

A Rare Case of Tubercular Pyometra in A Post-Menopausal Women: A Case Report

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Abstract

Endometrial tuberculosis with pyometra is extremely rare in post-menopausal women. A 65-year-old women was diagnosed with tubercular pyometra. CT of abdomen and pelvis showed significant endometrial collection of pus with bilateral tubo-ovarian masses. Aspirated pus when examined was found to be positive for acid fast bacilli. Gene expert assay was also positive for Mycobacterium tuberculosis. The patient was started with anti-tubercular treatment and subsequently advised to continue the same for six months.

Keywords: Genital TB, Menopause, Pyometra, Acid Fast Bacilli, Gene Expert.

Introduction

Tuberculosis is major health problem worldwide. Genital tuberculosis (Genital-TB) is a form of extra pulmonary tuberculosis (EPTB) usually secondary to pulmonary TB, that is spread through hematogenous or lymphatic route.

Genital-TB accounts for 9 per cent of all EPTB ^[1]. Pyometra, is a clinical condition where there will be an accumulation of pus in the uterine cavity, it is an uncommon condition with incidence of 0.01 - 0.5 per cent in gynaecologic patients ^[2]. Pyometra could be due to malignancy or bacterial infection and its rupture could result in significant morbidity and mortality, hence its diagnosis before rupture is of dilatation of the cervix, drainage and lab analysis of pus followed with an appropriate treatment ^[2]. The most common organisms isolated from pyometral pus are Escherichia coli and Bacteroides fragilis ^[3]. However, Mycobacterium tuberculosis may also be isolated in women of reproductive age group, whereas its cause for endometrial TB with pyometra is rare in postmenopausal women ^[2]. The diagnosis of TB in pyometra is made by detection of acid-fast bacilli on microscopy or histopathological examination of endometrial biopsy or by rapid nucleic acid

amplification techniques [4]. In the present study a menopausal woman with pyometra showing acid fast bacilli in the pus, confirmed by Gene expert and subsequently treated with antitubercular drugs is being reported.

Case report

A 65-year-old women with history of low grade on and off fever since one month, pain in upper and lower limb, epigastric burning sensation since 10 days with loss of appetite and severe generalized weakness was presented to Department of Emergency Medicine.

Previous report showed Widal test positive for Salmonella typhi with CRP-36 mg/L. There is no history of Diabetes mellitus, Hypertension or Tuberculosis in family. On examination, Blood pressure, SpO2 and pedal oedema was found to be 88/57 mmHg, 93 percent and grade 2+ respectively. CNS and CVS examination were normal. Respiratory system examination revealed bilateral coarse crepitation over infra scapular region. Per abdominal examination revealed scaphoid, soft and non-tender abdomen with no renal tenderness. The patient expressed obstetric history of P7L7 and all were normal vaginal delivery done at home and has attained menopause about 10-12 years back. There was no history of post-menopausal bleeding, White discharge, burning micturition or pain abdomen.

Initially, the patient was diagnosed as a case of Bronchopneumonia / Septic shock and hence was shifted to Intensive Care Unit for further evaluation and management. Patient was subjected for CBC, Serum electrolyte, RFT, LFT, RBS, Chest X-ray, ECG and USG abdomen. Patient was started with piperacillin/Tazobactam (4.5 mg in divided doses) and Azithromycin along with Pantoprazole and Lasix.

