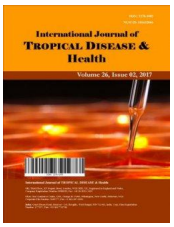

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Genital Tract Tuberculosis in a 42-year Female Masquerading as Ovarian Malignancy

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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Case Report

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ABSTRACT

Female genital tuberculosis is one the known causes of infertility in the tropics. The symptom complex are diverse and it is one of the known causes of pyrexia of unknown origin. Instances of mimicry of ovarian cancer with raised CA125, have been reported. We present a case report in a 42-year-old woman with abdominal pain and progressive abdominal pain of 3 weeks durations, who had confounding symptom of raised CA125, forcing a presumptive diagnosis of ovarian cancer. She had exploratory total abdominal hysterectomy (TAH). The surgical findings and histopathological diagnosis were suggestive of tuberculosis, for which she is undergoing treatment and showing remarkable improvement.

Keywords: Genital; tuberculosis; ovarian malignancy.

1. INTRODUCTION

Tuberculosis (Tb) is a deadly chronic infection, presenting as progressive body wasting, pulmonary involvement is the rule, although every organ may be affected [1-3]. Female genital tuberculosis is often misdiagnosed due to non-specificity of symptoms [4-6] and the

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difficulty of isolating the mycobacteria in some instances. Infertility is the commonest presenting complain [7]. The causative organism is an obligate aerobe, *Mycobacterium tuberculosis* and two species *M. tuberculosis* and *M. bovis* are known to cause human disease. *M. tuberculosis* causes pulmonary disease and *M. bovis causes abdominal disease* [8]. The bacteriology and pathogenicity are well documented elsewhere. The source of female genital tuberculosis is reported to be haematogenous [8,9]. Attah reported that the fallopian tube is the source of dissemination to the rest of the genital tract, but Turkmen et al who reviewed 1,548 cases occurring in Turkish women, found the endometrium was involved in 1,073 cases, fallopian tubes in 164 cases, cervix 157 and multiple sites 154. Namavar and colleagues found 73.03% endometrial location in their series while tubal involvement was 34.03%, ovarian involvement accounted for 12.9% and 2.4% cervical involvement [7]. Aliyu et al. also reported fallopian tube as the commonest site of genital tuberculosis [10]. The clinical presentations are diverse [11] and may be very nonspecific. Qureshi et al. in Pakistan reported infertility 42.5% as the chief presenting complain followed by abdominal pain 42% [12]. Other symptoms in their studies included fever, ascites, irregular vaginal bleeding, oligomenorrhoea, chest pain and pain in the flanks [12]. Infertility as the main presenting feature in genital tuberculosis was reported by many authors [5,7,12-24]. Ovarian presentation with raised CA125 and therefore mimicry of ovarian cancer is a common way of presentation [25-27]. It is therefore important to include tuberculosis in the differential diagnosis of ovarian cancer in the tropics when there is suspicion of ovarian cancer, even with raised CA125.

Diagnosis of female genital tuberculosis may be difficult because it is the paucibacillary form of the disease, smears and cultures from it are often negative [26]. In some instances the researchers had to use polymerase chain reaction amplification of the mycobacterial DNA to support the clinical and histological diagnosis [25-27]. Cervical tuberculosis is rare, but in one study in India it was diagnosed at Papanicolaou smear(Pap smear) and confirmed through biopsy [28]. Instances of formation of tubo-ovarian abscesses calling for hysterosalpingographic examination have been reported [29] or presentation as acute pelvic inflammatory disease [30]. In both cases patients were HIV positive. Other investigations normally done include trans vaginal scans, colposcopy, chest X rays, abdominal and pelvic CAT, Mantoux test and general laboratory tests [31]. Liquid and solid tissues can be cultured to recover the organism and Ziehl Neelsen and Kinyoun special stains are used for confirmation [8]. There is need for a high index of suspicion in immigrant patients presenting in foreign locales with pelvic symptoms.

2. CASE REPORT

2.1 Case History

A 42-year-old lady presented at the general outpatient department complaining of abdominal pain and progressive abdominal swelling of three weeks duration, she also experienced associated body weakness and easy satiety. There was no history of cough, haemoptysis, or night sweats. They was positive history of significant weight loss.

