Teaching NeuroImage: MRI of diabetic lumbar plexopathy treated with local steroid injection

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Diabetic lumbosacral plexopathy is a well-recognized subacute, painful, asymmetric lower limb neuropathy associated with type II diabetes mellitus.1 MRI findings of lumbosacral plexopathies have rarely been reported.2 A 60-year-old man with diabetes experienced subacute right L4 dermatome dysesthesias, as-

MR neurography coronal images show increased caliber and T2 signal (A, B), and abnormal T1 contrast enhancement (C, D), of the right L3 nerve (short thin arrow), L4 nerve (long thin arrow), proximal portion of the femoral nerve (short thick arrow), and right obturator nerve (arrowheads).

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associated with right lower extremity weakness graded on the Medical Research Council scale as 3/5 in the psoas, 0/5 in the quadriceps femoris, and 3/5 in the thigh adductors. Electromyography revealed evidence of widespread spontaneous activity in the same muscles. MRI disclosed abnormalities in the right L4 root and lumbar plexus (figure 1). A CT-guided steroid injection of triamcinolone acetonide 80 mg into the L4 nerve root sheet (figure 2, A and B) resulted in a reduction in the patient’s symptoms. A repeat MRI performed 1 month after the injection demonstrated marked reduction of radiologic abnormalities (figure 2, C and D); the patient’s dysesthesias resolved along with an improvement in muscle strength to 4/5 in the psoas and thigh adductors as well as 1/5 in the quadriceps. At last follow-up, 3 months after the injection, muscle strength was further improved (4/5 in the psoas, 2/5 in the quadriceps femoris, and 5/5 in thigh adductor muscles). Local CT-guided injection of corticosteroids may be a means of reducing the patient’s symptoms while minimizing the systemic side effects of oral or IV steroid therapy. This case study’s findings need to be confirmed in a randomized, double-blind, placebo-controlled trial.

REFERENCES
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