The Association between Lower Extremity Tendinopathies and Lumbar Radiculopathy

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Introduction. Lower extremity tendinopathies and lumbar radiculopathy are often observed together in clinical practice, yet their association remains understudied. This study aimed to quantify coexistence of plantar fasciopathy, gluteal tendinopathy, and proximal hamstring tendinopathy with lumbar radiculopathy to enhance physician awareness and improve outcomes through earlier recognition and management.

Methods. A retrospective cohort study was conducted with patients treated at KUMC and KCOA, 2014 to 2024. Data collected included demographics, body mass index, diagnosis of tendinopathy based on clinical history, physical examination, and imaging, as well as presence or absence of lumbar radiculopathy determined by motor and sensory testing, slump and straight leg raise tests, lumbar spine magnetic resonance imaging, and electromyography. Patients with patellofemoral pain syndrome served as control group.

Results. Dataset included 437 patients. Coexistence of lumbar radiculopathy was found in 29% of plantar fasciopathy cases, 38% of proximal hamstring tendinopathy cases, and 51% of gluteal tendinopathy cases. The association between gluteal tendinopathy and lumbar radiculopathy was statistically significant (OR 3.98; 95% CI 1.79-8.85; p = 0.001) and magnitude and confidence limits for association between proximal hamstring tendinopathy (OR 2.41; 95% CI 1.00-5.82; p = 0.056) and lumbar radiculopathy was highly suggestive of a true association. In contrast, the association between plantar fasciopathy (OR 1.60; 95% CI 0.76-3.38; p = 0.291) and lumbar radiculopathy was not significant.

Conclusions. Results support a significant association between lumbar radiculopathy and both gluteal and proximal hamstring tendinopathy. Clinicians should evaluate for radiculopathy in these patients to guide treatment and improve clinical outcomes.

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