CASE REPORT

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Tuberculosis of the pubic symphysis masquerading as osteitis pubis: a case report

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Tuberculosis is one of the oldest diseases affecting mankind and is known for its ability to present in various forms and guises. Pubic symphysis is an uncommon site for tuberculous affliction; hence very few cases have been reported in the English-language literature. We present a rare case of pubic symphysis tuberculosis diagnosed as osteitis pubis before presentation to our institution. The patient made an uneventful recovery following antitubercular chemotherapy.

Key words: Antitubercular chemotherapy; osteitis pubis; pubic symphysis; tuberculosis.

Tuberculosis has been recorded in Egyptian mummies aging back to 3000 B.C. It commonly affects the pulmonary system but extrapulmonary involvement is seen in approximately 14% of patients, with 1% to 8 % having osseous involvement.[1] The major areas of predilection in order of occurrence are: spine, hip, knee, foot, elbow and hand. Tuberculosis of the pubic symphysis is rare and few cases have been presented in the literature in the past three decades.[2-11] Likewise, uncertainty on management still prevails. Though rare, it nevertheless warrants greater emphasis to allow for differentiation from other infective or non-infective inflammatory conditions of pubic symphysis, especially osteitis pubis which is a self-limiting non-infective inflammation of the pubic symphysis.

The rarity of this condition and its clinical resemblance to osteitis pubis forms the basis of this case report. A high index of suspicion of tuberculosis must be entertained by the treating surgeon in such cases to arrive at the correct diagnosis.

Case report

A 35-year-old male presented with a history of suprapubic pain for six months following a fall while playing football. The pain was insidious in onset, dull aching in nature and localized in the suprapubic area. It increased on exertion and relieved with rest and anti-inflammatory medications and was not aggravated by coughing, sneezing, voiding or straining during stool. There was no diurnal variation. The pain was associated with a history of intermittent low grade fever. However, the patient had no history of weight loss, anorexia, cough with sputum, bone pain or other joint involvement. The patient consulted his family physician and was provisionally diagnosed with osteitis pubis based on radiological findings (Fig. 1). Despite initiation of symptomatic treatment, symptoms continued to worsen. After 5 months, the patient developed a swelling over the suprapubic region in the midline which spontaneously burst, forming a draining sinus a month later. For these complaints, he was referred to

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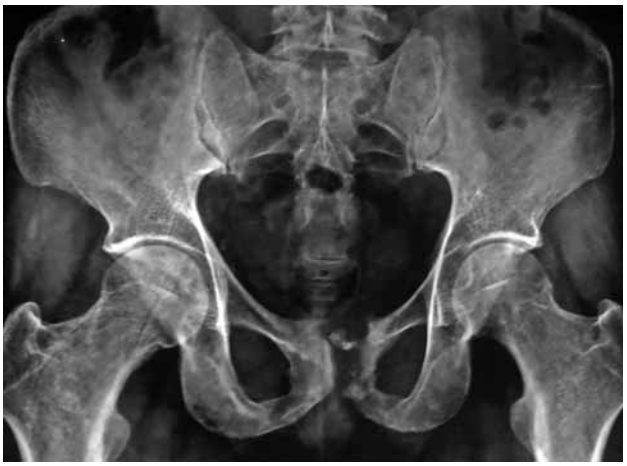

Fig. 1. Anteroposterior radiograph of the pelvis showing erosion of the body of pubis on both sides adjacent to the symphysis pubis along with irregularity and widening of the symphysis.

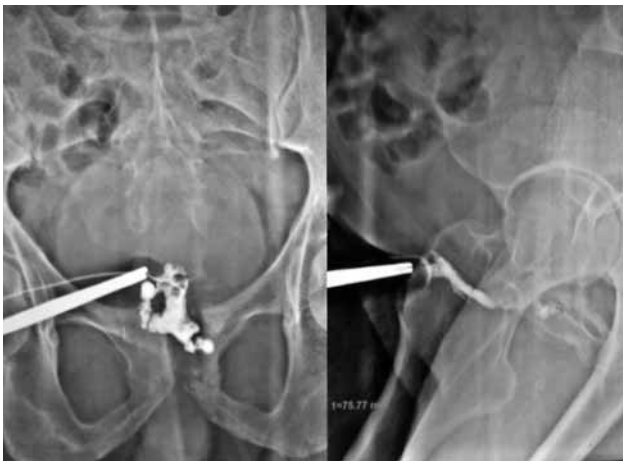

Fig. 2. Sinograms showing the sinus arising from the symphysis pubis and widespread ramification of the abscess cavity into the surrounding soft tissues.

our institution for definitive management. Past history and family history was non-contributory.

