatic theories which suggested that where there is no identifiable structural cause then psychological factors are the only possible explanation. The associated prescription of 'acceptance' can therefore be received negatively by patients when perceived as "negative, indeed defeatist" (West et al, 2012). 'Acceptance' is a word that carries professional and lay meaning deriving from historic and contemporary understandings. Some qualitative studies have explored the meaning of acceptance among people with chronic pain but all have provided participants with a definition a priori.

Aims

The present study sought to explore how people with chronic pain conceptualise 'acceptance' in their own terms, in order to enable a more shared understanding of the concept which could help to facilitate patients making greater use of professional support.

Methods

Fifteen men and women in the UK with chronic pain were recruited from a support group run for and by service users. Their ages ranged from 23-65 years; six males and nine females. Semi-structured interviews followed a topic guide which covered experiences of pain, meaning of acceptance and experiences of acceptance, all introduced in a broad open style with some prompts but no definitions. When asking about the meaning of acceptance, the interviewer asked, "Some people talk about acceptance of chronic pain. What would this mean to you?" Interviews were audio-recorded and transcribed verbatim. The data was subjected to thematic analysis (Braun & Clarke,2006) following six non-linear recursive phases: familiarisation with the data; generating initial codes; searching for themes; reviewing themes; defining and naming themes; producing the report. MaxQDA was employed to aid systematic analysis and provide a clear audit trail, enhancing trustworthiness (Flick, 2009).

Results

Acceptance appeared to be conceptualised as a journey, partly constructed during the interview. Although similar to process or stage models of acceptance identified in previous studies, the present analysis revealed a more dynamic and recursive journey with no fixed end-point. Different to previous studies, reflection and developing an internal locus of control emerged as potential mechanisms for movement along the journey. There were three stages of the journey: battling against pain, active change phase and reflection, each of which could be revisited. The journey metaphor was conveyed vividly; "roller coaster ride", "a marathon with hills and valleys", a "wheel". The predominant metaphor for times when it was more difficult to maintain acceptance was "fighting" with pain, illustrating that acceptance is rarely final, that the journey is not linear but recursive, moving from reflection back to battling the pain and/or active change and on to reflection again and so on.

Conclusion

This study proposed a recursive journey of pain acceptance model and suggested that it may be useful for professionals to enable more time and support within an understanding of acceptance as a metaphorical journey which follows a recursive, non-linear path with three main elements: battling against pain, active change and to develop reflection. Also to discuss individuals' own understanding of the concept 'acceptance' and to potentially use the model to help consider careful timing and selection of interventions depending on individuals' readiness for change and development of internal locus of control.

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COMPASSION-FOCUSED PAIN MANAGEMENT, PRELIMINARY FINDINGS ACROSS MULTIPLE SITES, AND FUTURE DIRECTIONS

Category: Psychology

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Background

Current guidelines recommend Cognitive Behavioural Therapy (CBT) based pain management for pain related disability and distress. Recent studies have suggested that self-compassion may be a key factor in determining the degree of psychological distress experienced by people in chronic pain and their ability to adjust to the pain (Costa & Pinto-Gouveia, 2013; Wren et al, 2012; Purdie & Morley, 2015). Many people with persistent pain experience high levels of shame and self-criticism and low self-compassion; these may present barriers to CBT strategies such as pacing and acceptance, because shame can drive people to over-activity. Compassion Focused Therapy (CFT) is a third wave psychological therapy which has been adapted for persistent pain. CFT provides an explicit focus on de-shaming and developing self-compassion, while educating patients about neurobiology, evolutionary psychology and common humanity. CFT encourages self-compassion, acceptance and willingness to engage in activities without the need to control, fight or avoid pain.

Aims

This study contributes to the Compassionate Mind Physical Health SIG aims: to standardise and research compassion-focused approaches in physical health. We aimed to discover whether CFT-based pain management would improve pain-related disability and distress, encouraging greater acceptance of pain and willingness to engage in activities without attempting to control pain.

