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Case Report

Ovarian tuberculosis-A rare case report

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ABSTRACT

Extrapulmonary tuberculosis is one of the major concern in developing countries. It presents with various clinical features, hence most of the times it is difficult to make diagnosis on the basis of single investigation. Multiple investigations should be done simultaneously for making appropriate diagnosis. We report a rare case of a 50 years old female, diagnosed as ovarian tuberculosis, who presented with complaints of dysmenorrhea, abnormal uterine bleeding and low grade fever for 4-6 months. Tuberculosis should always be kept in mind as the most common cause of granulomatous lesion in endemic regions.

1. Introduction

Tuberculosis is one of the common diseases in developing countries. Tuberculosis most commonly involves the lungs.[1] Extrapulmonary tuberculosis is not common. Sites of extrapulmonary tuberculosis may include kidney, lymph node and genital tract.[2]

Clinical features of tuberculosis are non specific which may mimic malignancy.[3] Usually genital tract tuberculosis presents with triad including infertility, menstrual abnormalities and pain in pelvic region. In some cases genital tract tuberculosis may present as adnexal mass.[2,3] Tuberculosis of ovary may be caused due to the reactivation of mycobacterium tuberculosis. It can be associated with hematogenous, lymphatic and direct spread.[4]

Investigations such as ultrasonography, histopathological examination, complete blood count, biochemical profiles, AFB staining and Polymerase Chain Reaction help in reaching to the definitive diagnosis.[4,5]

Diagnosis of Tuberculosis is difficult many times, as it may present with similar features like malignancy. Treatment modality for both tuberculosis and malignancy differs as tuberculosis may be treated by anti tubercular treatment while cases with malignancy may require extensive surgical procedures.[6]

2. Case Summary

A 50 years old female presented to the Gynaecology Out Patient Department with the complaints of dysmenorrhea, abnormal uterine bleeding on and off for 4 years, pain lower abdomen and low grade fever for 4 months. The patient also had history of 6kg weight loss and lump in left sided lower abdomen for past 2 months. Her family history revealed history of tuberculosis in daughter. On evaluation per speculum and per vaginum findings were within normal limits. On abdominal examination a globular, non-tender, soft to firm mass measuring 8x3.5cm was identified in left lower abdomen. Complete blood count showed lymphocytic leucocytosis with 52.0% lymphocytes. On ultrasonography a multi-septated mass was seen in left adnexal region while right adnexa was normal. Preoperative fine needle aspiration cytology showed numerous epithelioid cell granulomas in

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the background of caseous necrosis. AFB stain was positive. Chest X ray was normal. CA 125 level was 20U/ml.

On the basis of clinical and cytological findings, and the fact that the patient had completed her family, total hysterectomy was performed. On histopathological examination uterus showed features of leiomyoma with interlacing fascicles of smooth muscles showing cells exhibiting cigar shaped nucleus with vesicular chromatin and eosinophilic cytoplasm. Left ovary showed chronic granulomatous lesion with caseous necrosis, Langhan's giant cell, epithelioid cells and lympho-plasmacytic infiltrate suggestive of tuberculosis (Figure 1 and 2).

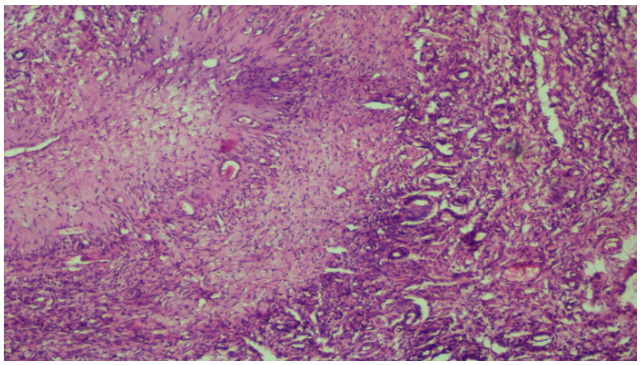

Fig. 1: Left ovary showed chronic granulomatous lesion withcaseous necrosis, epithelioid cells and lympho-plasmacytic infiltrate suggestive of tuberculosis. Hematoxylin and Eosin x 10X.

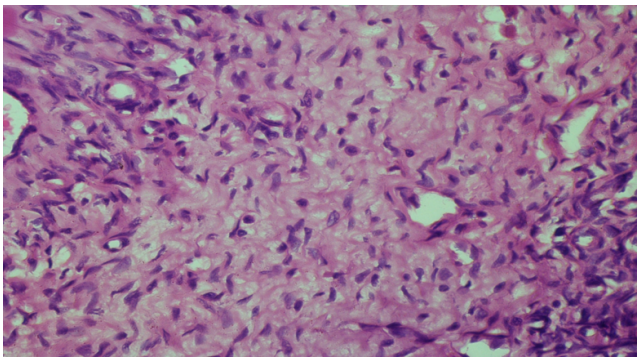

Fig. 2: Left ovary showed chronic granulomatous lesion withepithelioid cells and lympho-plasmacytic infiltrate suggestive of tuberculosis. Hematoxylin and Eosin x 40X.

Our patient was given 4 drug regimen of anti-tubercular treatment for 18 months and she is fine after 6 months of follow up period.

3. Discussion

Tuberculosis is the one of the most common granulomatous lesion in developing countries. Genital tract tuberculosis most commonly involves endometrium followed by ovaries. However other possible causes of granulomatous lesion of ovary should also be kept in mind including sarcoidosis, leprosy, mycosis and cat scratch disease.[7] Crohn's disease, endometriosis and history of prior surgery should be ruled out as one of the probable cause of ovarian granuloma.[6,7]

Tuberculosis may present with many nonspecific symptoms which are also seen in other conditions such as malignancy. It is necessary to offer multiple investigations panel to patient to make definitive diagnosis. Investigations including histopathological examination, ultrasonography, CA-125 levels are necessary for differentiating these two mimicking diseases.[8] CA125 levels may remain normal or raised in tuberculosis, hence it is necessary to differentiate tuberculosis from malignancy. In case of malignancy CA125 is markedly raised with features of ascitis.[7,8]

Acid Fast Staining is a rapid and inexpensive method for detecting mycobacterium tuberculosis in developing countries. Acid Fast Bacilli staining may provide aid in reaching to the definitive diagnosis as it can detect Acid Fast bacilli with fair sensitivity.[7] Furthermore Polymerase Chain Reaction is the most sensitive and specific method which can provide quick results.[8] PCR is one of the most advanced option, causes gene amplification and DNA is amplified using the primers.[8] However PCR has the disadvantage that it is unable to differentiate between active and latent infections.[8]

Management for tuberculosis includes combination of drugs like isoniazid, Ethambutol and Pyrazinamide intensive phase and Isoniazid, Rifampicin and Ethambutol in continuation phase. Surgery can also be done in cases with associated abscess, adhesions and tubo-ovarian mass.[9,10]

4. Conclusions

Tuberculosis should always be considered as one of the possible diagnosis for patients with abdominal mass and pain. It is necessary to differentiate tuberculosis from malignancy and other granulomatous lesions, so that appropriate treatment can be initiated.

5. Source of Funding

None.

6. Conflicts of Interest

None.

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