Trochanteric bursitis: a common cause of pelvic girdle pain

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Regional pain syndromes constitute a large part of general practice. Pelvic girdle pain is particularly common and often confusing; it is usually interpreted as due to arthritis of the hip or a lumbar spine problem.

Trochanteric bursitis, a condition frequently overlooked as a possible cause of pelvic girdle pain, is recognized by diffuse pain in the buttock and lateral thigh, with marked point tenderness of the greater trochanter. The pain and tenderness can be relieved by infiltrating the area of the trochanteric bursa with local anesthetic and steroids. A brief review of the literature, the clinical and radiologic features, the differential diagnosis and the treatment of this condition are given in this paper.

Literature review

In 1952 Spear and Lipscomb[1] described 40 patients with chronic noninfectious trochanteric bursitis. Most of their patients were middle-aged women who reported the spontaneous onset of dull aching pain in the "hip" that radiated down the lateral aspect of the thigh. The pain was increased by activity and lying on the affected side. In a few patients the discomfort resulted in a limp. The recommended treatment was application of local heat, diathermy and roentgen irradiation. Two patients, whose condition did not improve, were treated surgically.

In 1958 Anderson[2] reported a similar experience with 45 patients. He noted that the tenderness was over the tendinous insertion of the gluteus medius in 38 patients, over the posterior aspect of the gluteus maximus in 2 patients, and on the superior aspect of the greater trochanter, overlying the insertion of the gluteus minimus, in 1 patient. In 55.6% of the patients the trochanteric bursitis was thought to be secondary to some associated disorder.

In 1976 Swezey[3] described a group of 70 elderly patients referred because of low back pain or suspected herniation of an intervertebral disc or both. Only 5 had objective evidence of nerve root involvement, whereas 31 had trochanteric bursitis.

The disease has been self-limiting in most patients,[1] and the symptoms have been controlled by conservative measures[1] or local infiltration of anesthetic and steroids.[3] In one patient a tense bursal sac was surgically removed, but histopathologic findings were not reported.[1] In 24% of one

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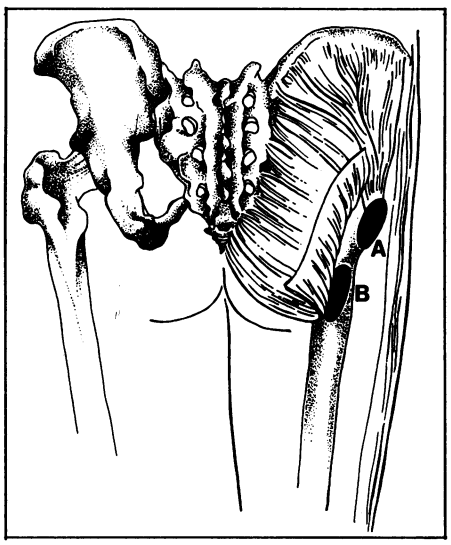

FIG. 1—Pelvis and femurs from the back, with gluteus maximus reflected off its insertion. A = trochanteric bursa; B = sub-gluteus-maximus bursa.