Methods

21 patients completed an 8-week compassion focused pain management group across two community pain services (15 in the North West and 6 in the North East). Pre/post treatment measures investigated pain self-efficacy, pain related disability, pain related anxiety, depression, self-compassion, chronic pain acceptance including activities engagement and pain willingness. Data was subjected to repeated measures ANOVA to determine statistical significance. Session content:

1) Bio-psychosocial understanding of pain and the evolution of compassion for soothing
2) Relationship between stress and pain; introducing soothing techniques
4) Mindfulness, breathing and awareness, compassionate body scan
3) Pacing and mindfully listening to the body to prevent overdoing and burnout

5) Compassionate imagery for pain: safe place and compassionate colour
6) Working with the inner critic: Compassionate companion and compassionate self-imagery
7) Multiple selves work - understanding our anxious, angry and critical selves
8) Maintaining change: the long term benefits of self-compassion and the pain journey

Results

The results suggest that CFT led to a significant reduction in depression (CESD: $p<0.01$) and pain-related disability (RMDQ: $p<0.01$); significant increase in self-compassion (SCS: $p<0.01$) and activities engagement (CPAQ AE: $p<0.005$). Differences did not achieve statistical significance for pain (VAS) pain-related anxiety (PASS) pain willingness (CPAQ PW) or self-kindness (subscale of SCS). Statistical testing was not carried out for the BPI and PSEQ, due to the small data set for these measures (n=6). Results suggest that CFT increased confidence in managing pain (PSEQ) and decreased impact of pain on mood, sleep and walking ability (BPI). Results also suggest that CFT increased acceptance of pain and improved activities engagement despite pain (CPAQ-AE). These results are consistent with the hypothesis that self-compassion improves pain management and reduces pain-related distress via the moderating factor of pain acceptance. This study included two factors of pain acceptance; activities engagement appears to be of greatest importance.

Conclusion

This pilot study suggests CFT is a useful approach to working with patients with persistent pain and high levels of shame and self-criticism. For this group of patients, standard CBT is counter-productive in driving shame, threat and pain-related distress. CFT encourages self-compassion, acceptance and psychological flexibility; these may be key moderating factors to improve self-care and reduce risk of burn out in the longer term.Small sample size and lack of control group are significant limitations to this study. Investigators completed standardized CFT training to minimize variance in content and delivery but multiple sites may have introduced confounding therapist variables.

Reviews

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COGNITIVE BEHAVIOURAL THERAPY VERSUS EDUCATION OF ADULT PATIENTS WITH CHRONIC PAIN A META-ANALYSIS OF THE CHANGE OF PAIN INTENSITY POST-INTERVENTION AND AFTER 6 MONTHS

Category: Reviews

Authors: Salim Makhlouf - Health, Education and Life Sciences Birmingham City University, Anabela Silva - School of Health (ESSUA) University of Aveiro, Aveiro, Portugal , Salim Khan - Health, Education and Life Sciences Birmingham City University, Osama Tashani - Centre for Pain Research Leeds Beckett University

Background

Sessions of Pain Management Programme in which an element of education of patients is involved are similar in structure to cognitive behaviour therapy (CBT) sessions. The key principles of education sessions primarily begin with establishing good rapport and explaining the rationale for therapy (Thorn et al. 2011). Systematic reviews comparing CBT with other treatments concluded that CBT is superior only to treatment as usual or waiting list in improving pain (Eccleston et al 2012). On the other hand Geneen et al (2015) concluded in a systematic review they couldn't confidently conclude that education alone is effective in reducing pain intensity or related disability in chronic pain in adults. We have decided to review the literature for studies that compared CBT against Education head to head and evaluate the evidence.

Aims

To compare the effectiveness of CBT versus Education of patients (Edu) regardless of its delivery method in reducing pain intensity just after the intervention and at 6 months follow up.

Methods

Randomised Controlled Trials (RCTs) studies, including 20 or more participants in CBT and Edu arms for the management non-malignant chronic pain of adult patients (18- 65 years of age) were searched in PubMed, Cochrane, Science direct. Data on improvement of pain (measured as pain intensity using a numerical rating scale from 0-10 with 10 is the most severe pain, immediately post intervention and at after 6 months follow up) were extracted from the relevant studies. A meta-analysis approach was followed to estimate the total effect size of the difference between the two interventions in improving pain.

