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# Myofascial Trigger Points in Neck and Shoulder Muscles and Widespread Pressure Pain Hypersensitivtiy in Patients With Postmastectomy Pain: Evidence of Peripheral and Central Sensitization.

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## Abstract

**OBJECTIVE:** To describe the presence of widespread pressure pain hyperalgesia and myofascial trigger points (TrPs) in neck and shoulder muscles in patients with postmastectomy pain.

**METHODS:** Twenty-nine women (mean age: 50±8 y) with postmastectomy pain and 23 matched healthy controls (mean age: 50±9 y) participated. Pressure pain thresholds (PPT) were bilaterally assessed over the C5-C6 zygapophyseal joint, the deltoid muscle, the second metacarpal, and the tibialis anterior muscle. TrPs in the upper trapezius, suboccipital, levator scapulae, sternocleidomastoid, scalene, infraspinatus, and pectoralis major muscles were explored. TrPs were considered active if the local and referred pain reproduced symptoms and the patient recognized the pain as familiar.

**RESULTS:** Twenty-five (86%) patients reported neck pain whereas 20 (69%) patients showed shoulder/axillary pain. The results showed that PPT levels were significantly decreased bilaterally over the C5-C6 zygapophyseal joint, deltoid muscle, second metacarpal, and tibialis anterior muscle in patients with postmastectomy pain as compared with controls (all sites, $P<0.001$). No significant differences in the magnitude of PPT decrease between sites were found ($P=0.222$). The mean number of active TrPs for each woman with postmastectomy pain was 5.4±1.8. Healthy controls only had latent TrPs (0.5±0.6). Patients with postmastectomy pain showed a greater number of TrPs than controls ($P<0.001$). In all muscles, there was significantly more active TrPs in patients with postmastectomy pain as compared with controls ($P<0.001$). Active TrPs in the pectoralis major (n=27, 93%), infraspinatus (n=23, 79%), and

upper trapezius (n=19, 65%) muscles were the most prevalent in the affected side in the postmastectomy group. The number of active TrPs was positively correlated with neck (rs=0.392, P=0.036) and shoulder/axillary (rs=0.437, P=0.018) pain intensity.

**CONCLUSIONS:** Our findings revealed bilateral widespread pressure pain hypersensitivity in patients with postmastectomy pain. In addition, the local and referred pain elicited by active TrPs reproduced neck and shoulder/axillary complaints in these patients. These results suggest peripheral and central sensitization in patients with postmastectomy pain.

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