The findings on examination the abdomen were distension with tenderness on the left iliac region. Ascites was demonstrable by shifting dullness.

Her parity was p3+0.Pelvic examination revealed a bulky retroverted uterus with a tender irregular left adrenal mass and they was fullness of the pouch of Douglass.

2.2 Radiology

2.2.1 Chest X-ray

The chest X-ray was normal.

2.2.2 Ultrasonography

Initial abdominopelvic scan revealed, marked ascites with collapsed bowel loops. A bulky uterus was found with a myoma in the posterior myometrium measuring 3.8 x 1.7 cm as well as a multicystic left adnexal mass. The largest cyst measuring 4.5 x 4.2 cm.A diagnosis of suspected left ovarian malignancy was suggested.

2.2.3 Laboratory results

The complete blood count result was, Total wbc 4.8 x10/dl, neutrophils 67%, lymphocytes 30%, eosinophils 2% and basophils 0.

The erythrocyte sedimentation rate was 121/mm. The serum electrolytes were normal, however CA125 was elevated, (449.9 µm) normal range (0-35).

Fig. 1. TAH specimen showing tubo-ovarian abscesses the left > the right

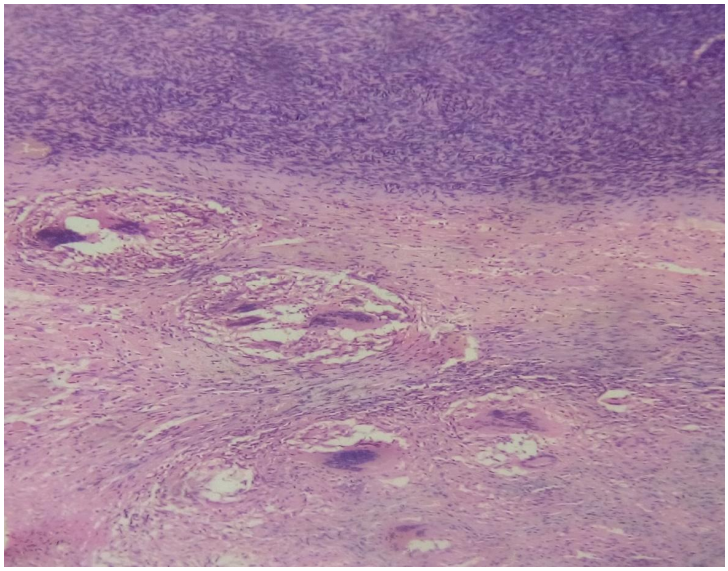

Fig. 2.Granulomata in the ovary, Langhans type giant cells, and necrotic areas (H&EX 400)

2.2.4 Diagnosis

Based on these findings a presumptive diagnosis of ovarian malignancy was made and the patient counselled for exploratory laparotomy.

2.2.5 Surgery

She had a staging total abdominal hysterectomy (TAH) plus bilateral salpingectomy and left sided oophorectomy. Intraoperative findings included 2.2 l of clear ascitic fluid and widespread seedlings in the pelvis and gut. The omentum was free of lesions, so infracolic omentectomy was not carried out.

2.3 Histopathology

2.3.1 Gross

The TAH specimen measured 10x 5.5x4 cm, the external surface was studded with miliary size caseous nodules. They was left sided tubo-ovarian abscess, the right fallopian tube was equally enlarged, the left being more prominent. Caseous necrosis was seen in the left and right salpinx as well the left ovaries. Cut surfaces show cystic fallopian tubes and left ovary had thickened wall and caseous necrosis in some areas. They was an intramural