Results

Out of initial eligible 5 studies that compared CBT against Education in the same sample of patients at the same time only 3 was qualified for this meta-analysis. These were Turner et al (2006) (n=72 CBT, 76 Edu), Thorn et al. (2011) (n=49 CBT, 34 Edu) and Carmody et al. (2013) (n=48 CBT, 50 Edu). All studies reported that patients were randomised to either CBT or Edu and pain intensity was similar between the two intervention groups at baseline ($P>0.1$). The overall effect size of the mean difference between CBT and Edu groups' pain intensity suggested that there is no differences between the two interventions post-intervention ($z=.044$, $P=0.66$) or at 6 months follow up ($z=-1.126$, $P=0.26$). There was an intermediate level of heterogeneity ($Q=4.22$, $P=0.12$, I squared=52.60) but no publication bias among these three studies was identified.

Conclusion

CBT and Education programmes of chronic pain management resulted in the same level of pain intensity reduction post-intervention and after 6 months follow up. The two interventions only slightly reduced the pain intensity score in the 3 samples studied which was statistically significant in one study only.

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094	USEFULNESS OF MUSIC THERAPY AMONG PATIENTS HOSPITALISED IN CONVALESCENT AND REHABILITATION UNITS FOR THE ELDERLY	OLDER PEOPLE	Stéphane Guétin
095	EVALUATION OF PATIENTS MANAGED IN JOINT PAIN AND SUBSTANCE MISUSE CLINIC	OTHER (AUDIT)	Nilu Bhadra
096	PAIN-FREE: A QUALITY IMPROVEMENT PROJECT ON THE UNDERSTANDING AND MANAGEMENT OF PERIOPERATIVE PAIN	OTHER (AUDIT)	Angeline Lee
097	DEVELOPING A TRIAGE ASSESSMENT PROCESS TO STRATIFY THE CARE PATHWAY IN A SECONDARY CARE PAIN MANAGEMENT PROGRAMME (PMP) TEAM	OTHER (AUDIT)	Fraser Gething

098	A PROSPECTIVE AUDIT OF RESPONSE TO CAPSAICIN 8% PATCH TREATMENT IN A DISTRICT GENERAL HOSPITAL IN NORTH WALES	OTHER (AUDIT)	Fiona Owen
099	BUZZING THROUGH PAIN: AUDIT OF A NURSE LED TENS SERVICE	OTHER (AUDIT)	Dee Burrows
100	PELVIC PAIN: A DISTRICT GENERAL'S PERSPECTIVE	OTHER (AUDIT)	Ramy Mottaleb
101	A CLINICAL AUDIT OF HORMONE LEVELS ON PATIENTS ON LONG TERM OPIOIDS	OTHER (AUDIT)	Heather Riggs
102	STRONG OPIOID TREATMENT FOR PERSISTENT NON-CANCER PAIN: A PROSPECTIVE EVALUATION OF PREVALENCE FROM A SECONDARY CARE MULTIDISCIPLINARY PAIN CLINIC	OTHER (AUDIT)	Peter Keogh
103	RE-AUDIT OF RADIATION EXPOSURE FOR COMMON CHRONIC PAIN PROCEDURES	OTHER (AUDIT)	Mohammed Sajad
104	LOW DOSE NALTREXONE USE IN FIBROMYALGIA SYNDROME AND CHRONIC WIDESPREAD PAIN	OTHER (AUDIT)	Michael Jones
105	DOSE-RESPONSE ANALYSIS OF ONABOTULINUMTOXIN A IN CHRONIC MIGRAINE	OTHER (AUDIT)	Michele Trimboli
106	DEVELOPMENT OF RESEARCH PRIORITIES IN PAEDIATRIC PAIN AND PALLIATIVE CARE	OTHER (RESEARCH)	Christina Liossi
107	INDIVIDUALS' PERCEPTIONS AND EXPERIENCES OF BEING BOTH OVERWEIGHT AND LIVING WITH PERSISTENT MUSCULOSKELETAL PAIN	OTHER (RESEARCH)	Lesley Cooper
108	DEFENSIVE HIGH-ANXIOUS INDIVIDUALS DEMONSTRATE DIFFERENT RESPONSES TO PAIN MANAGEMENT TO THOSE WITH LOWER LEVELS OF DEFENSIVENESS AND ANXIETY	OTHER (RESEARCH)	Zoe Franklin
109	WIDESPREAD HYPERALGESIA AND RADIOGRAPHIC OSTEOARTHRITIS: RELATIONSHIP TO PRE-OPERATIVE PAIN AND OUTCOME AFTER TOTAL HIP AND KNEE REPLACEMENT	OTHER (RESEARCH)	Vikki Wylde
110	DOES HORSE RIDING PREDISPOSE TO PUDENDAL NEUROVASCULAR INJURY?	OTHER (RESEARCH)	Joseph Anthony
111	TRENDS IN PRESCRIPTION OPIOID ANALGESIC DISPENSING IN THE REPUBLIC OF IRELAND 2003-2011: RESULTS FROM A NATIONAL POPULATION STUDY	OTHER (RESEARCH)	Mary Claire Kennedy

