**Case Report**

# Tuberculosis of symphysis pubis presenting as labial swelling: A rare case report diagnosed on FNAC

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## Abstract

Tuberculosis of symphysis pubis is a rare condition with few reported cases. It is necessary to distinguish the entity from Osteitis pubis and Osteomyelitis of pubic symphysis to start the treatment early and thereby minimize morbidity and prevent complications. A case report of tuberculosis of symphysis pubis mimicking labial swelling in a 25 year old female was described. High index of suspicion along with an extensive workup including magnetic resonance imaging (MRI) scan of pelvis and fine needle aspiration (FNA) of swelling led to the diagnosis. A brief case report and review of literature have presented here.

## Key words

Tuberculosis, FNAC, Labial swelling.

## Introduction

Tuberculosis commonly affects the pulmonary system, and extra-pulmonary involvement is seen in approximately 14% of patients, with 1–8% having osseous involvement. The major osseous areas of tubercular involvement in order of occurrence are spine, hip, knee, foot, elbow, and hand. Isolated pubic bone tuberculosis is an uncommon entity, even in tuberculosis-endemic areas [1]. The cold abscess in this patient might have resulted from the fluid tracking down inferiorly in right labia majora, because the origin of these muscles on the pubic bone coincides with the tubercular lytic lesion. Although rare, tuberculosis of the pubis should be considered in the differential diagnosis of cold abscess of the labia majora. Fine-needle aspiration (FNA) cytology is a simple, economical, highly accurate tool in the diagnosis of tuberculous lesions. It is also ideal for sample collection for ancillary studies such as Ziehl-Neelsen (Z-N) stain for acid-fast bacilli (AFB), as well as culture and molecular biologic studies of Mycobacterium tuberculosis.

We have hereby reported a case of tuberculosis of pubic symphysis diagnosed on FNAC, with rare presentation as labial cold abscess in young reproductive age female.

## Case report

A 25-year-old married female from low socio-economic background presented to our hospital with complaints of a dull aching supra-pubic pain and labial swelling since one month. There was no history of bladder or bowel complaints, any trauma, infection or surgical procedure in the patient. There was no history of fever, weight loss, tuberculosis in self or in contact with patient with tuberculosis. On local examination, approximately 4x3 cm right labial swelling was seen which was tender on palpation. (**Figure – 1**) On per speculum, pelvic examination was normal. Rectal examination was also normal. No significant lymphadenopathy was seen.

**Figure – 1:** Clinical image of right labial swelling.

Magnetic resonance imaging of the pelvis was performed using a T1- and T2-weighted STIR imaging sequence without contrast enhancement and showed irregular destruction of both pubic bones involving pubic symphysis with abnormal T2 hyper intense and T1 hypointense signal, along with soft tissue collection extending inferiorly in the right labia majora with thin peripheral enhancement. These findings were likely to suggest of infective etiology such as Tuberculosis. (**Figure – 2**)

Fine needle aspiration (FNA) from labial swelling showed epithelioid cell clusters admixed with histiocytes in a background of caseous necrosis. In our case, patient had no active cough and no symptoms/sign of active TB and so no sputum smear was taken. Thus a definitive diagnosis of tuberculosis of the symphysis pubis was established and the patient was started on standard multidrug anti-tubercular chemotherapy. (**Figure – 3Aa, 3Ab, 3B, 3C**)

## Discussion

The second most common site of extra-pulmonary tuberculosis next to lymph nodes is bones [2]. It constitutes about 13% of all extra pulmonary cases [3]. It is the result of a hematogenous or lymphatic spread from a reactivated latent focus; it is difficult to demonstrate another active infection site. Tuberculosis of the pelvic girdle is primarily limited to the sacroiliac synchondrosis and less frequently with isolated involvement of ilium or ischial tubercle. The most common site for skeletal tuberculosis is the spine followed by the hip, knee and ankle joints.

