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Gluteal trigger points as a common source of pseudo sciatic pain and their therapy with radial shockwaves

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Introduction: Patients with chronic low back pain often complain about pain irradiation in their legs although they have no objective neurological deficit. These irradiations are called "pseudo sciatic" and are mostly explained by the muscle trigger point theory of Travell & Simons. Pseudo sciatic pain is mostly due to trigger points in the gluteal muscles.

The trigger point theory further includes the possibility of secondary insertion tendinosis due to an increase of intramuscular tension over longer periods. In this clinical study the frequency and localisation of musculotendinous pathologies amongst chronic low back pain patients were examined and the results of a radial shockwave therapy described.

Material and method: In a group of 184 patients with chronic pseudo sciatic pain (>12 months) the gluteal muscles and their insertion at the ilium and the greater trochanter were examined by palpation and the correlation to the duration of pain calculated (1 examiner).

The trigger point areas in the gluteal muscles were treated with radial shockwaves (Masterpuls, Storz) during 6-8 sessions and the result of therapy documented over 6 months.

Results: 92% of all patients with chronic pseudo sciatic pain showed trigger points in the gluteal muscles and described a typical referred pain in the lower extremities during high pressure on these areas. Amongst these 184 patients 61% showed muscular trigger points only (average pain duration 1.8 years, VAS 7.3), whereas additional insertion tendinosis was found in 31% of the patients (average pain duration 3.7 years, VAS 7.6). The difference in pain duration was statistically significant ($p < 0.01$), whereas the intensity of pain was not.

The treatment with radial shockwaves resulted in a significant reduction of pain after 6 months in the subgroup of pure muscular trigger points in 84% of patients (VAS 1.9) and a relief of the referred pain in 69%. In the subgroup with additional insertion tendinosis only 49% of patients profited from the trigger shockwave therapy (VAS 3.4) and described a relief of the pseudo sciatic pain in 35%.

Conclusion: Muscular gluteal trigger points are a common source of pseudo sciatic low back pain and are a risk factor for secondary insertion tendinosis. Whereas muscular trigger points respond well to the radial shockwave therapy, insertion tendinosis does not improve equally. Under practical considerations we recommend an early treatment of muscular trigger points in patients with pseudo sciatic low back pain to prevent later tendinosis which is much more difficult to treat.