

Osteitis pubis simulating a soft-tissue lesion

Pardis Malakzadeh-Shirvani, MD;* Eva Wikholm, MSc;* Adel Assaf, MD†

Osteitis pubis is a self-limited, painful inflammatory condition, involving the pubic bones, joint and attached tendons. It has been described after trauma, pelvic surgery, childbirth and athletic overuse as well as in some rheumatic conditions.¹ We describe a case resulting from trauma.

Case report

A 48-year-old woman from northern Quebec was admitted to the Montreal General Hospital because of pain and swelling at the symphysis pubis. Five days earlier she had been hit in this region by a canoe while attempting to board it.

Since then she had experienced increasing pubic pain that was exacerbated by movement, causing her difficulty in walking. She also reported mild pelvic pain since falling to her knees on ice 6 months earlier. She had undergone a Marshall–Marchetti–Krantz (MMK) urethropexy 5 months before admission and an appendectomy (complicated by an abscess) 3 months before. She denied having any fever, chills, weight loss, malignant disease or tuberculosis.

On physical examination she was found to be afebrile and her vital signs were within normal limits. There was mild pubic swelling and tenderness, without erythema or lymphadenopathy. Abnormal

laboratory findings included an elevated leukocyte count ($11.7 \times 10^9/L$), erythrocyte sedimentation rate (50 mm/h), C-reactive protein (60 mg/L) and lactate dehydrogenase (232 U/L). Culture of blood and urine specimens gave negative results.

Radiography of the pelvis done several weeks after her fall on the ice showed only minimal erosive changes at the articular surfaces of the pubic symphysis. At the time of hospital admission, however, radiography revealed joint diastasis and significant osteolysis of the margins bilaterally (Fig. 1). In addition, CT showed a soft-tissue density surrounding the joint (Fig. 2). Needle biopsy of the joint under



FIG. 1. Plain radiograph of the pelvis demonstrates bilateral pubic symphyseal bone erosions and diastasis.



FIG. 2. CT axial image shows joint diastasis, bilateral erosions and an apparent soft-tissue lesion surrounding the pubic symphysis (arrows).

From the *Faculty of Medicine, McGill University and the †Department of Radiology, McGill University Health Centre, Montréal, Que.

Accepted for publication July 13, 2006

Correspondence to: Dr. Adel Assaf, Assistant Professor, McGill University Health Centre–Montreal General Hospital, Department of Radiology, Rm C5-118, Montréal QC H3G 1A4; fax 514 934-8263; adel.assaf@muhc.mcgill.ca

CT guidance produced no free fluid, but the aspirate showed acute and chronic inflammation with focal necrosis and fibrosis and occasional spicules of degenerative bone. No malignant cells were found. Cultures and acid-fast staining gave negative results.

The patient was treated conservatively with analgesics for 2 weeks. During that time her pain, swelling and difficulty walking all resolved. Ten days later, radioactive bone scanning showed increased uptake of tracer at the symphysis pubis. Gallium scanning did not suggest an infectious process. Repeat pelvic radiography 9 months after discharge showed sclerotic (though still irregular) symphyseal margins and decreased diastasis.

Discussion

Symptoms of osteitis pubis begin 1–8 weeks after an initiating event. They include pelvic pain, which can radiate to the inner thigh or lower abdomen and which is exacerbated by abdominal straining or motion (especially standing up or climbing stairs).¹ Physical findings include tenderness over the pubis, possible joint instability and occasionally fever.¹ Blood tests are characteristic of an inflammatory process, which can be confirmed by bone scanning,¹ as was the case in our patient. Radiographic (Fig. 1) and CT (Fig. 2) findings showed bilateral

erosions of the pubic bone symphyseal margins and joint diastasis (> 10 mm). The mainstay of treatment is rest and analgesia, with the possible use of corticosteroids. Rare cases of long-standing pubic osteitis have been treated surgically by curettage, resection or arthrodesis of the joint.²

Pubic osteomyelitis is an infectious process that is also often preceded by pelvic surgery.³ It should always be ruled out when considering a diagnosis of osteitis pubis. Culture of joint and bone specimens usually yields *Staphylococcus aureus*, *Pseudomonas aeruginosa* or multiple organisms.³ Although *Mycobacterium tuberculosis* is a rare cause, in this case it was important to rule out since the patient came from an area in which tuberculosis was of greater prevalence than normal. Pubic osteomyelitis requires aggressive antibiotic therapy for 6 weeks, and about 50% of patients require surgery.³ It may be that osteitis pubis predisposes to osteomyelitis.⁴

Five months before admission, our patient had undergone MMK urethropexy, a procedure associated with a 0.7%–2.5% postoperative incidence of osteitis pubis.⁵ Direct trauma to the pubic bone and postoperative venous congestion have been proposed as causative mechanisms.⁵ Of note is the high rate (70%) of positive bone cultures from these patients,⁵ indicating that postopera-

tive osteitis pubis may often actually represent a low-grade, self-contained osteomyelitis.

Our patient's condition may have been caused by either trauma or surgery. On the one hand she had typical findings of osteitis pubis. On the other hand the swelling and soft-tissue density seen on CT suggested other diagnoses such as malignant disease or osteomyelitis. The negative biopsy and cultures as well as the excellent response to conservative therapy, established the diagnosis of osteitis pubis in this case.

Competing interests: None declared.

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