

the upper trapezius, and collection of neck disability and neck pain intensity. The examination was performed by an assessor blinded to subjects' condition.

Results: A significant positive association between pain and disability ($P < 0.003$), pain and PPT in the upper trapezius ($P < 0.041$), pain and PPT in tibialis anterior ($P < 0.038$), disability and PPT in upper trapezius ($P = 0.006$) was found in both groups. Subjects with MNP showed significantly negative association between disability and PPT in the tibialis anterior ($P = 0.003$). Subjects with active TrPs in the upper trapezius exhibited significantly higher neck pain intensity and neck disability and lower PPTs (all, $P < 0.015$), than those with latent TrPs in both groups.

Conclusions: Our results suggest that the association between pain, disability, and PPTs is similar in subjects with neck pain and not influenced by the origin of neck pain. The presence of active TrPs in upper trapezius in neck pain patients was related to higher pain intensity, related-disability and lower PPTs, compared to neck pain patients with latent TrPs in upper trapezius. Future studies are needed to determine the clinical role of these associations.

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Association between widespread pressure pain hypersensitivity, health history, and trigger points in subjects with neck pain

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Aims: Health history (medical conditions, comorbid musculoskeletal pain, surgical operation, long term intake of medications) may contribute to central sensitization. The duration and the number of the peripheral nociceptive input seem to play a crucial role in the development and maintenance of sensitization. No study has previously investigated these relationships. Our aim was to investigate the association between pressure pain thresholds (PPTs) and health history in patients with neck pain, and the role of active trigger points (TrPs) on PPTs.

Methods: Thirty-four subjects with mechanical neck pain and 34 with whiplash-associated neck pain participated. They underwent an assessment of PPTs over upper trapezius, extensor carpi radialis longus, and tibialis anterior muscles, and were screened for the presence of active TrPs in upper trapezius muscle. Further, patients fulfilled a questionnaire investigating health history outcomes number and duration.

Results: Significant negative correlations between all PPTs and the duration of health history outcomes were found in both groups (all, $P < 0.02$), with no correlations between PPTs and the number of health history outcomes (all, $P > 0.15$). Significant lower PPTs over upper trapezius, extensor carpi radialis longus, and tibialis anterior (all, $P < 0.01$) muscles were found in subjects with active TrPs as compared to those with latent TrPs.

Conclusions: Widespread pressure pain hypersensitivity was associated with the duration, but not the number, of health history outcomes suggesting that long-lasting health complains may act as

triggering factor driving sensitization in individuals with neck pain regardless the origin of neck pain. Patients with active TrPs in the upper trapezius muscle showed higher widespread pressure sensitivity than those with latent TrPs. These data should be included in the assessment of neck pain subjects, as they may be useful for planning the management of their symptoms.

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Neuromas in patients with peripheral nerve injury and amputation - An ongoing study

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Background and aims: Injury to peripheral nerves associated with trauma, amputation, or surgery may lead to the formation of neuromas that can cause severe pain. Unfortunately, neuromas are frequently refractory to medical and surgical treatment. This ongoing study examines whether neuromas are more frequent in patients experiencing pain after peripheral nerve injury or amputation than in patients without pain.

Methods: In this observational cohort study, 80 patients with peripheral nerve injury or amputation will be recruited. Patients will answer pain questionnaires and undergo a clinical examination with quantitative sensory testing performed within the area of spontaneous pain, including areas of brush-evoked allodynia and pinprick hyperalgesia. Neuromas are identified using ultrasound.

Results: Patient inclusion is ongoing. At present, fourteen amputees have participated in the study: nine males and four females, aged 38–77 years. Six patients had no neuromas. Stump pain in this group ranged from 0 to 8 and phantom pain from 0 to 10 on a numerical rating scale, 0–10. Eight patients had neuromas. Stump pain in this group ranged from 0 to 7 and phantom pain from 0 to 8. Further results will be presented at the congress.

Conclusions: Because of a limited number of patients included, it is not yet possible to conclude if neuromas are more frequent in patients with pain.

Hopefully, this study will increase our understanding of the role of neuromas in patients with pain after peripheral nerve injury and amputation.

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