112	DEVELOPING A COMPLEX INTERVENTION FOR PATIENTS WITH LONG-TERM PAIN AFTER TOTAL KNEE REPLACEMENT	OTHER (RESEARCH)	Vikki Wylde
113	USING A LEARNING COMMUNITY TO MANAGE PAIN: A PARTICIPATORY ACTION RESEARCH STUDY	OTHER (RESEARCH)	Gareth Parsons
114	AN INVESTIGATION INTO THE EFFECT OF BLOOD FLOW RESTRICTION ON PAIN RESPONSE AND MUSCULAR ENDURANCE IN HEALTHY HUMANS	OTHER (RESEARCH)	Vincent Burnham
115	PILOTING A SPECIALISED PAIN CLINIC FOR PEOPLE WITH SICKLE CELL PAIN	OTHER (RESEARCH)	Jenna Love
116	CENTRAL & PERIPHERAL SENSITISATION RESPONSE FOLLOWING PREGABALIN IN PATIENTS WITH FIBROMYALGIA	OTHER (RESEARCH)	Theresa Wodehouse
117	PAIN AND QUALITY OF LIFE IN YOUNG PEOPLE WITH EPIDERMOLYSIS BULLOSA	PAEDIATRIC	Christina Liossi
118	NOT SEEING EYE-TO-EYE: DIFFERENTIAL REPORTING OF CHRONIC PAIN BY CHILDREN AND THEIR PARENTS (PRIME-C)	PAEDIATRIC	Hannah Durand
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122	CHARACTERISTICS OF NON-CANCER PAIN PATIENTS PRESCRIBED LONG-TERM STRONG OPIOIDS IN PRIMARY CARE: A POPULATION BASED STUDY USING CPRD	PRIMARY CARE	Muna Adan
123	COMBINED COGNITIVE BIASES FOR PAIN-RELATED INFORMATION IN INDIVIDUALS WITH CHRONIC HEADACHE	PSYCHOLOGY	Daniel Schoth
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126	A PILOT CLINICAL INTERVENTION TO DECREASE PRE-SLEEP COGNITIVE ACTIVITY AND AROUSAL IN PATIENTS WITH INSOMNIA SECONDARY TO CHRONIC PAIN	PSYCHOLOGY	Szilivia Vas
127	DO POSITIVE PSYCHOLOGICAL INTERVENTIONS MAKE A DIFFERENCE TO PEOPLE LIVING WITH CHRONIC PAIN? A SYSTEMATIC REVIEW OF THE LITERATURE	PSYCHOLOGY	Joanne Iddon
128	WHERE ARE ALL THE MEN?	PSYCHOLOGY	Emelie Hasselgren
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133	A SYSTEMATIC REVIEW AND META-ANALYSIS OF MEMORY BIASES FOR PAIN-RELATED INFORMATION IN PATIENTS WITH CHRONIC PAIN	PSYCHOLOGY	Daniel Schoth
134	PAIN COMMUNICATION: IS THERE A DIFFERENCE BETWEEN STRANGERS, FRIENDS AND ROMANTIC PARTNERS?	PSYCHOLOGY	Rhiannon Edwards
135	"MARATHON WITH HILLS AND VALLEYS": JOURNEYS OF ACCEPTANCE IN CHRONIC PAIN	PSYCHOLOGY	Toni Miles
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137	COGNITIVE BEHAVIOURAL THERAPY VERSUS EDUCATION OF ADULT PATIENTS WITH CHRONIC PAIN. A META-ANALYSIS OF THE CHANGE OF PAIN INTENSITY POST-INTERVENTION AND AFTER 6 MONTHS	REVIEWS	Salim Makhlouf