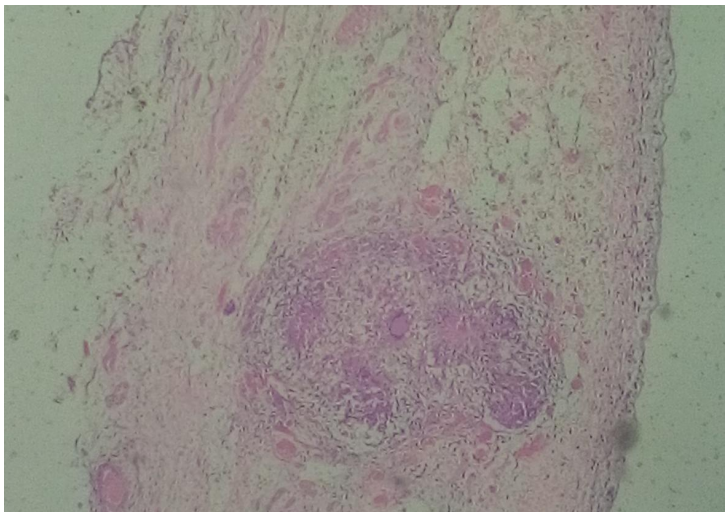

Fig. 3. Shows granuloma in the wall of the fallopian tube (H&E X400)

myoma. The cervix and endometrium were not involved.

2.3.2 Microscopy

There were chronic granulomas with Langhans type giant cells seen in the left and right salpinx as well as the right ovariectomy specimen A diagnosis of chronic granulomatous inflammation most probably tuberculosis, was made. The Ziehl Neelsen stain for Mycobacteria was inconclusive.

The immediate post-operative period was uneventful but 3 weeks after discharge from the hospital, she complained of abdominal pain and swelling. An abdominopelvic scan was ordered which revealed hepato splenomegaly. Hepatitis b surface antigen was negative and HIV test was non-reactive. Ascitic fluid as sent for gene expert assay for tuberculosis but it turned out negative.

2.3.3 Treatment and outcome

The respiratory physicians and public health physicians were called in to evaluate the patient and a diagnosis of genital tuberculosis with pelvic and peritoneal dissemination was made.

She was commenced on empirical tuberculosis therapy and has shown tremendous improvement. The Tb regimen chosen was the same as that normally used for pulmonary Tb. The treatment consisted of 2 months of intensive phase of oral isoniazid, rifampicin, pyrazinamide and ethambutol, followed by four months of continuation phase with isoniazid and rifampicin. She has completed the course of treatment and has shown remarkable improvement. She is currently on follow-up, which has been going on for the past four months.

3. DISCUSSION

The difficulty often encountered in the diagnosis of female genital tuberculosis [18,31] was appreciated in the management of this patient. This informed the suggestion by Zhuchenco and group that the differential diagnosis of genital tuberculosis be approached in two steps; through the use of routine clinical examination and the study of anti tuberculous immunity [32]. A combination of test often out of reach of the poor are required in the diagnosis of this disease [9,21], yet tuberculosis is the disease of the poor. A case reported from Italy, had a Pap smear, culposcopy, trans vaginal scan, chest X-ray, abdominal and pelvic CAT scan, Mantoux test and other laboratory test [31]. In some instances the investigators had to culture tissue samples and amplified the mycobacterial DNA using polymerase chain reaction [29]. There is therefore the need for us over here to always entertain a high index of suspicion and formulate a robust differential diagnosis that provides a quick definitive diagnosis at the cheapest cost.

The second confounding factor within the narrow scope of investigations that were carried out was the raised levels of CA125. It is important to note that CA125 is also raised in some benign conditions, including cases of female genital tract tuberculosis [33]. Other conditions include, pelvic inflammatory disease, pregnancy, cirrhosis of the liver, endometriosis ectopic pregnancy, tubo-

ovarian abscess, ovarian cyst hyper stimulation syndrome among others [34]. It is therefore important to always interpret raised CA125 in proper context with other clinical variables. The prevalence of Tb in the locality of this study is as yet unknown, but unpublished data suggest that as many as 44.6% of HIV patients attending clinic have tuberculosis. It therefore means efforts should be made towards improved diagnosis of extra pulmonary tuberculosis which is likely to accompany such high Tb. rate.

4. CONCLUSION

Most studies emphasized a strong clinico Pathologic and radiological interplay in the diagnosis of these caes. It is important to note that tuberculosis is ever present in our part of the world therefore among it systemic complications, genital tract disease should be expected and sought out for.

CONSENT

Patients personal data was anonymised and permission for the use of specimen photographs and histopathological photomicrographs was granted by the Department of Pathology, University of Calabar Teaching hospital.

ETHICAL APPROVAL

Approval was granted by the institutional review board.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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