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Background. Previous attempts to quantify neuropathic pain (NeP) have not been population based. A greater understanding of the extent of the NeP population and its needs is necessary to determine health care allocations.

Methods. A population study telephone survey laboratory at the University of Alberta contacted 1207 subjects aged 18 years and over. Relevant epidemiological data were acquired along with determination of the presence of pain and its duration in each subject. In subjects with pain, the history portion of the DN4 questionnaire was administered to derive an estimate of the prevalence of features of NeP and non-NeP, and quality of life (QoL) (EQ-5D) measurements were also acquired.

Results. Chronic pain of $\geqslant 6$ months duration was present in 390 subjects (32%). A score of $\geqslant 3$ on the history portion of the DN4 questionnaire, suggesting features of NeP, was recorded in 208 (53%) subjects. Subjects with features of NeP (sNeP) were more likely to be female (62%), under 60 years of age (77%) and were more likely to be unemployed. Despite similar education levels, sNeP had lower incomes, as well as lower QoL, particularly in the realms of mobility, pain/discomfort, and anxiety/depression. Younger subjects with NeP had the greatest decline in QoL scores.

Conclusion. It is possible that NeP is considerably more prevalent in the general population than previously estimated. NeP is most common amongst subjects in their income earning years and lowers QoL. Clearly, new strategies are required for the management of the large population of sNeP.

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465

PATHOPHYSIOLOGY OF NEUROPATHIC PAIN IN CARPAL TUNNEL SYNDROME: A CLINICAL AND NEUROPHYSIOLOGICAL STUDY – PRELIMINARY RESULTS

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Neuropathic pain is a frequent symptom of carpal tunnel syndrome (CTS). We aimed at seeking information on the pathophysiology of neuropathic pain in CTS.

We enrolled 19 patients with a clinical diagnosis of CTS (34 hands, 15 patients had bilateral CTS). The DN4 questionnaire for neuropathic pain was administrated to all patients, for each hand separately. When the DN4 score was >4, the neuropathic pain scale inventory (NPSI) was administrated. All patients underwent the recording of standard nerve conduction study (NCS), cutaneous silent period (CSP) after stimulation of the II and V digit, and laser evoked potentials (LEPs) after stimulation of the median nerve territory.

Seventeen CTS hands had neuropathic pain (DN4 score >4). II digit-CSP was shorter and LEP amplitude smaller in CTS hands with neuropathic pain than in CTS hands without neuropathic pain.

($P = 0.03$), NCS data did not differ between these two groups ($P > 0.2$). Up to now correlations between NPSI score and neurophysiological data failed to reach statistical significance ($P > 0.05$).

Our data suggest that neuropathic pain in CTS may be related to a selective damage of the small myelinated afferents. A larger sample of patients is needed to achieve further information on the correlations between NPSI score and neurophysiological data.

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466

A RANDOMIZED SHAM-CONTROLLED TRIAL OF MIRROR THERAPY FOR LOWER LIMB PHANTOM PAIN DEMONSTRATES EFFICACY OF MIRROR THERAPY

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Background/aims. Mirror therapy reduces phantom limb pain (PLP) in upper limb amputees, but has not been examined in lower limb amputees. Since the critical ingredient of mirror therapy might be the induction of

limb imagery, we conducted a sham-controlled trial of mirror versus imagery therapy for lower limb amputees with PLP.

Methods. Fourteen (14) subjects with a unilateral lower limb amputation and daily PLP were randomly assigned to three treatment groups: mirror (M), $n = 6$; covered mirror (CM), $n = 4$; mental visualization (MV), $n = 4$. Subjects in the M and CM groups were asked to move their intact foot while simultaneously imagining moving their amputated foot for 15 min daily for 1 month. Subjects in the MV group were asked to imagine moving their amputated foot only. Each day, all subjects reported their PLP level using a 10 cm visual analogue scale (VAS) as well as the number of and duration of episodes.

Results. Baseline median VAS pain scores were similar in all groups: M, 3.1 cm (range: 1.5–9.3); CM, 3.8 cm (1.8–7.0); MV, 2.7 cm (2.2–6.3) ($p = 0.63$). After 1 month of therapy the M group had a median VAS pain score of 0.5 cm (0–3.9), while CM was 3.5 cm (1.9–6.9), and MV was 5.8 cm (5.0–6.0) ($p = 0.006$). The number and duration of PLP episodes decreased in 100% of M-treated subjects and 50% of MV-treated subjects. Of the CM-treated subjects, 25% had reduced pain while 75% had increased pain.

Conclusions. Mirror therapy, compared to covered mirror or mental visualization therapies, is highly effective for treating lower limb PLP.

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467
PERSISTENT PAIN AFTER CARDIAC SURGERY: A NEUROPATHIC PROBLEM?

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Aim. In previous work, the majority of coronary artery bypass graft (CABG) patients reported considerable pain at hospital discharge. Therefore, this study examined pain, related interference, and analgesic use of patients at home in the first 3 weeks following CABG surgery.

Method. As part of a larger RCT ($N = 406$), 312 patients (42 women) were followed at home after discharge. Patients received 3 weekly telephone calls to determine pain (MPQ-SF), related interference (BPI-I), and analgesic intake.

Results. For the 69% of patients with moderate to severe pain intensity at discharge ($\geqslant 4/10$), 48% reported $\geqslant 4$ pain at week 1, 35% week 2, and 20% week 3. The consistent worst pain site was the sternotomy/chest site (65%, 52%, and 43%). Pain descriptors (MPQ-SF) rated as moderate-severe for over 10% of patients included shooting, stabbing, hot/burning and tender. Pain-related interference was particularly problematic in all 3 weeks for 20–25% and analgesics were used minimally. Using repeated measures for the total group, no differences were found in any outcome measure by intervention group, sex, or age. However, women discharged home with moderate-severe pain had significantly more pain-related interference in activities than did men [$F = 5.47$ (2, 113), $p > 0.01$].

Conclusions. About 20% of CABG patients continued to report moderate-severe pain at 3 weeks after discharge using neuropathic pain descriptors. Whether this persistent pain post-sternotomy is neuropathic needs further examination. Our current research aims to determine the risk factors in the transition from acute to a persistent pain after cardiac surgery over a 2-year period.

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468
CORRELATIONS BETWEEN CLINICAL NEUROPATHIC PAIN RESPONSES AND EXPERIMENTAL PAIN MEASURES IN POSTAMPUTATION PAIN

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Background/aims. There is wide interindividual variability in analgesic responses. Improved predictability of clinical pain responses would increase the efficacy and tolerability of analgesic treatment. This study investigated the usefulness of experimental