

CASE REPORT

An Interesting Case of Bilateral Perianal Tuberculosis in a 9 Month Old Infant

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ABSTRACT

**BACKGROUND:** India has the highest incidence of tuberculosis of 2.1 million cases out of a global incidence of 9 million. Before the emergence of human immunodeficiency virus(HIV) and in immunocompetent individuals extrapulmonary tuberculosis constituted about 15-20% of all cases of tuberculosis. However involvement of the perianal region in tuberculosis is a rare extrapulmonary form of the disease. It comprises less than 10% percent of all perianal diseases and 0.7% of all tuberculosis cases. We present a rare case of bilateral perianal tuberculosis in a 9 month old infant with no evidence of pulmonary or any other extrapulmonary focus of tuberculosis. A 9 month old infant came to our department with bilateral perianal swellings. FNAC was done from bilateral swellings & cytology smears showed epithelioid cell granulomas, giant cells, degenerated inflammatory cells & necrosis. Ziehl Neelsen staining for acid fast bacilli (AFB) was positive in smears. We made a diagnosis of bilateral perianal tuberculosis. Antitubercular therapy (ATT) was started & on follow up 4 months later there was complete healing of perianal lesions.

**Key words:** Perianal, Tuberculosis, Infant

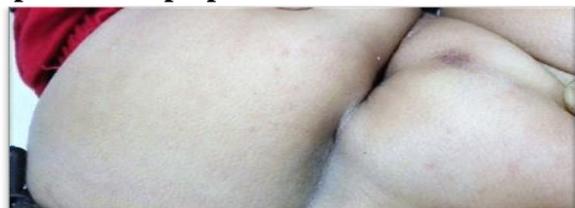
INTRODUCTION

India has the highest incidence of tuberculosis of 2.1 million cases out of a global incidence of 9 million. Before the emergence of human immunodeficiency virus(HIV) and in immunocompetent individuals extrapulmonary tuberculosis constituted about 15-20% of all cases of tuberculosis<sup>2-6</sup>, whereas in HIV positive individuals extrapulmonary tuberculosis constitutes more than 50% of all cases of tuberculosis<sup>7,8</sup>. However involvement of the perianal region in tuberculosis is a rare extrapulmonary form of the disease<sup>9-11</sup>. It comprises less than 10 percent of all perianal diseases and 0.7% of all

tuberculosis cases<sup>12</sup>. Here we present a case of bilateral perianal tuberculosis in a 9 month old child with no evidence of pulmonary or any other extrapulmonary focus of tuberculosis.

**Case Summary:** A 9 month old male child was brought to our department with a history of bilateral perianal swellings for past 4 months. No pus discharge, ulcer or fistula was present at the time of presentation and no palpable inguinal lymph nodes were present. On palpation swellings were measuring 2.5x2 cms & were soft to firm in consistency. Scar mark of BCG vaccination was present on the upper left arm of the child. There was no history of tubercular contact in the family.

**Figure 1: Bilateral perianal swellings present on palpation.**



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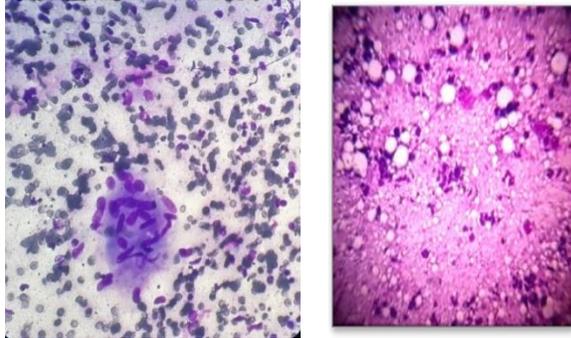
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Lab investigations showed Hb level of 11.1g/dl, TLC of 12300/cumm with 63% lymphocytes. Serology for HIV 1 & 2 was nonreactive. Ultrasound whole abdomen was normal. Ultrasound perianal region showed well defined heterogenous hypoechoic track in bilateral perianal region with peripheral hypoechoic rim and suspicious moving echos within the track extending till the skin and subcutaneous tissue. However no external opening scar and internal opening is well defined.

