

## MYOFASCIAL TRIGGER POINTS: ANOTHER WAY OF MODULATING TINNITUS

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**Objectives:** investigation of the prevalence of chronic pain in the head, neck and shoulder girdle of a population with tinnitus as well as the presence of pain-related myofascial trigger-points, besides their capacity of modulating tinnitus.

**Methods:** in this case control study 94 subjects with tinnitus and 94 without such symptom were analyzed, matched by age and gender, excluding those with widespread musculoskeletal pain or myoclonus. All of them underwent an evaluation protocol carried out by the same researcher in order to investigate the time and the presence of frequent regional pain for three months or more (chronic pain) in the head, neck and shoulder girdle. For the symptomatic group, the time and tinnitus location was also investigated. The myofascial trigger points were researched in 9 bilateral muscles (head, neck and shoulder girdle), always in the same muscular portion, according to Travell and Simons [1999]. The intensity of tinnitus was evaluated with a scale ranging from 0 to 10, and modulation was considered as present in cases of immediate increase or decrease of at least one point in the scale and/or changes in the type of sound. The exams took place in a silent environment, so as to make it easier for tinnitus modulation to be perceived.

**Results:** tinnitus patients were more likely to complain of chronic pain in the researched regions (30.3%; OR= 2.81) when compared to the control group (13.1%). Pain complaint took place before or at the same time of tinnitus in 67.7% of patients. Among patients with both tinnitus and pain, 90.3% experienced myofascial pain. Upon local digital pressure of myofascial trigger points in the tinnitus group, 55.9% of patients reported tinnitus modulation. When patients with tinnitus modulation are compared to those without modulation, a significant difference was observed with regards to the presence of previous pain complaints as reported by the patient ( $p < 0.008$ ). Correlation of laterality was verified in 61.3% of cases between the ear with the worst tinnitus and the side of the body with chronic pain in the researched regions ( $Kappa = 0.50$ ;  $p < 0.001$ ).

**Conclusions:** myofascial pain is a common finding in tinnitus patients. Myofascial trigger-points' capacity of modulating tinnitus was surprisingly high. So, trigger points should be more investigated as a possible etiologic factor and/or adjuvant as to tinnitus onset.