On general physical examination, vitals were stable and the patient's health was good. There was no evidence of lymphadenopathy. Tenderness was present over the symphysis pubis along with diffuse swelling of the region. A discharging sinus was present in the suprapubic region. The sinus had a wide mouth and the margins were thin blue and undermined. The surrounding skin was indurated. The discharge was straw colored, thin in consistency and had an occasional tinge of blood. The skin was fixed to the underlying pubic bone. Pelvic compression and distraction tests were negative. Per rectal examination was within normal limits.

Laboratory investigations revealed an increased total leucocyte count (17,000/mm^3) with lymphocytosis (45%) and raised erythrocyte sedimentation rate (70 mm at the end of first hour using Wintrobe's method) and C-reactive protein levels. Chest radiographs showed clear lung fields. Radiographs of the pelvis demonstrated erosion of the body of the pubis on both sides adjacent to the symphysis pubis along with irregularity and widening of the symphysis pubis and rarefaction of the adjacent rami (Fig. 1). A sinogram revealed widespread ramification of the abscess cavity into the surrounding soft tissues and that the sinus originated from the symphysis pubis (Fig. 2). Magnetic resonance imaging of the pelvis was performed using a T1- and T2-weighted STIR imaging sequence with gadolinium contrast enhancement and showed a soft tissue collection in front of the pubic symphysis along with the osseous debris (Fig. 3). Fine needle aspiration cytology of the lesion was performed and showed clusters of epithelioid cells surrounded by lymphocytes, Langerhans' type giant cells and histiocytes. Smear examination revealed multiple acid fast bacilli. Polymerase chain reaction (PCR) for *Mycobacterium tuberculosis* was positive.

A definitive diagnosis of tuberculosis of the symphysis pubis was established and the patient was started on standard multidrug antitubercular chemotherapy (isoniazid 5 mg/kg; rifampicin 10 mg/kg; pyrazinamide 25 mg/kg; ethambutol 15 mg/kg; along with pyridoxine 10 mg). The drug therapy (2HRZE/4HR3) was continued for a period of six months. The patient improved symptomatically and the sinus was healed after two months (Fig. 4). He was pain-free after 4 months of antitubercular chemotherapy and radiographs showed healing response (Fig. 5). The patient was asymptomatic at the final 12th month follow-up and there was no evidence of recurrence.

A written, informed consent was obtained from the patient authorizing treatment, radiological examination, and photographic documentation. The patient was also informed that data concerning the case would be submitted for publication and he consented.

Discussion

Tuberculosis of the symphysis pubis is a rare entity; only eleven cases have been reported in the literature in the past three decades, three of which have been reported in India. The first case of symphysis pubis tuberculosis in the English literature was described by

Jackson in 1923.[12] A review of the literature has revealed that most cases presented late owing to its insidious course and nonspecific symptomatology. Various complications such as the formation of sinus or fistula, cold abscess and hypogastric mass have been reported.[2,5,7,8,10,13] Nicholson reported 11 cases of tuberculosis of the pubic symphysis, nine of which presented with cold abscess above the symphysis in the groin or thigh region.[13]

A delay in diagnosis has also been attributed to its resemblance to other inflammatory diseases of the pubic symphysis. Thus, it is important to differentiate the entity from other mimicking conditions, such as osteitis pubis, juvenile osteochondrosis of symphysis pubis, and pyogenic osteomyelitis of symphysis pubis.[13] Osteitis pubis is a self-limiting, non-infective inflammation of the pubis usually seen during pregnancy, in athletes and following gynecological and urological operations or trauma to the pubic symphysis. It is characterized by intense pain over the pubic symphysis but abscess formation is not seen. In case of osteitis pubis, initial radiographs may be normal or show patchy sclerosis, irregular cortical margins, marked rarefaction of pubis. Sequestrum formation is rare.[13] Treatment is comprised of rest, moist heat application and NSAIDs.

