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CASE REPORT

Tuberculosis of the ilium : is it really so rare ?

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Tuberculosis of the ilium is a rare identity, accounting for less than 1% of all skeletal tuberculosis. We report two such lesions in immunocompetent individuals. Tuberculosis remains an important differential diagnosis when faced with unusual or chronic bony lesions, especially in endemic areas, even in non-immunocompromised individuals. It can involve any site and affect people of any age.

INTRODUCTION

The prevalence of tuberculosis is increasing all over the world. Skeletal tuberculosis accounts for nearly 1-3% of all cases of tuberculosis (*4*). The contribution of iliac tuberculosis has been considered negligible till to date. However, with the epidemic of HIV and tuberculosis, its incidence is bound to increase. We present two cases of isolated iliac tuberculosis : one in a healthy adult male and one in a young girl. The lesions were treated by curettage and antituberculosis chemotherapy.

MATERIALS AND METHODS

Case 1

A 25-year-old male was seen in the orthopaedic department with pain over the left posterior ilium for the past three months. The pain was insidious in onset, continuous and not relieved by rest. There was no local redness or heat. The patient had not received any injection in that region in the recent past. There was no history of trauma, intravenous drug abuse or blood transfusion. There was no discharging sinus. The biochemistry was normal, except for the ESR : 54 mm/1st hour. Radiographs revealed a lytic lesion in the left posterior ilium, surrounded with mild sclerosis (fig 1). A CT-scan showed lysis with a coke sequestrum in the left ilium (fig 2). Chest and spinal radiographs were normal. The lesion was curetted, and granulation tissue was sampled for bacterial, fungal and mycobacterial cultures. Histopathological examination revealed the presence of necrotizing epithelioid granulomas, compatible with tuberculosis. The radiometric acid-fast bacillus culture was positive.

A standard multi-drug anti-tuberculous therapy was started : rifampicin 10 mg/kg, isoniazid 5 mg/kg, pyrazinamide 25 mg/kg and ethambutol 15 mg/kg for the initial three months, followed by rifampicin and isoniazid alone for the next fifteen months. The pain subsided within a few weeks. ESR decreased to 20 mm / 1st hour after three months of treatment. Two years later the patient remained asymptomatic with complete subsidence of symptoms.

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Fig. 1. — Case 1. A-P view of the pelvis. Lytic region in the left ilium surrounded by a rim of sclerosis (arrow).

Fig. 2. — Case 1. CT scan of the pelvis showing the coke sequestrum inside the lytic cavity in the left posterior ilium (arrow).

Case 2

A ten-year-old girl presented with pain and swelling over the right anterior superior iliac spine for the last two months. The biochemistry was normal, except for a raised ESR of 45 mm/1st hour. Radiographs of the pelvis (fig 3) revealed lysis of the right iliac crest with irregular destruction. A chest radiograph was normal. A tissue specimen was obtained and sent for histopathological examination, which showed granulomatous lesions compatible with tuberculosis.

A classical regimen of antituberculous drugs was started. Two months later there was considerable improvement : pain and swelling had disappeared and the patient had gained weight. The ESR had decreased to 18 mm/1st hour. Radiographs now showed sclerosis as a sign of healing (fig 4).

Fig. 3. — Case 2. A-P view of the pelvis showing lysis of the right anterior superior iliac spine region.

DISCUSSION

Tuberculosis of the ilium is uncommon. It is rarely reported in the literature, and if so, usually in conjunction with involvement of a sacroiliac joint. Very few case reports document the presence of isolated iliac tuberculosis (*1, 4*), mostly in immunocompromised patients. Our series is unique in that it reports iliac tuberculosis in immunocompetent young people.

Skeletal tuberculosis usually occurs in the spine and in the long bones ; it is less common in cancellous bones such as sternum, pelvis and calcaneus (*4*). The radiological features of skeletal tuberculosis depend upon the stage of the disease. In early stages the radiographs may be entirely normal. Typically, there may be localized osteopenia with poorly defined margins and minimal surrounding sclerosis. Healing tends to stimulate marginal sclerosis with progressive obliteration of the destructive focus (*5*). The radiographic image of

Fig. 4. — Case 2. A-P view of the pelvis after two months of antituberculous treatment.

tuberculosis in cancellous bone may be different from that in diaphyseal or cortical bone. Cancellous bone usually shows lysis with the presence of a hazy, irregular soft shadow in the middle with little surrounding sclerosis : "feathery sequestrum". Similar findings may be expected in iliac tuberculosis.

In an *immunocompetent* patient the differential diagnosis includes metastatic deposits, Brodie's abscess or chronic osteomyelitis, Hand-Schüller-Christian syndrome, sacroiliac strain, chronic arthritis of the sacroiliac joint and tumours like chondroblastoma, osteoid osteoma or sarcoma. Brodie's abscess has radiological features similar to those of tuberculosis, but tissue samples reveal the presence of neutrophilic / granulation tissue ; cultures may show bacteria. Chronic osteomyelitis usually has a discharging sinus.

Immunodeficient patients are no longer exceptional, now that HIV has come to the front. Atypical tuberculosis is one of their features. No age is immune from the vagaries of atypical tuberculosis.

The treatment of tuberculosis in cancellous bone is usually curettage of the lesion, along with antituberculous treatment (*6*). The optimum duration of treatment for osseous tuberculosis has not been defined. It is suggested that the treatment be continued for a minimum period of twelve months, extending up to eighteen months for certain conditions (*7*).

All too often skeletal tuberculosis is missed because of its uncommon localisation, its ability to mimic other diseases, and because of lack of awareness from the side of the physician.

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