

Pain Medicine

PM01
REHABILITATION PAIN CLINIC

R. L. ATKINSON

Wesley Hospital, Brisbane, Queensland

The multidisciplinary rehabilitation pain clinic has an important role in the treatment of persistent pain. Increasingly surgeons and third party case managers recognize this is an important requirement for their patients if they are to recover and return to work.

The concept and plan of treatment considers the patient in terms of a biopsychosocial approach. The pain patient is an amalgam – the physical effects of tissue injury; the conscious recognition of this event; the emotional response to the injury and the environmental stressors.

The assessment addresses traits including physical deconditioning, anxiety and depression, pain and suffering disproportionate to the injury, superstitious beliefs about pain and a failure to work.

The treatment plan directs the patient to understand pain, improve exercise, diet, sleep patterns, reduce medications, develop coping skills and a confidence to return to work.

The usual program extends over three weeks. The team includes pain medicine, rehabilitation physicians, psychologists, nurses, physiotherapists, occupational therapists and vocational advisors. Much of the success depends on an early referral and the “chemistry” in a group of patients. A group of six to eight is optimal.

Outcomes have been examined by John Loesser and others which show a decrease in pain self rating by 60%, a reduction in the intake of Opiates 60%; reduced attendance at physicians 30% and a return to work in up to 60%. Still the success depends on careful patient selection and exclusions.

PM02
A RANDOMIZED, DOUBLE BLIND, PLACEBO CONTROLLED STUDY TO COMPARE ILIO INGUINAL NERVE BLOCKS AND LOCAL WOUND IRRIGATION WITH LOCAL ANAESTHETIC ON POST OPERATIVE PAIN FOLLOWING PRIMARY OPEN INGUINAL HERNIA REPAIR – A STOPPED TRIAL

S. R. WALKER AND C. ORLIKOWSKI

Royal Hobart Hospital, Hobart, Tasmania

Background: Local anaesthetic use for post operative pain control is widely used following open inguinal hernia repair but this is not without risk. The aim of this study was to compare ilioinguinal nerve block and wound irrigation in patients undergoing open inguinal hernia repair under general anaesthetic in a randomized, double blind, placebo controlled trial.

Methods: Adult patients admitted for unilateral primary open mesh repair of an inguinal hernia were recruited. Following patients received a standard general anaesthetic. Prior to skin incision, an ilioinguinal injection was performed by the anaesthetist with either ropivacaine or normal saline. Prior to closure of the wound, the wound was irrigated with either ropivacaine or normal saline. Post operatively, all patients received fentanyl patient controlled analgesia and regular oral analgesia. Pain scores and visual analogue scores were recorded until discharge. Patients were then contacted by telephone at 24 hours, 48 hours, two weeks and four weeks post operatively and asked a standard series of questions, mainly related to post operative pain.

Results: After 12 patients had been recruited the trial was stopped as 5 of the 8 patients who received an ilioinguinal nerve block suffered a neurological complication.

Conclusion: Ilioinguinal nerve block with ropivacaine should be avoided.

PM03
PERIPHERAL NERVE FIELD STIMULATION: A NOVEL TREATMENT FOR CHRONIC LOW BACK PAIN AND FAILED BACK SURGERY SYNDROME

B. MITCHELL, P. VERRILLIS, D. VIVIAN AND C. SINCLAIR

Metro Spinal Clinic, Melbourne, Victoria

Purpose: To assess the efficacy of peripheral nerve field stimulation (PNFS) for the treatment of chronic low back pain and failed back surgery syndrome (FBSS).

Methodology: Chronic back pain sufferers received subcutaneous octrode, percutaneous lead implants within the major area of pain in the lower back. Over a 12 month period data was collected from patients receiving treatment, in the form of a pre- and post-treatment questionnaires which aimed at assessing pain indices, alterations to analgesic administration and the overall level of patient satisfaction.

Results: Data demonstrated a statistically significant decrease in pain levels, with an average reduction of 3.8 ± 1.2 on the visual analogue scale (VAS). Of the 13 patients assessed, only two reported a poor response to outcome measures. The remaining patients all reported successful outcomes with an average pain reduction of 4.2 ± 1.4 VAS. Pain relief was significantly and positively correlated with reduced analgesic intake and patient satisfaction. No adverse events or complications were reported.

Conclusion: PFNS is a safe, reversible and highly effective treatment option for sufferers of chronic low back pain and FBSS, whom have exhausted all other conventional treatment options.

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PM04
NERVE ROOT BLOCKS FOR LUMBAR DISC PROLAPSE: AN ASSESSMENT OF CLINICAL VALIDITY

R. E. BLACKHAM, P. M. MAJEDI AND G. Y. LEE

Sir Charles Gairdner Hospital, Perth, Western Australia

Purpose: Nerve root blocks are a major modality in the treatment of radicular pain from lumbar disc prolapse. Whilst this technique is frequently utilized in clinical practice there is uncertainty with regards to the evidence base for this method. In this study we review the history and current literature of nerve root blocks for lumbar disc prolapse, to assess their utility in chronic pain management.