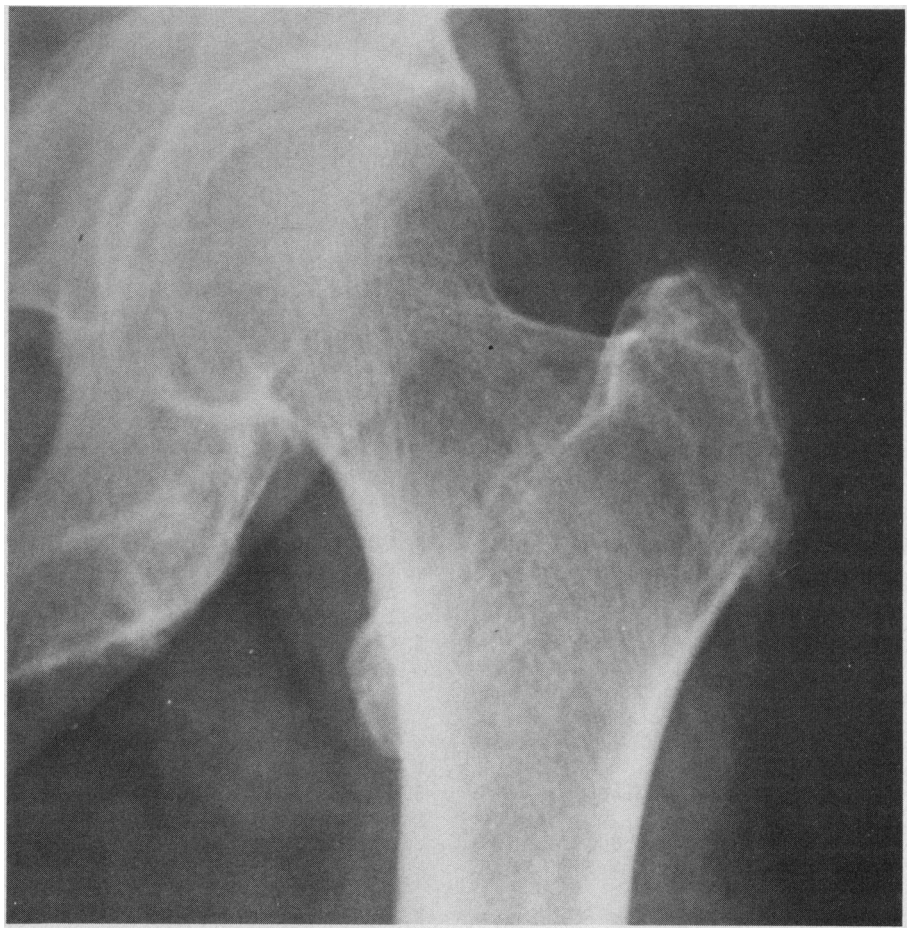

FIG. 2—Irregular new bone on greater trochanter, ischial tuberosity and superior labrum of acetabulum. Patient had recurrent episodes of trochanteric bursitis.

group of patients there was radiologic evidence of roughening along the outer margin of the greater trochanter.[1]

Clinical features

Pain

The pain is described as a deep, aching pain in the "hip". Often during the description the patient gestures along the second lumbar dermatome, from the buttock over the greater trochanter and down the lateral aspect of the thigh to the knee. The pain is aggravated by activities such as squatting, climbing stairs and walking. Lying on the painful side is uncomfortable, as is sitting with the painful leg crossed over the other. Occasionally the pain is described as burning or tingling, but sensory loss is not a feature.

Tenderness

With the patient in the lateral recumbent position and the painful side uppermost, one should palpate the lateral aspect of the thigh from well below the greater trochanter. The femur is indistinctly palpable through the vastus lateralis. Moving proximally one encounters the firm, bony inferior edge of the greater trochanter. This edge and the bone immediately above it are covered by the trochanteric bursa. Posteriorly and deeper is the sub-gluteus-maximus bursa (Fig. 1). Firm pressure over the trochanteric bursa will cause pain.

Since bony prominences are often mildly tender, similar pressure should be exerted over the anterior and posterior iliac spines. If the trochanter is markedly tender and other bony prominences are not, one has a presumptive diagnosis. Patients with trochanteric bursitis who have had "tennis elbow" state that the tenderness and pain are similar.

Radiologic features

Roentgenograms are usually normal. Occasionally roughening of the trochanter is noted; this may be part of diffuse idiopathic skeletal hyperostosis, as described by Resnick, Shaul and Robin[4] (Fig. 2). In some

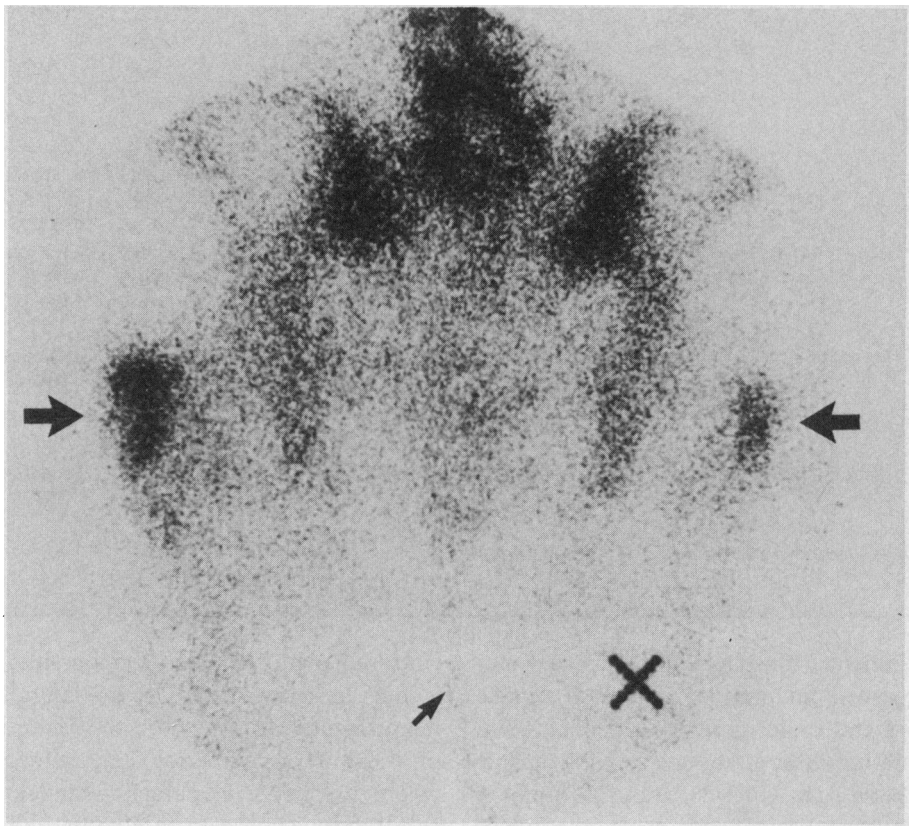

FIG. 3—Marked uptake of radiotracer over greater trochanters (large arrows). Patient was paraplegic, had indwelling urinary catheter (small arrow) and complained of severe pain in "hips".

