

## MYOFASCIAL TRIGGER POINTS IN SUBJECTS WITH WHIPLASH SYNDROME: A PILOT STUDY

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**Background and Aim:** It is suggested that muscle trigger points (TrPs) can be involved in the genesis of the pain in whiplash associated disorders (WAD). Since no previous study has systematically explored TrPs in WAD, our aim was to investigate in a blinded design the presence of TrPs in 7 pair of muscles in WAD patients compared to controls.

**Methods:** Six male and 4 female (age:  $30 \pm 5$  years) diagnosed with WAD grade II and 10 age- and sex-matched healthy controls (age:  $31 \pm 6$  years) participated. TrPs in upper trapezius, sternocleidomastoid, suboccipital, levator scapulae, scalene, temporalis and masseter muscle were bilaterally explored following Simons et al criteria: hyperirritable spot in a palpable taut band, local twitch response elicited by snapping palpation and presence of referred pain. TrPs were active if the referred pain reproduced symptoms of the subject, and TrPs were latent when the referred pain did not reproduce symptoms.

**Results:** The mean number of TrPs on each WAD subject was 4.8 (SD: 1.6) active TrPs and 2.5 (SD: 1.2) latent TrPs. Controls only exhibited latent TrPs (mean: 2.5; SD: 0.5). Significant difference between groups were found for active ( $P < 0.001$ ), but not latent TrPs ( $P = 0.9$ ). Active TrPs in the levator scapulae ( $n=9$ ,  $n=9$  right / left side), upper trapezius ( $n=6$ ,  $n=5$ ), and scalene ( $n=4$ ,  $n=3$ ) muscles were the most prevalent in WAD subjects.

**Conclusions:** The referred pain elicited from active TrPs in head/neck muscles may be involved in the pathophysiology of WAD.

**Key words:** Muscle trigger points, whiplash associated disorders, referred pain.