Laboratory investigations revealed Hb - 8.2 gm/dL, WBC - 24,000 cells/ μ L, Neutrophils - 69%, Lymphocyte - 24%, Platelet-1.02 lakh/ mm^3 , CRP- 36 mg/L, ESR - 56 mm/hr ,

Dengue was negative, so also blood and urine culture were negative for growth. HIV, HbsAg, and HCV were Negative. ECG revealed left ventricular hypertrophy. CT of thorax showed numerous miliary nodules in both lungs with multi focal patchy areas of consolidation in upper lobe suggestive of infective miliary tuberculosis (fig: -1, 2, 3). USG of abdomen and pelvis showed large exophytic simple renal cortical cyst measuring 5X5 cm at right kidney upper lobe and 5X9 cm at left Kidney upper lobe. uterus was found to be atrophic with heteroechoic collection measuring 7X6X3.8 cm collection in uterine cavity likely suggestive of pyometra. Further CT of abdomen and pelvis showed significant endometrial collection with bilateral tubo-ovarian masses (fig: -4, 5, 6). Patient was referred to Obstetrics and Gynecology for pelvic examination. On per-speculum examination, cervix showed small sessile polyp measuring 1X1 cm. On Histopathological examination of polyp revealed as Benign lesion. Purulent discharge was also noted on cervical dilatation with a small SBC dilator, 3-4 ml of pus was aspirated and sent to microbiology lab for ZN Stain and Gene expert. The purulent pus was thick, mucoid cream coloured with no foul smelling. ZN stain showed few acid-fast bacilli (fig:- 7). Gene expert report was found to be positive for Mycobacterium tuberculosis with rifampicin resistance not being detected. Patient was diagnosed as endometrial TB with pyometra and hence started on anti-tubercular treatment.

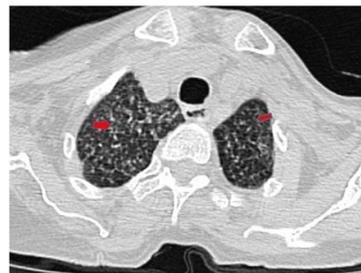


Fig. 1: HRCT Axial section of upper thorax: Multiple tiny random dense miliary nodules (red arrow) seen in apical segments of bilateral upper zone.

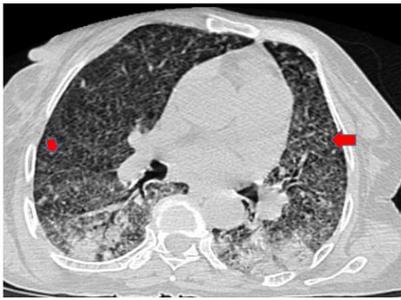


Fig. 2: HRCT Axial section of mid thorax: Multiple tiny random dense miliary nodules (red arrow) seen in bilateral upper and lower lobes.

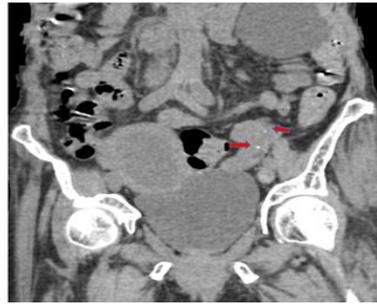


Fig. 6: Plain CT pelvis coronal section: calcific specks (red arrow) within left adnexal mass.

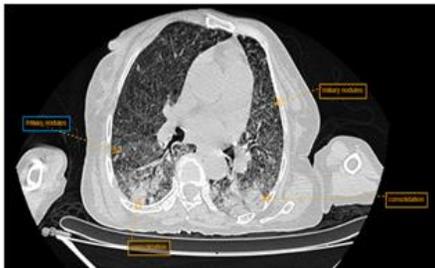


Fig. 3: HRCT thorax: Axial section at mid thorax: Areas of miliary nodules in bilateral upper lobes and areas of consolidations in apical segments of bilateral lower lobes (as annotated in the image)

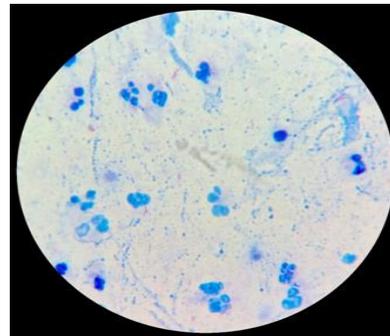


Fig. 7: ZN Stain showing Acid Fast bacilli

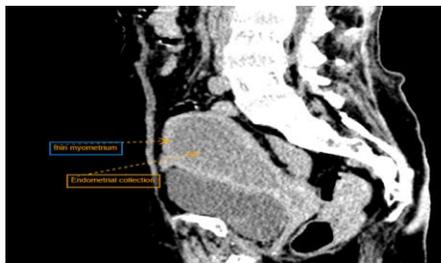


Fig. 4: Plain CT, Sagittal section of pelvis: Significant endometrial collection with diffusely thin and stretched myometrium.