Pyogenic osteomyelitis of the pubic symphysis may, at times, simulate the condition. Sexton et al. reported 4 cases of postoperative pubic osteomyelitis misdiagnosed as osteitis pubis.[14] Pyogenic osteomyelitis usually occurs after gynecological and urological operations. Confirmation of diagnosis is largely based on the isolation of microorganisms from the lesion. *Staphylococcus aureus* is the most common implicated pyogenic microorganism in such cases, followed by *Pseudomonas spp*. Debridement and curettage are considered the mainstay of treatment along with appropriate antibiotics. According to Ross and Hu, surgical debridement was required in 55% of patients of septic arthritis of pubic symphysis and they recommended antibiotic courses of 6 weeks' duration.[15]

Juvenile osteochondrosis of the pubic symphysis, also known as adolescent osteochondritis of the pubic symphysis, is a rare entity characterized by pain and tenderness over the pubic symphysis without abscess formation.

Of the 11 cases of tuberculosis of pubic symphysis reported in the literature in the past 30 years, six were treated surgically along with antitubercular chemotherapy and five were treated conservatively (Table 1).

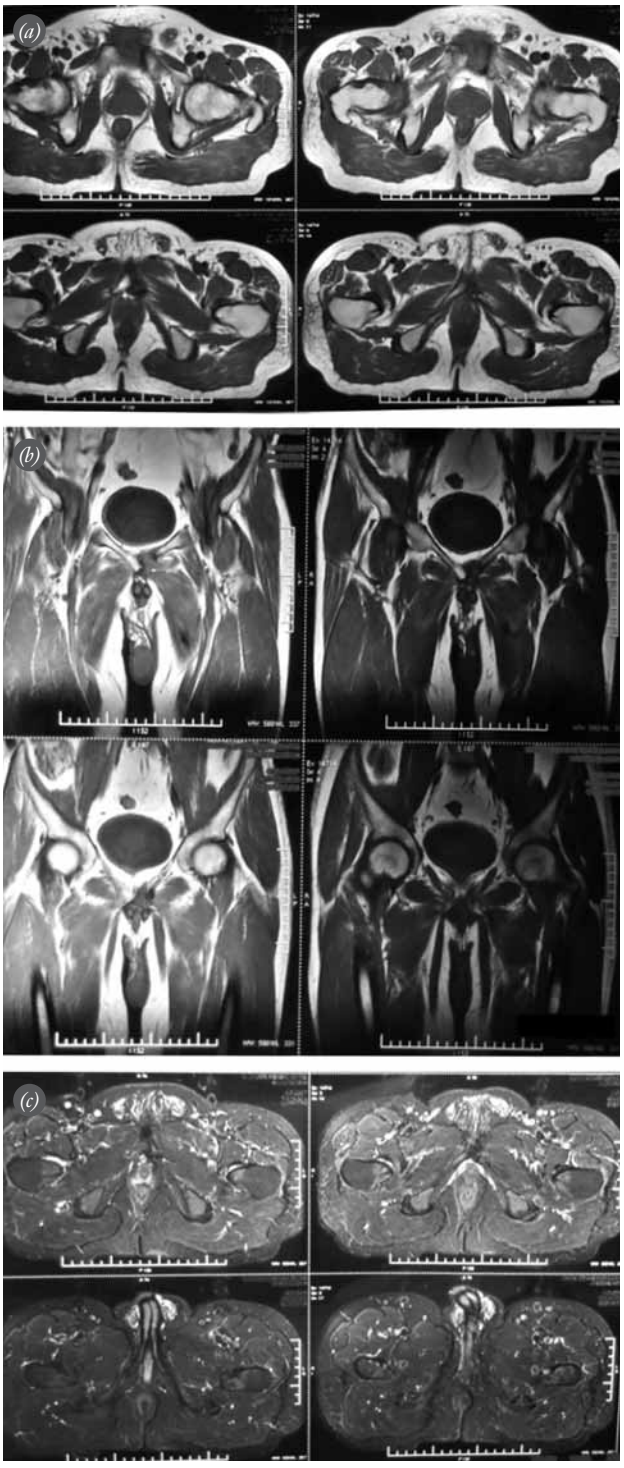

Fig. 3. **(a-c)** Magnetic resonance imaging of pelvis showing a soft tissue collection in front of the pubic symphysis along with the osseous debris.

Curettage with or without bone grafting is most often described by authors for operative intervention. A literature review has revealed that most patients do well, irrespective of the mode of treatment (Table 1).