Methodology: A systematic review of MEDLINE-listed papers analysing the current literature on nerve root blocks was performed. These included a wide range of outcomes including decreased pain and efficacy upon comorbidities.

Results: A total of 15 papers were identified. Of these, only five were confined to patients with disc prolapse causing lumbar radicular pain (seven did not differentiate by underlying pathology). Outcomes included: Subjective symptomatic efficacy, randomization of patient cohort by technical approach or recurrence of symptoms, and relative decrease in likelihood of future neurosurgical intervention. Few clinical end-points were generalizable.

Conclusion: Whilst the practice of epidural steroid injection for lumbar disc prolapse is relatively common the evidence for this practice is still in its infancy. Given the anecdotal usefulness of the technique, further prospective trials with subset analysis of lumbar disc prolapse-specific cohorts would be required to evaluate its efficacy. Limitations of methodology of epidural technique include: Difficulty in randomization, multifactorial lumbar spine pain, and non-standardized technique. Hence whilst there is a clear need for better RCTs, current evidence supports a risk-benefit picture which is in concordance with evidence-guided practice.

PM05
THE INTRATHECAL BACLOFEN PUMP PROGRAM AT THE CHILDREN'S HOSPITAL WESTMEAD (CHW): ADVERSE EVENTS AND GOAL ATTAINMENTS

R. BAZINA, S. HAYDEN, M. DEXTER AND A. SCHEINBERG

The Children's Hospital Westmead, Sydney, New South Wales

Purpose: An Intrathecal baclofen program (ITB) was commenced at CHW in 1999 for children with severe spasticity and dystonia. The authors present a review of complications and compared these for dystonic and spastic subjects and attainment of individual goals was measured.

Methodology: Prospective data collection, with retrospective chart audit of side effects, surgical and hardware complications. Twenty five children received ITB between 1999 and 2007, mean age 10.4 yrs (4–16). Sixteen patients had assessment of goals at baseline and six months post implantation.

Results: Spasticity was the diagnosis in 60% patients. There were 6 elective pump replacements for low battery. Of 25 patients 15 (60%) had at least 1 complication, 8 patients (32%) had more than 1 complication. There were 19 surgical procedures for complication management (excluding pump replacement for low battery) with 3 patients having 3 or more procedures all for infection. The infection rate was 20% with 2 explanted pumps. Other adverse events included 3 catheter fractures/disconnections, 2 catheter tip repositions, and post operative CSF leak in 3 patients. The complication rate was higher in subjects with dystonia compared to those with spasticity (0.67 complications/years of pump operation v 0.15). There was significant improvement in the Canadian Occupational Performance Measure (COPM) six months after implantation ($p < 0.001$).

Conclusion: ITB therapy can improve the quality of life in patients but those with dystonia have a higher complication rate which needs to be considered in the decision making process.

PM06P
COMBINED LAPAROSCOPIC AND OPEN ANTERIOR APPROACH IN THE TREATMENT OF POST-HERNIORRHAPHY CHRONIC GROIN PAIN: A DEMONSTRATION OF ITS SAFETY AND EFFICACY

H. M. TRAN AND L. SALIBA

The Sydney Hernia Clinic, Sydney, New South Wales

Introduction: Chronic groin pain is common after open inguinal hernia repair. Traditional surgical management consists of injection therapy, groin exploration, mesh removal, and nerve transection. The resultant hernia defect may be difficult to repair from an anterior approach. The outcomes of a combined laparoscopic and open approach for treatment of chronic groin pain following open inguinal herniorrhaphy are assessed.

Methodology: All patients who underwent groin exploration for chronic neuralgia after a prior open inguinal hernia repair were prospectively analysed. The operation consisted of laparoscopic extra-peritoneal hernia repair, followed by groin exploration, mesh removal, and nerve transection. Outcome measures included recurrent groin pain, numbness, hernia recurrence, and complications.

Results: Three patients with a mean age of 48 years underwent combined laparoscopic and open treatment for chronic groin pain; all complained of unilateral neuralgia. Two patients failed attempted percutaneous nerve blocks. All had prior Lichtenstein repairs. There were no intraoperative complications. All patients reported virtual disappearance of pain within hours after operation. All patients reported persistent but decreasing numbness in the ilioinguinal nerve distribution but remained highly satisfied with the procedure. Histological analyses revealed neuroma formation in at least one of the nerves transected.

Conclusions: A combined laparoscopic and open approach for post-herniorrhaphy chronic groin pain results in excellent patient satisfaction with no peri-operative morbidity. It may be the preferred technique for the definitive management of chronic neuralgia after prior open hernia repair.

PM07P
CONTINUOUS INTRACUTANEUS INFUSION USING "PAIN BUSTER" FOR NEUROPATHIC PAIN

M. ASHRAFI, M. AHMAD AND D. BROCKWELL

Mersey Community Hospital, Davenport, Tasmania

Purpose: Continuous intracutaneous infusion using a constant flow infusion pump "Pain Buster" is commonly employed for treatment of incisional pain. We report its use in persistent neuropathic pain.