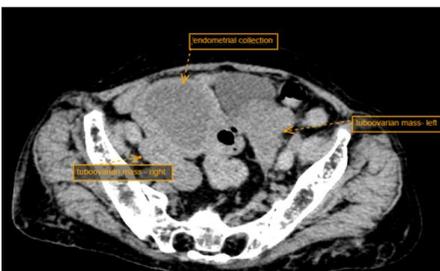


Fig. 5: Plain CT pelvis axial section: significant endometrial collection with bilateral tubo-ovarian masses. (as annotated above)

Discussion

Among extrapulmonary tuberculosis female genital tuberculosis constitutes about 15-20 % [5]. In genital TB, Endo salpinx is the primary site of involvement in 90-100% of cases and then it can spread to the peritoneum, endometrium, ovaries, cervix, and vagina. In all cases of genital TB, the endometrium and the ovary are affected in 50%- 60% and 20%-30%, respectively [2]. In the present study we are describing the case of endometrial TB with pyometra in a post-menopausal woman without any previous history of tuberculosis.

The diagnosis of endometrial TB is usually made by detection of acid fast bacilli on microscopy or culture of endometrial biopsy or Histopathological examination. [6] In the present case, the aspirated endometrial purulent discharge was confirmed for presence of acid fast bacilli by ZN staining and Gene expert was also positive for Mycobacterium tuberculosis.

Endometrial tuberculosis with pyometra in a post-menopausal woman is extremely rare which may be

attributed to atrophic endometrium, and the incidence ranges is observed to range from 0.01%-0.5% [3]. The most common presentations reported in the general population are infertility (44%), pelvic pain (25%), vaginal bleeding (18%), amenorrhoea (5%), vaginal discharge (4%) and postmenopausal bleeding (2%). Less common presentations include abdominal mass, ascites, tubo-ovarian abscess, and abdominal distension, persistent vaginal discharge and pyometra. Postmenopausal women usually present with bleeding, pyometra and persistent vaginal discharge [7].

In the present case, endometrial tuberculosis with pyometra was diagnosed following ultrasound abdominal scan and CT scan of abdomen pelvis without any history of postmenopausal bleeding or any other symptoms including absence of history of TB. Female genital tuberculosis is always secondary to primary lesion in lung and 1/3rd of the patients also have involvement of extra pulmonary tuberculosis such as meninges, bone, skin, joints and Genito urinary tract and abdominal cavity [2,5]. Hence this case of endometrial tuberculosis with pyometra is opined to be due to spread from the primary lesion in the lung which got extended to endosalpinx and endometrium through haematogenous or Lymphatics resulting in accumulation of pus in the endometrial cavity causing pyometra [8]. Further though the initial diagnosis of CT of thorax showed numerous miliary nodules in both lungs with multi focal patchy areas of consolidation in upper lobe, the same could not be confirmed because patient was unable to collect the sputum /BAL sample. As CRP was 36 mg/L, ESR was 56 mm/hr, together with microbiological and gene expert confirmation reports, the patient was started with daily therapy of Rifampicin (R), Isoniazid(H), Pyrazinamide(Z) and Ethambutol for 2 months of intensive phase followed by daily 4 months therapy of continuous phase of Rifampicin (R) and Isoniazid (H).

Conclusion

Early diagnosis of genital tuberculosis is essential for prompt treatment and prevention of complications. All aspirated specimens have to be subjected for AFB staining and gene expert.

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