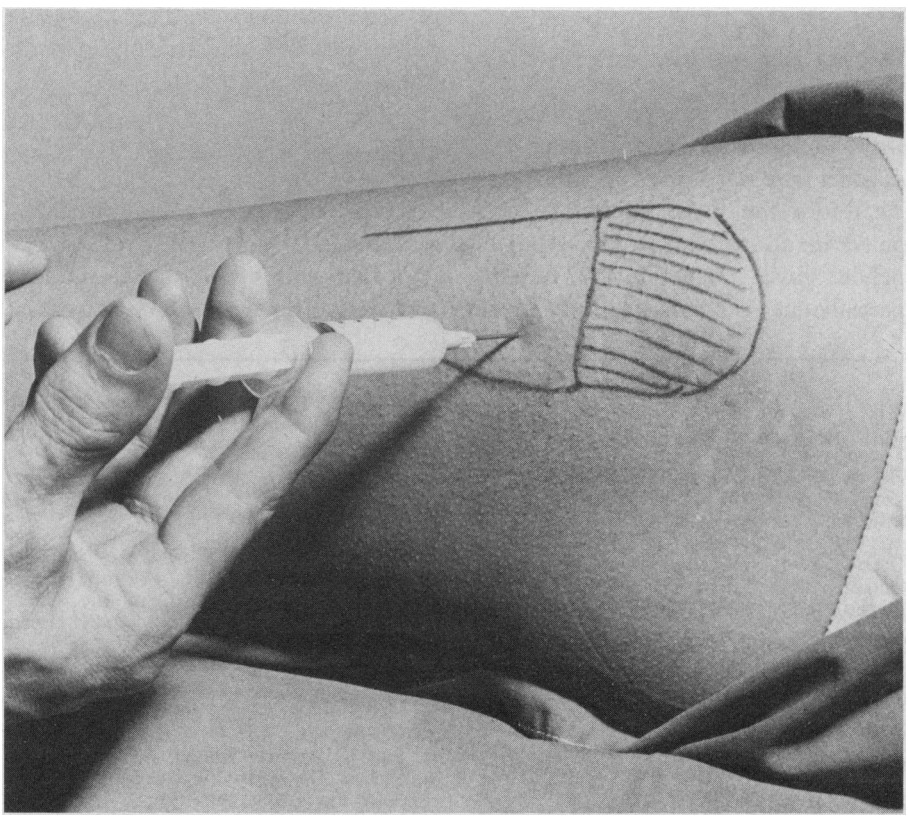

FIG. 4—Infiltration of local anesthetic and steroids into point of maximum tenderness in trochanteric bursitis. Surface markings outline upper end of femur. Insertion of gluteus medius is marked with horizontal lines. Vertical line lies over palpable bony ridge. Point of maximum tenderness is at or just below this site.

Table I—Differentiating features of common causes of pelvic girdle pain

Cause	Site of pain	Aggravating and relieving factors	Physical findings	Other findings
Degenerative disc disease with facet impingement	Buttock, posterior thigh	Worse with spinal extension; relieved by rest in fetal position	Restricted spinal movement, tender spinal segment	Roentgenograms abnormal
Degenerative disc disease with nuclear prolapse	Buttock, posterior thigh	Worse with spinal extension; relieved by rest in fetal position	Restricted spinal movement, tender spinal segment, nerve root dysfunction	Roentgenograms abnormal; prolapse shown on myelogram
Sacroiliitis	Buttock, posterior thigh	Worse at rest; relieved with activity	Often associated restriction of spinal movement	Roentgenograms abnormal
Osteoarthritis of hip	Groin, occasionally buttock or knee	Worse with activity; relieved with rest	Restricted hip movement	Roentgenograms abnormal
Meralgia paresthetica	Lateral thigh paresthesia	Worse at night	Tenderness just below anterior superior iliac spine	Relieved by local infiltration of anesthetic and steroids
Trochanteric bursitis	Lateral thigh	Worse at night and with activity	Tenderness over greater trochanter	Relieved by local infiltration of anesthetic and steroids

patients, despite normal roentgenograms, an area of increased uptake of the radiotracer is seen on a technetium-99m stannous pyrophosphate bone scan (Fig. 3). Bone scanning is not recommended as a diagnostic procedure, but its results support the localized inflammatory nature of this condition.

Differential diagnosis

Trochanteric bursitis can coexist with lumbosacral disc disease and degenerative arthritis of the hip.[2] Therefore the bursa should be palpated in all patients complaining of pelvic girdle discomfort. Meralgia paresthetica, a condition likely to be confused with trochanteric bursitis, is due to entrapment of the lateral femoral cutaneous nerve in the region of the anterior superior iliac spine, where the nerve is palpably tender. Infiltration of local anesthetic and steroids around the nerve at this site relieves the symptoms.[5]

The main differentiating features of the common conditions causing pelvic girdle pain are outlined in Table I.

Treatment

Local infiltration of the trochanteric bursa (Fig. 4) with 4 mL of 2% lidocaine and a hydrocortisone derivative is effective in 93% of cases; in 30% of cases a second or third injection is required.[3]

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