Methodology: A 41 year-old Caucasian male was hospitalized with severe persistent upper abdominal visceral and neuropathic pain. The visceral component was secondary to multiple surgeries which followed a traumatic liver laceration and subsequent adhesions. The pain had previously been managed with long-term opiate and various combinations of neuropathic medications.

An I-Flow on Q Pain Buster, Lake Forest CA, was inserted in percutaneously 15 cm in the painful scar. The pump infused Ropivacaine 0.2% at a constant flow rate of 5 ml/hr for 54 hrs. The patient reported an improvement in pain scores on the verbal analogue scale from 10/10 to 3/10 with subconscious improvement in his posture to from forward flexed to upright position during ambulation.

Discussion: Continuous intracutaneous infusions are commonly employed for post-operative incisional pain. The catheter wall has minute pores which diffuse the local anaesthetic into the surrounding tissues. Persistent pain from entrapment neuropathy typically responds to short term local anaesthetic blocks. A continuous infusion technique of local anaesthetic may affect the outcome by attenuating afferent input, and thus diminishing the plasticity of the central nervous system.

Conclusion: Continuous intracutaneous infusion of local anaesthetic agent may be employed for the treatment of persistent pain from entrapment neuropathy in surgical scars.

PM08P
POSTOPERATIVE EPIDURAL ANALGESIA FOR LAPAROTOMY-A COMPARISON OF THREE GROUPS; 0.2% BUPIVACAINE 5 ML/HR, 0.25% BUPIVACAINE+ FENTANYL 2 ML/HR, 0.2% BUPIVACAINE +SUFENTANYL 3 ML/HR

R. P. S. BABRA, A. TEWARI, S. GARG, S. S. VIRK, A. AHUJA AND R. KAUR

Dayanand Medical College & Hospital Ludhiana India, Punjab, India

Purpose: Pain after laparotomy is associated with various comorbid conditions which might delay the discharge of patient and increase the cost of stay in hospital. We evaluated the efficacy of bupivacaine with various adjuvants for relief of pain after laparotomy.

Methodology: We carried out a prospective, randomized and double blinded study to evaluate the efficacy and compare the post operative analgesia produced by three groups of 0.2% Bupivacaine 5 ml/hr (Group B), 0.25% Bupivacaine+ Fentanyl 2 ml/hr (Group BF), 0.2% Bupivacaine +Sufentanyl 3 ml/hr (Group BS) was carried out for 157 cases as the postoperative epidural analgesia after laparotomy. Side effects like nausea, vomiting, and pruritis were also evaluated.

Results: Cases that needed the postoperative additional analgesia were the least in the BS group. As the postoperative side effects, the decrease in blood pressure of the B group was significantly more frequent compared with the other groups, and nausea in the B was significantly more frequent than that in the BS group.

Conclusion: We recommend the use of 0.2% Bupivacaine +Sufentanyl 3 ml/hr for post operative pain relief after laparotomy surgery.

PM09P
WARFARIN RELATED INTRACRANIAL HAEMORRHAGE: BAD LUCK OR BAD MANAGEMENT? A CASE-CONTROL STUDY OF ANTICOAGULATION MONITORING PRIOR TO SPONTANEOUS SUBDURAL OR INTRACEREBRAL HAEMORRHAGE

D. H. GORDON AND R. L. JEFFREE

St George Hospital, Sydney, New South Wales

This study assesses the incidence of over-warfarinization and recency of coagulation monitoring in patients with spontaneous intracranial haemorrhage (ICH).

Patients with subdural and intracerebral haemorrhages were compared to a control group of patients presenting with atraumatic fractured femur over 24 months. Main outcome measurements were the INR on presentation, INR measured prior to presentation, days between most recent INR measurement and presentation and in-hospital mortality.

A significantly higher proportion of warfarin usage was seen amongst the ICH group (33/221, 14.9%) compared with the control (16/201, 8.0%). Sub-analysis of both groups, using warfarin, showed the majority of patients presented to hospital with an INR in the therapeutic range. In addition, no significant difference in the mean INR at presentation (2.8 ± 1.6 v 2.3 ± 0.8)

or INR when last measured prior to hospital presentation (2.6 ± 0.8 vs. 2.2 ± 0.5) or number of days since the INR was last tested (13 ± 20 vs. 28 ± 40) was found. There was no correlation between the INR time interval and the INR level on presentation. In-hospital mortality was significantly higher in those patients who were anticoagulated versus patients also presenting with ICH but not on warfarin (40%, n = 13) vs 24%, n = 48).

Our findings indicate that most patients on warfarin who suffer an ICH have a therapeutic INR at the time of their haemorrhage and are being monitored appropriately in the community. The inherent risk for ICH, despite appropriate monitoring, needs to be considered when prescribing anticoagulant treatment.