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SPEAKER ABSTRACTS

SCS for Visceral Ppain

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Spinal cord stimulation is an evidence-based treatment for certain painful conditions such as complex regional pain syndrome (CRPS), Angina, failed back surgery syndrome (FBSS). Its use in abdominal pain has been reported in the literature in a very small group of patients. Now more evidence is available to suggest some abdominal pain to be neuropathic in character.

We in Leeds have used this modality of treatment since 1995 and have nearly 30 patients. This is a very difficult group of patients who have frequent admissions secondary to uncontrolled pain. They are invariably on large doses of opioids with other adjuvant to control their pain. We have seen that neuromodulation reduces the opioid requirement considerably and it also increases the quality of life for the patient.

In this presentation I will be covering use of neuromodulation in abdominal pain and discuss case series about a new approach (anterior epidural placement) to neuromodulation in abdominal neuropathic pain. Normally when stimulating the dorsal column, the battery usage is significant and most of these patients end up having a rechargeable battery. With the anterior approach, I have found that the battery usage is going to be cut down by one tenth needing less frequent changes. The possible mechanism of action will also be discussed.

Interesting Read

1. Yasin N Khan, Application of spinal cord stimulation for the treatment of abdominal visceral pain syndrome – case reports, *Neuromodulation*, Vol 8: No1: 2005; 14-27
2. Linderoth, Physiology of spinal cord stimulation- review and update, *Neuromodulation*, Vol 2, No 3, 1999, 150-164.
3. Kapural et al, Spinal Cord Stimulation for Chronic Visceral Abdominal Pain**,** *Pain Medicine 2010;* 11: 347–355

Sacral Nerve Stimulation

Dr Jonathan Richardson
Consultant Pain Specialist Bradford Hospitals NHS Trust
Oct 2010

Urinary (UI) and/ or faecal incontinence (FI) is a distressing, unpleasant and socially disruptive condition that results in significant health, social and economic consequences. Although not life-threatening, incontinence has a profoundly negative impact upon life quality of affected individuals and their families.

Unfortunately these are common disorders. The incidence of UI increases from 5% in males and 7% in females aged 15 to 44 to 10% and 20% in males and females respectively over the age of 65 (Good practice in continence services. 2000 Department of Health publication). FI involves 2% of the general population (Nelson R et al JAMA 1995). This also increases with age to involve 11% men and 26% women over the age of 50 (Roberts RO et al J Am Geriatr Soc 1999)

Conservative treatments involve muscle exercises, behavioural therapy and drugs. These are effective for many, but the worst affected patients are left with a destroyed lifestyle. Patients cope using pads, nappies, catheters, carrying a change of clothing, using a change of diet with fluid restriction and withdrawal from society and the world of work.

Major surgery can sometimes be offered. For FI direct sphincter muscle repair (post anal repair) has a 5 year continence rate of 26% (Jameson JS et al Br J Surg 1994, Setti Carraro P et al Br J Surg 1994). Other operations are autologous sphincter augmentation, artificial sphincter implantation. Dynamic graciloplasty has a published morbidity rate of up to 42% (Matzel KE et al Dis Colon Rectum 2001). Overlapping sphincter repair has a long term success rate of 50% (Malouf AJ et al Lancet 2000). All surgical treatments involve morbidity, but often the problem is functional - rather than anatomical.

For UI some patients can be offered clam-shell enteroplasty.

Sacral nerve stimulation (SNS)

This involves electrical stimulation of the sacral nerves that supply the muscles of the pelvic floor and the detrusor muscle. Its mode of action in simple terms involves the rebalancing of inhibitory and excitatory muscle coordination. There are many function effects produced, but in essence this is the effect.

Indications

UI: urge incontinence, urgency-frequency & urinary retention

FI: a weak but structurally intact sphincter

Failed conservative / conventional treatments

Patients with failed surgical treatments should be considered, but as SNS is relatively far safer, effective and cheaper than major surgery it would be wrong to withhold SNS until surgery has been seen to have failed.

Bradford has over 7 years experience with SNS for incontinence. Audit results will be presented along with an overview of the subject. This is fascinating and rewarding work.

SCS in CRPS

Dr M Kemler

Background

Chronic CRPS is a painful, disabling disorder for which no treatment with proven effect is available. In the present randomized controlled trial, spinal cord stimulation has been found effective in reducing pain in CRPS during two years follow-up.

Methods

We performed a randomized trial in a 2:1 ratio in which 36 CRPS patients were allocated to spinal cord stimulation and physical therapy (SCS+PT) and 18 patients received solely physical therapy (PT). Twenty-four SCS+PT patients were given a permanent spinal cord stimulator after successful test stimulation; the remaining 12 patients received no permanent spinal cord stimulator. We assessed pain intensity, global perceived effect, satisfaction, and health-related quality of life. Patients were examined before randomization, before implantation and every year until five years thereafter.

Results

At five years, ten patients were excluded from the analysis. The main analysis showed no difference between the groups in any of the measured variables. In the subgroup analysis, patients with an implant (N = 20) outweighed PT patients (N = 13) with regard to global perceived effect (35 percent vs. 15 percent "much improved"; P = 0.02) and pain intensity (–2.5 vs. –1.0; P = 0.06). Nineteen of 20 patients (95%) reported that they would go through the treatment again for the same result.

Conclusions

After careful selection and successful test stimulation, spinal cord stimulation results in a high patient satisfaction in chronic CRPS patients during five years follow-up. The extent of pain relief, however, diminishes over time.

IT Pumps for Cancer Cain

Dr L Lynch

A presentation aimed at describing my use of implanted programmable intrathecal infusion pumps and patient therapy managers in the management of cancer related pain.

A discussion of patient assessment and selection - I will implant only around a quarter of patients referred.

A description of test dose and implant procedure and drug combinations and doses used. I generally use a combination of hydromorphone, clonidine and bupivacaine, but sometimes solely hydromorphone for opioid responsive pain and sometimes bupivacaine alone for non-opioid sensitive perineal pain.

Problems and complications and a couple of examples of common scenarios - malignant nerve root compression and perineal pain.

Cortical Reorganisation and Mirror Therapy in Complex Regional Pain Syndrome

Professor Candy McCabe

The motor-control system usually operates below our conscious level and we only become aware of the complex interaction between desired movements and actual, when an irregularity in the system occurs. Recently it has been proposed that such discordances in sensorimotor function may generate pain and other somaesthetic disturbances. This presentation will describe the sensorimotor incongruence model of pain and see how it may be applied to Complex Regional Pain Syndrome, a condition where there is a lack of obvious causal pathology. The clinical implications of such a theory and the rehabilitation approaches, aimed at correcting sensory input and motor output, will be discussed. Specifically, mirror visual feedback will be considered and how further research has demonstrated its potential benefit within graded motor imagery programs.

DBS for Pain and Depression

Mr N Patel

The presentation aims to share his experience in the application of DBS in the treatment of intractable chronic pain, in particular for phantom de-afferentation states; and treatment-resistant depression, based on preliminary findings from a unique pilot study.