Symphysis pubis is an unusual site for tubercular infection [4]. TB of the pubis has a varied clinical presentation, initially being asymptomatic to the most common presentation of an abscess and swelling in the hypogastric, perineal, medial thigh, ischiorectal area or labial swelling [5, 6]. Fine needle aspiration (FNA) cytology is a simple and economic procedure for diagnosis of TB compared with core-needle biopsy or excision biopsy, not only at the initial stage, but also during follow-up of patients after treatment with an antitubercular regimen. FNA offers a wider scope for diagnosis of organ and tissue involvement [7]. In the past 2 to 3 decades, a large number of reports on FNA cytologic diagnosis of pulmonary TB [8-13] and tuberculous lesions of extra-pulmonary superficial sites, such as lymph nodes [14-21],

breast [22, 23], thyroid [24, 25], and salivary gland [26], have been published. FNA averts the physical and psychological trauma occasionally encountered with open surgical biopsy, it is convenient for patient and physician alike,it can be performed on outpatients, it is relatively painless, and it provides good correlation between cytomorphologic and histopathologic features [17]. FNA can collect cells from the deeper areas and even beyond the wall of the viscera to facilitate a proper tissue diagnosis. At times,cases of TB present as an ulcer or a draining sinus. FNA cytology is a useful tool for sample collection and obtaining a diagnosis in these cases [27]. Gross and microscopic features of tuberculous lesions in fine-needle aspirates are well documented in literature. Various ancillary techniques used for cytodiagnostic confirmation include demonstration of the causative organism, M tuberculosis or NTM, by Ziehl-Neelsen (Z-N) stains and fluorochrome technique, and by culture or molecular biology.FNA is a suitable tool for collection of material for such investigations. The studies on FNA diagnosis also provide information about the frequency of tuberculous lesions at different sites.

**Figure - 2:** MRI/CT – Pelvis.

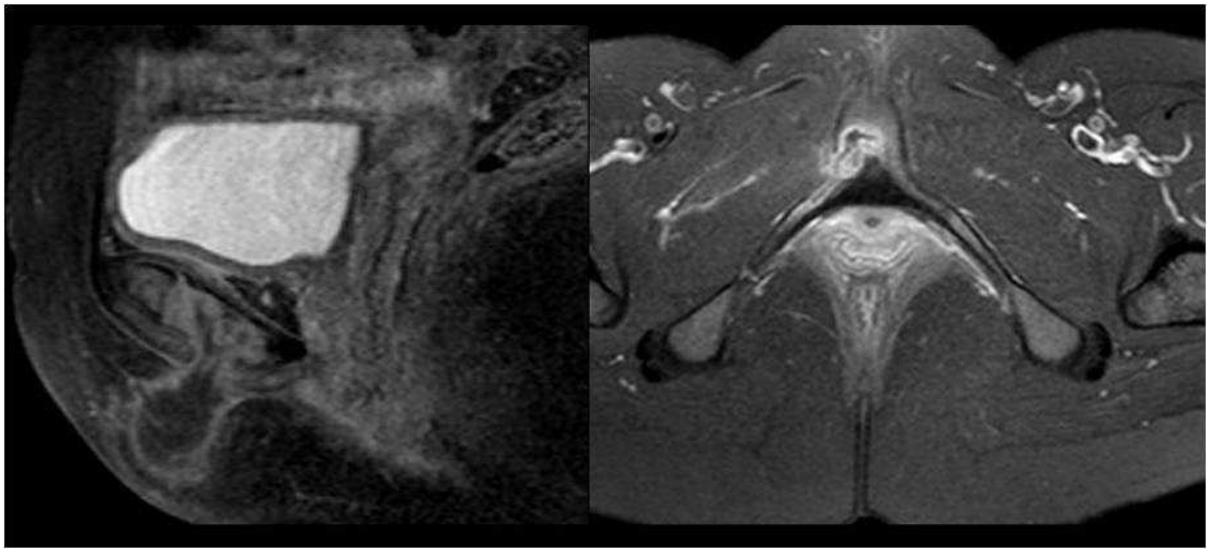
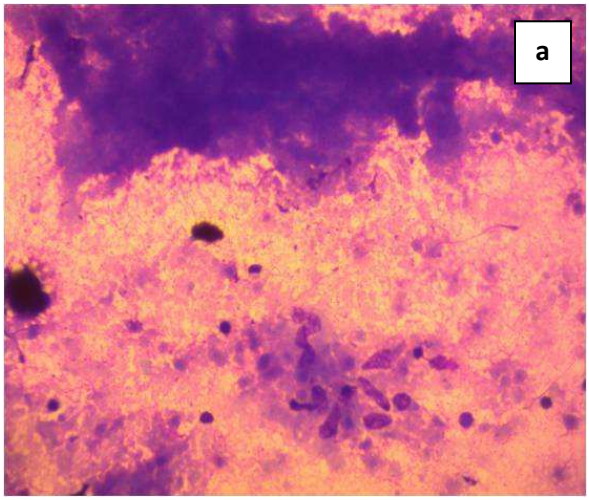
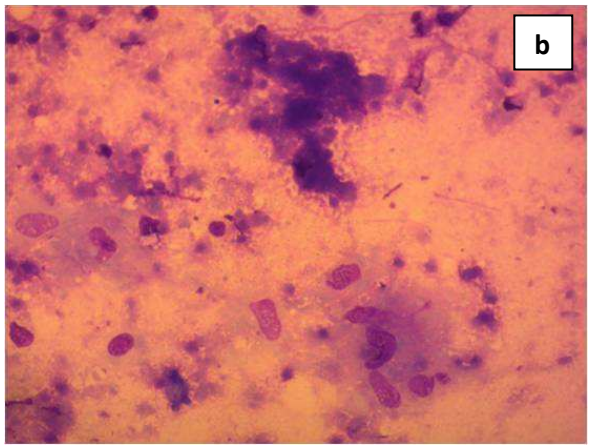


