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Denervation hypertrophy in lumbosacral radiculopathy

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This case illustrates an unusual hypertrophic response to a spinal radiculopathy and describes treatment.

A 57-year-old female with a history of left L5 laminectomy in 1976, revision in 1983, presented with a 1 year history of progressive low back and left thigh pain. The patient also noted a growth within the thigh. She treated herself unsuccessfully with occasional ibuprofen.

The physical examination revealed a tender soft tissue mass on the anterolateral aspect of her thigh. Except for mild left hip abduction weakness, there were no focal neurological deficits.

MR imaging demonstrated a hypertrophic left tensor fascia lata (TFL) muscle (figs 1, 2). The lumbosacral spine MRI (figs 3, 4) showed degeneration and post-operative changes worse at the L5–S1 level. Biopsy results of the mass showed hypertrophic changes only, without evidence of inflammation or necrosis.

The patient received a left L5–S1 transforaminal epidural steroid injection of triamcinolone acetonide and lidocaine. She completed eight sessions of a McKenzie based spine therapy programme. Within 6 weeks, there was a substantial reduction in pain. Nine months later, the patient described a gradual return of pain, still better than before the injection. She had a second injection, with good results.

Denervation hypertrophy is unusual. It has been described in anterior horn cell disease, spinal muscular atrophy, postpolio syndrome, neuropathies and radiculopathies.^{1–4} Denervation hypertrophy of the TFL, arising from a radiculopathy, has not been described. Comprehensive spine rehabilitation principles focused on spine strengthening and epidural steroid injections, worked well to manage the condition.

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Figure 1.

T1 fat suppressed post-contrast MRI image, axial view of the thighs. The hypertrophied tensor fascia lata (TFL) muscle is on the patient's left, with dimensions A×B (dimensions A = 7.1 cm, B = 4.0 cm, C = 4.6 cm and D = 2.8 cm).

Figure 2.
STIR MRI image of the pelvis and thighs, coronal view. Arrow shows hypertrophied tensor fascia lata (TFL) muscle.

Figure 3.
Axial T2 MRI of the lumbosacral spine at L5–S1, showing severe left and moderate right neuroforaminal narrowing caused by facet joint hypertrophy and disk protrusion.

Figure 4.
Sagittal T2 MRI of the lumbosacral spine at midline, showing disk space thinning and darkening worse at L4–5 and L5–S1.