LESSON OF THE MONTH

Tophaceous gout of the pubic symphysis: an unusual cause of groin pain

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CASE REPORT

A 73 year old Polynesian woman was admitted with a 5 day history of severe pain in the right groin, right hip, and lower back and was unable to weight bear. Past history included tophaceous gout of 10 years' duration, which was poorly controlled despite daily colchicine. She had chronic lymphoedema of the right leg (Milroy's disease). This was complicated by recurrent episodes of right lower leg cellulitis requiring previous amputation of one of her toes due to intractable infection. She had a longstanding monoclonal gammopathy of uncertain significance. Other problems included hypertension, congestive cardiac failure, obesity, and impaired renal function (creatinine clearance 30 ml/min). Her drugs on admission were quinapril, furosemide, calcium carbonate, and paracetamol.

On examination she weighed 120 kg. A gouty tophus was present at the right index finger proximal interphalangeal joint. She was afebrile and normotensive. There was diffuse tenderness in the right groin and she was unable to actively lift the right leg owing to pain. Significant blood results included erythrocyte sedimentation rate 99 mm/1st h, creatinine 0.17 mmol/l, and urate 0.80 mmol/l. Initial investigations were directed at excluding infection. Plain x ray examination of the pelvis showed destruction of the symphysis consistent with osteitis pubis. Comparison with x ray examination from 1991 showed new osteolytic change (figs 1A and B). A computed tomography scan confirmed destructive change and demonstrated a mass anterior to the symphysis pubis (fig 2A). Treatment was started with intravenous amoxycillin/clavulanic acid empirically, but she subsequently became febrile and developed severe right shoulder pain. Blood cultures were negative. A whole body scintigram demonstrated increased activity around the symphysis pubis, at the right index finger, left foot, both shoulders, and within the skull.

Magnetic resonance imaging demonstrated a widened symphysis with abnormal soft tissue anteriorly measuring 5.7×3.7×4.6 cm. With contrast, a fluid collection tracked into the origins of the pectineus and adductor longus and brevis muscles (fig 2B). Based on this finding a computed tomography guided aspirate of the symphysis pubis yielded chalk-like material, which under polarised light microscopy was shown to contain monosodium biurate crystals and was culture negative. Treatment was restarted with colchicine 0.6 mg twice daily, and morphine was required for adequate analgesia. After 48 hours, she was able to mobilise independently with a frame and was discharged home several days later. Subsequently, low dose allopurinol was added under the colchicine cover and was slowly titrated to a maximum dose of 150 mg daily.

DISCUSSION

This case represents a very unusual presentation of gout, with tophaceous involvement of the symphysis pubis mimicking infection or a surgical cause for groin pain. The differential

diagnosis was wide and included deep tissue infection, plasmacytoma, lymphangiosarcoma complicating chronic lymphoedema, and degenerative change at the symphysis pubis as a cause for pubic pain. It is likely that the severe groin pain experienced by our patient was due to inflammation of soft tissues surrounding the adductor muscles and associated gouty arthritis of the symphysis pubis.

Gout is a well recognised cause of acute polyarthritis among the Polynesian population in New Zealand. The prevalence of gout in Maori people is more than twice that in Europeans (6.4% v 2.9%) and there is an increased frequency of tophaceous and polyarticular involvement. Hyperuricaemia is more common in Maori than European women (26.6% v 10.5%), especially if they are receiving diuretic treatment.¹ In a recent study of Maori or Polynesian patients

Figure 1 Radiographs of the symphysis pubis. (A) 1991: Early degenerative changes; (B) 2003: interval progression with marked irregularity, cortical erosion, and widening of the symphysis.

Figure 2 (A) Axial computed tomography scan demonstrating bony destruction of the symphysis pubis and the presence of a soft tissue mass (arrow). (B) Coronal post-contrast T₁ weighted magnetic resonance scan showing patchy enhancement in adductor muscles (arrow).

undergoing surgery for complications of tophaceous gout, 68% of cases had raised urate levels and only 31% were taking allopurinol.² Gouty tophi are a result of prolonged hyperuricaemia and can be found in soft tissues, tendon sheaths,

joints, and bony prominences. They may occur in unexpected sites, such as the spinal canal, and cause radiculopathy and paraparesis, sometimes without evidence of peripheral tophi.³⁻⁴ We are not aware of any report of tophaceous gout of the symphysis pubis.

Gouty arthritis should be considered in the differential diagnosis of spinal and pelvic pain in Maori or Polynesian patients with poorly controlled hyperuricaemia. Regression of tophi can take many years and requires strict control of hyperuricaemia.⁵ Optimising treatment with drugs such as allopurinol can be difficult, especially in cases where there is renal impairment or poor compliance.⁶

THE LESSONS

- Serial radiographs should be reviewed when trying to determine a cause for pubic symphysis pain.
- Tophaceous gout is common in Polynesians, and tophi may occur in unusual sites.
- Extrusion of tophaceous material into adjacent soft tissues may cause muscular spasm.
- Gout needs to be considered in the differential diagnosis when infective lesions are suspected.

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