FNAC done from bilateral perianal swellings revealed pus & blood mixed material. Microscopic examination showed epithelioid cell granulomas, giant cells, histiocytes, degenerated inflammatory cells and necrosis. Ziehl Neelsen staining for AFB was positive in smears.

**Figure 2 & 3: Smears show epithelioid cell granulomas, degenerated inflammatory cells & necrotic material (Giemsa, HP)**



**Figure 4. Ziehl Neelsen smears are AFB positive**



We made a diagnosis of bilateral perianal tuberculosis. No primary focus of tuberculosis was identified. Two weeks later child developed pus discharge from swellings in perianal region, whereas at the time of presentation no external opening or

scar was present. Antitubercular therapy (ATT) was started, on follow up 4 months later there were no complaints of pus discharge with complete healing of perianal lesions.

### DISCUSSION

Tuberculosis can involve any organ system in the body. While pulmonary tuberculosis is the most common presentation, extrapulmonary tuberculosis (EPTB) is also an important clinical problem<sup>2,13,14</sup>. Tuberculosis of perianal region is still very rare. Diagnosis is especially difficult if it is the initial manifestation of tuberculosis. Perianal tuberculosis cases are also reported in immunocompromised patients especially HIV where extrapulmonary tuberculosis is more common as compared to immunocompetent patients<sup>15</sup>. Perianal tuberculosis can present as recurrent fistula, fissure like ulcer, warty lesion or abscess, other associations are anal bleeding, strictures and inguinal lymphadenopathy. Out of all extrapulmonary tuberculosis cases tubercular lymphadenitis is most common (35%) followed by pleural effusions (20%), whereas abdominal tuberculosis constitutes 3% of all cases reported<sup>3,4,5,6,14</sup>. In the GIT, the ileocaecal junction is the most commonly affected, whereas anoperineal involvement is very rare especially isolated ano-perineal cases<sup>16</sup>. Sultan et al reported 7 cases of ano-perineal tuberculosis all of which were associated with pulmonary tuberculosis<sup>17</sup>. Horland and Varkey presented two cases diagnosed as anal tuberculosis associated with pulmonary tuberculosis<sup>18</sup>. The cause of perianal localization in our patient is not clear as there was no evidence of pulmonary or any other known focus of tuberculosis even after extensive investigations. In cases of perianal tuberculosis from Asia, pulmonary involvement was not common, whereas it is more commonly associated in cases of

perianal tuberculosis from European countries **19, 20**.

The suggested mechanisms of perianal affection are: ingestion of respiratory secretions filled with bacilli, through ingestion of contaminated milk, hematogenous dissemination from primary lung focus with later activation, spread from adjacent organs, lymphatic spread from infected lymph nodes **20**.

Perianal lesions in tropical countries are due to multiple causes: bacterial, viral, and parasitic ones. The differential diagnosis of the tuberculosis ulcerative lesions in the perianal region are Crohn's disease, anorectal abscesses associated with mixed flora, amoebiasis, sarcoidosis, syphilis, lymphogranuloma venereum, malignancies, and foreign body reactions **21,22**. Few other clinical conditions mimicking tuberculosis are hidradenitis suppurativa, Bartholin's, radiation injuries, lymphomas, and anti-biomas **23**.

The diagnosis of perianal tuberculosis is difficult especially in cases with no pulmonary involvement. The various methods used for diagnosis are complete blood count, ESR, Mantoux test, FNAC, biopsy, AFB smears, serology, culture studies, chest x-rays, computed tomography, MRI, PCR studies, fistulogram, transperineal sonography & immunochromatographic assays **23,24,25**. However in clinical practice it is seen that FNAC, AFB smear & culture are more useful and cheaper in comparison to costlier tests like TB IgG, IgM or immunochromatographic assays **26**.

Though perianal tuberculosis is very rare and can have varied manifestations but it should be kept in mind in cases of anorectal lesions when cause is not known or if it is recurrent and it should be confirmed by cytological (or histopathological) and microbiological investigations.

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