of the patella; 3 cm lateral to the mid-point of the lateral edge of the patella; and centre of the patella), (ii) tibialis anterior muscle, and (iii) extensor carpi radialis longus muscle. The PPT values from tibialis anterior and extensor carpi radialis longus muscles were used to divide the patients in high and low sensitization groups (two-steps clustering).

Results: PPT values at bilateral knees sites were lower in the high sensitivity [median (range) of all sites: 423 (153, 1129) kPa] compared with low sensitivity group [822 (305, 2051) kPa] ($P < 0.05$). CoP range in the anterior–posterior direction was reduced in high sensitivity group (41 ± 16 mm) compared with the low sensitivity group (51 ± 16 mm) during the SS with CE ($P < 0.05$) condition.

Conclusions: The lower CoP Range suggests stiffer postural strategy in patients with higher widespread pain sensitivity compared with low sensitivity patients during sensory restrictions. The lack of mobility found in high sensitivity patients under such restrictions might be related to the impaired integration of sensory information due to the parallel processing of the nociceptive information.

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Efficacy of dry needling on latent myofascial trigger points in male subjects with neck/shoulders musculoskeletal pain. A case series

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Aims: To assess the impact of dry needling on neural mechanosensitivity and grip strength in male subjects with a history of persistent pain in the neck/shoulder area.

Methods: Case series study. Eight male subjects (mean age 25 ± 6.24 years) with a recurrent history of bilateral neck/shoulder pain for at least 6 months, and with symptoms provoked by neck/shoulder postures or movement were recruited from a University-based clinical research center. Measurements were taken at baseline, immediately after intervention, and fifteen days later, of the pressure pain threshold (PPT) over the median, ulnar, and radial nerves, and the tibialis anterior (TA) muscle. Secondary measures included free-pain grip strength with a hydraulic dynamometer. A therapist assessed the presence of latent (not spontaneously painful, but painful upon palpation) myofascial trigger points (MTrP) over the scalene, subclavius, pectoralis minor, infraspinatus and serratus posterior superior muscles, on the most painful side. Deep dry needling was then performed on the latent MtrP by quickly inserting and partially removing the needle from the MTrP until 2 local twitch responses were provoked.

Results: PPT over the nerve trunks significantly increased after intervention ($p < 0.05$ for all locations). These changes remained constant in the second assessment, both in the treated ($p < 0.001$ for median and ulnar nerves, and $p = 0.004$ for radial nerve), and the non-treated upper limb (median nerve $p < 0.001$, ulnar nerve $p = 0.003$, and radial nerve $p = 0.006$). No statistical significance was found for PPT over the TA muscle ($p > 0.05$) or for grip strength ($p = 0.153$ on the treated side, and $p = 0.564$ on the non-treated upper limb).

Conclusions: Dry needling on the cervicothoracic and shoulder areas may help to improve peripheral neural features over the brachial plexus nerve trunks in subjects with recurrent neck/shoulder pain. No effect was observed for grip strength.

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Identification of pre-operative of risk factors associated with persistent post-operative pain by self-reporting tools in lower limb amputee patients – A feasibility study

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Aims: The incidence of persistent post-operative pain (PPP) is 30–85% in lower limb amputee (LLA) patients and identification of preoperative risk factors are warranted. Preoperative levels of anxiety, depression, pain catastrophizing, neuropathic pain and severe preoperative pain have previously been linked with PPP but such screening tools are not used in the clinical hospital setting. The aim of this study was to assess feasibility of using questionnaires for anxiety, depression, pain catastrophizing, neuropathic pain and preoperative pain levels in a clinical preoperative setting.

Methods: Patients scheduled for non-traumatic amputation of the lower leg or femur were recruited from three Danish hospitals. Exclusion criteria were surgery 4-weeks prior to LLA, same leg re-amputation, or inability to participate. Pre-operative values of anxiety, depression and catastrophizing were assessed using the Hospital Anxiety (A) and Depression(D) Scale (HADS) (cutoff: 8) and Pain Catastrophizing Scale (PCS) (cutoff = 32). Neuropathic pain was assessed preoperatively using Pain-Detect-Questionnaire (PD-Q) (cutoff: 19). The maximum preoperative pain intensity was assessed using the Numeric Rating Scale (NRS; 0: no pain and 10: worst imaginable pain). Scores are presented as median values with interquartile range (Q1–Q3).

Results: Eight of 18 patients (5 females) completed this pilot study: median age 71 (range 56–83), 6 femur and two lower leg amputees. Nine of ten excluded patients were unable to complete the questionnaires and one patient was operated acutely. Median pre-operative HADS-D and -A scores were 7 (3–9, 50% ≥ cutoff) and 4 (1–8, 25% ≥ cutoff), pre-operative PCS score was 24 (18–28, 13% ≥ cutoff), pre-operative PD-Q score was 16 (8–22, 50% ≥ cutoff) and NRS score was 9.5 (8–10).

Conclusions: This study indicates that it is possible to implement preoperative questionnaires in a clinical setting. However, more than 50% of the patients are unable to complete the questionnaires.

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