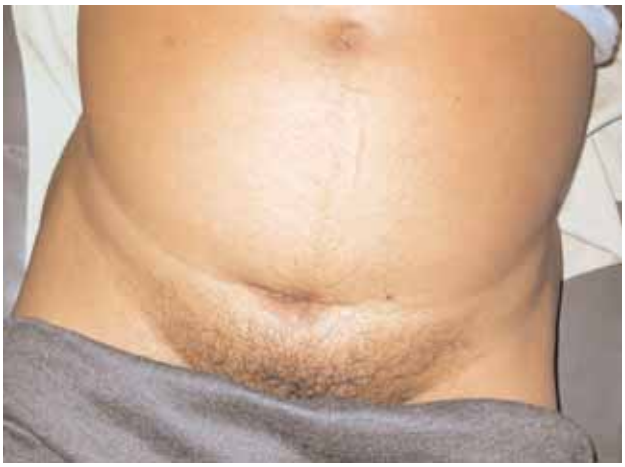

Fig. 4. Follow-up clinical photograph at 12 months showing healed sinus. [Color figure can be viewed in the online issue, which is available at www.aott.org.tr]

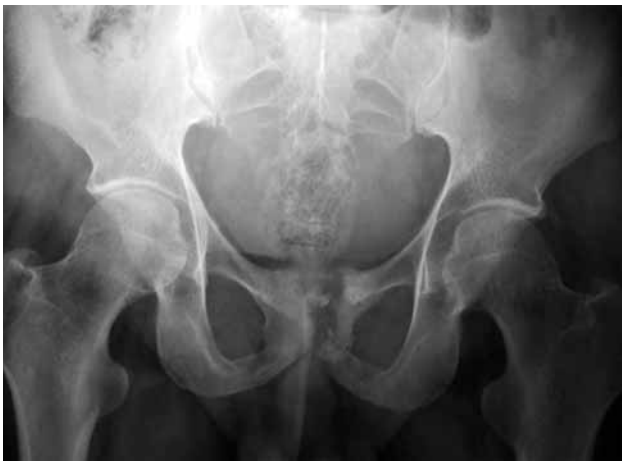

Fig. 5. Follow-up radiograph at 12 months showing healing response.

Nicholson[13] reported 11 cases of tuberculosis of the pubic symphysis treated surgically. In one patient, the whole of the affected bone was excised, in another bone grafting was performed and 9 cases were treated by curettage alone. In our opinion, bone grafting should be avoided as far as possible on an infected bed. Gulia et al. reported a case of pubic symphysis tuberculosis with discharging inguinal fistula successfully managed with antitubercular chemotherapy without any surgical intervention.[10] Moon et al.[3] obtained good results with simple curettage along with antitubercular chemotherapy. In addition, they performed bone grafting and plating in one case with complete disruption of the pubic symphysis. Since the pubic symphyseal area essentially consists of cancellous bone, implant surgery may be imprudent as it carries risk of re-infection and questionable implant purchase. However, on review of the literature, we found that even in the late presentation of tuberculosis of the pubic symphysis, antitubercular chemotherapy alone may suffice. The outcome in our case seems to be in tune with these observations. The case highlights the fact that tuberculosis is a medical disease and antitubercular chemotherapy remains the keystone of successful treatment.

In conclusion, despite the rarity of tuberculosis of the symphysis pubis, a high index of suspicion must be practiced in these cases for early diagnosis and treat-

Table 1. Tuberculosis of the pubic symphysis: cases reported in past three decades.

Year	Author	No. of cases	Presentation	Management	Outcome
1986	Ker[2]	1	Multiple discharging sinuses	Curettage + ATT	Healed
1990	Moon et al.[3]	2	Limping, groin pain & swelling	Curettage, bone grafting, plate fixation + ATT	Healed
1991	Rozadilla et al.[4]	1	Groin pain	Conservative	Healed
1992	Manzaneque et al.[5]	1	Hypogastric cystic mass	Surgical excision + ATT	Healed
1995	Tsay et al.[6]	1	Suprapubic pain & tenderness	Surgical intervention + ATT	Healed
2000	Ramakrishnaiah et al.[7]	1	Discharging sinus	Conservative	Healed
2001	Balsarkar and Joshi[8]	1	Hypogastric mass	Conservative	Healed
2006	Bayrakci et al.[9]	1	Suprapubic pain & tenderness	Surgical debridement and bone grafting + ATT	Healed
2009	Gulia et al.[10]	1	Discharging inguinal fistula	Conservative	Healed
2010	Bali et al.[11]	1	Suprapubic pain & tenderness	Conservative	Healed

ATT: anti-tubercular chemotherapy

ment. Both operative and conservative methods are described in literature; however, we found that even late cases of pubic symphysis tuberculosis can be managed conservatively.

Conflicts of Interest: No conflicts declared.

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