

Compression Neuropathy and Tensor Fasciae Latae Syndrome

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Case History

T.D. is a 39-year-old man with a two-week history of increasing right-sided lateral thigh numbness. Walking and standing at work, and right lateral recumbent sleep habit causes his symptoms to increase. He has worked as an electrician for 18 years. At work, he wears a 15-pound tool belt with pouch slung over his right hip. He is right-handed.

The patient's medical history is remarkable for bilateral acromioplasty three years ago. He reports: " Beside that, I haven't even had an aspirin in 15 years - been going to chiropractors all my life." Pain drawing revealed numbness in the distribution of the anteriolateral part of the right ilium to the medial third of the lateral thigh.

On physical examination he is a well-developed, well-nourished man who stands six feet, three inches, weighs 235 pounds, and are alert and in no apparent distress when sitting in a chair. He can forward flex fully with slight limitation in lumbar extension. Motor examination and sensory examination of the lower extremities is unremarkable. The distal vascular exam is normal. A compensatory, right lateral toe-out gait is observed. Incidental findings include skin grafting in advanced stages of healing, involving both hands. This patient reports status after a work-related injury eight months ago, by accidental contact of his left hand with a hot transformer that arced through his right hand, requiring hospitalization in a burn care unit. (In this instance, I would comment to my colleagues that the "path of arc" would internally affect primarily cardiopulmonary, and most likely is unrelated to his recent onset of lower extremity numbness.)

Chiropractic assessment yields joint fixation of the L5/S1 vertebrae and hypomobility with slight pain of the right sacroiliac joint. Asymmetry in the position of the posterior superior iliac spine was noted. Yeoman's (thigh hyperextension) testing is positive for right sacroiliac dysfunction. Ober's was positive for right TFL involvement. Hypertrophy of the right lumbar paraspinals is present with no apparent pain exhibited. Straight-leg raising produced slight pain between 70-90 degrees, yet was classically negative for radiculopathy. Flexion and abduction of the right lower limb exhibited pain. Calf muscle symmetry is normal. Examination of the feet is unremarkable.

Radiographic weightbearing imaging studies are performed to evaluate T.D.'s spine and hips. A lateral view of the lumbar spine reveals the curvature as hypolordotic. The lower two-thirds of the sacroiliac joint is unremarkable for sclerosis or narrowed joint space. There is mild loss in disc height of the fifth lumbar and first sacral levels accompanied by congenital findings of spinal *bifida occulta*. The left second through fifth lumbar transverse processes are transitional, blunted and pointing caudal. Proliferative osteophytes and mild traction spurring is demonstrated at the lumbar intraspinous levels. There is a right 15-millimeter pelvic declination. There is a prominent proliferative osteophytic caudal projection involving the region of the right anterior inferior iliac spine (ASIS) and acetabular labrum. Digital compression of this region failed to reproduce limb paresthesias.

Discussion: Compression Neuropathy and *Tensor Fasciae Latae* Syndrome

This case illustrates the typical clinical findings of compression neuropathy accompanied by *tensor fasciae latae* and sacroiliac dysfunction. Although the patient does have some mechanical low back disorder, his major difficulties are related to the acute onset of the compression neuropathy disorder.

Clinical Features

Patients may present with difficulty in gait. Look for hip joint, sacroiliac and lower extremity involvement. The function of involved muscle group is to tense the *fascia lata* counteracting the backward pull of the gluteus maximus on the iliotibial tract; the TFL assists in flexing, abducting and medially rotating the thigh. Its origin is the anterior border of the ilium with insertion on the middle third of thigh along the iliotibial tract. Its motor points to simulate pain of myofascial origin are typically located at the superior lateral hip joint region, and along the ASIS. Its nerve is the superior gluteal and is supplied by the lateral femoral circumflex and superior gluteal artery.

The biomechanics of the pelvis during walking demonstrate that during heel strike, the ipsilateral innominate moves posteriorly into flexion as the same side of the sacrum moves anterior and inferior. The 15-pound tool belt was perceived to interfere with this mechanism by limiting the typical cushion effect on the forces transmitted into the femur and spine.

Sacroiliac dysfunction may include joint locking. The locked joint often results in increased motion demands on the opposite side, consequently resulting in pain and inflammation of the hypermobile segment. Chiropractic adjustments to the affected fixed joint and assessment / correction of any sacral tilt were employed.

Detection of congenital anomalies by radiographic assessment accompanied by a thorough neurological examination should also be provided as part of the clinical evaluation.

The patient was advised to switch his tool belt to the unaffected side. Myofascial release was employed to the affected TFL and correction of his tortipelvis with chiropractic adjustments was utilized. After his initial visit, his symptoms lessened dramatically.

References

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