**Figure - 3Aa, 3Ab:** Epithelioid cell granuloma with necrosis (Giemsa stain).




## Conclusion

In conclusion, awareness of the disease helps detect cases on presentation. Timely diagnosis

and intervention is thus a key to treatment and helps in reducing the morbidity and deformities. With the emergence of a TB-friendly HIV, we may see many more cases of TB, with greater risk of transmission of the bacillus to others [28]. Because diagnosis is an important part of this process, and FNA is a useful tool for routine cytodiagnosis with diagnostic accuracy ranging from 84.2% to 100% [5, 18, 20, 29] and also for collection of samples for ancillary studies, it is necessary to expand this use of FNA through establishment of a network of cytology laboratories [30]. Awareness of the disease helps detect cases on presentation. Timely diagnosis and intervention is thus a key to treatment and helps in reducing the morbidity and deformities. 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 treatment.

**Figure - 3B:** Epithelioid cell granuloma.

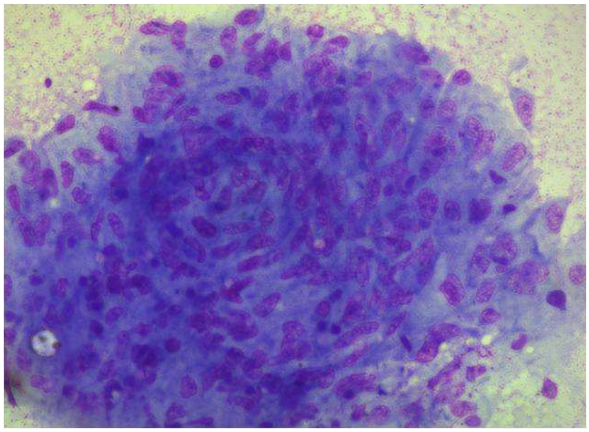
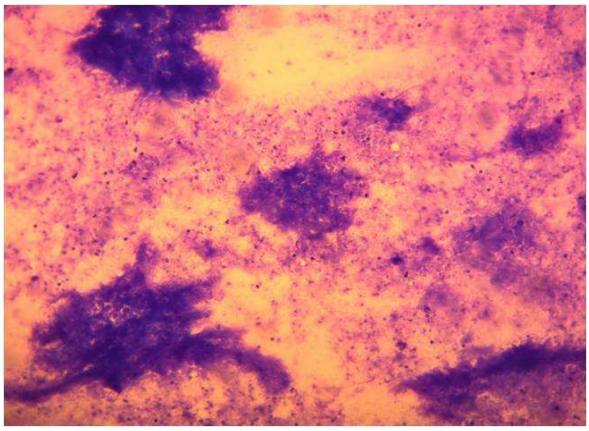


**Figure - 3C:** Background of caseous necrosis admixed with inflammatory cells.



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