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Female genital tuberculosis revisted

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Female Genital Tuberculosis Revisted

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Objective

Objective:To assess the clinical presentation of genital tuberculosis and to study various modes of diagnosis and treatment.
Setting:The Aga Khan University Hospital (AKUH), Karachi.
Method:A retrospective case review of all index female cases of genital tuberculosis, admitted to AKUH over twelve years of period.
Result:A total of 40 cases of genital tuberculosis were reported during this time period. Majority of cases were between 25-45 years. The commonest presenting symptoms were infertility (42.5%)and abdominal pain (42%). Others included fever, ascites, irregular vaginal bleeding, oligomenorrhea, chest pain and pain in the flanks. Main mode of treatment was antituberculous drug therapy for duration of nine months. Only 3 patients had successful pregnancies.
Conclusion:Genital tuberculosis should be excluded when managing infertility in females (JPMA 51:16; 2001).

Introduction

One third of the world's population is infected with the bacillus mycobacterium tuberculosis and approximately one in ten of those infected will develop active tuberculosis at some time. TB is now the world's leading cause of death from a single infectious agent[1]. Deaths from the disease are expected to increase to over 3.5 million per annum by the year 2000l Currently most of these cases and more than 98% of deaths occur in developing world.
Pulmonary TB today still occupies first position followed by genital TB depending on the affected population[2]. Most recent reports from developed countries showed an incidence of genital TB as 1% but in developing world where tuberculosis is common, figures as high as 1 0%are noted[2]. In Russia it accounts for 11.9% of all extra pulmonary TB while nineteen percent of infertile patients in India are reported to have genital TB[3,4].
First reported in 1970[5], genital TB has become a challenging disease both from diagnostic and therapeutic point of view as it has few characteristic symptoms. Clinical presentation is extremely variable depending on the site involved. It may present as chronic pelvic inflammatory disease unresponsive to therapy[6] and infertility due to extensive tubal destruction and is a common presentation not amendable by reconstructive tubal surgery[7,8].
Genital TB is usually secondary to a primary focus elsewhere in body. Spread to genital site results from hematogenous dissemination at a very early stage of disease[9]. In more than 80% there will be a history of extra genital TB lesion in the form of calcified abdominal glands, mycobacterium tuberculosis in the urine or X-ray appearance of pleurisy or past or present pulmonary TB[10]. It has been estimated that genital TB occurs in about 2% to 20% of patient's with pulmonary tuberculosis[11,12]. However chest roentgenographic findings are not always abnormal because by the time the disease is diagnosed the primary lesion is often healed and inconspicuous[2]. Very rarely pelvic TB may occur as a primary condition following intercourse with a partner suffering from active genitourinary TB[12].

The treatment of genital tuberculosis comprises mainly of chemotherapy and surgery. There are multiple regimens of chemotherapy used for a minimum of at least 6-9 months. Despite the success in eradicating active infection in almost all subjects, subsequent intrauterine pregnancy is a rare occurrence, with most conception ending in spontaneous abortion or ectopic pregnancy[13,14]. Surgery offers procedures like tubal reconstructive surgery, which has no place in the treatment of infertility due to genital TB, as reported results have been dismal. Furthermore, there also is the risk of activating a silent infection subsequent to surgery[15].

Any part of genital tract can be affected but the commonest sites are the fallopian tubes and the endornetrium. The fallopian tubes are the initial site being involved in all cases with secondary extension to the endometrium, in 50% to 90% of cases[4,7]. The ovaries are afiected in 20to 30% of cases and the cervix in 5 to 15%[4,7].

Infection first commences in the tubal mucosa, spreads through the wall to the peritoneal surface[16,17]. Rarely, re-infection from basal layer of endometrium or myometrium may occur[18,19]. In early cases small tuberculosis nodules can be seen at the ampullary region. When these nodules bieak down, infected material is discharged and the tube is sealed. Spread to the ovary is a very late featuie .TB of the cervix, vulva and vagina is rare.

The cost of the treatment of genital TB includes the cost of drugs as well as care over a prolonged period hence it is a disease of economic significance in Pakistan[20]. This study reported the pattern of genital tuberculosis in a tertiary care teaching hospital.

Material and Method

This is a refrospective case review of all index female cases of genital tuberculosis over a twelve-year period. All the cases were treated at the Aga Khan University Hospital (AKUII), which is a private tertiary care center of Karachi. Medical records of all hospitalized patients are documented in accordance with WHO lCD 9 codes (international coding of disease) and genital TB is regarded under the ICI) code 016.

The diagnosis of genital TB was confirmed by the histopathological and/or microbiological (AFB culture) findings of endometrial biopsies.

The variables collected after review of records included age, marital status, presenting complaints, previous or current history of extra genital TB and family history of TB. Investigations included complete blood picture (CBC), ESR (upto 20 was considered normal), urineanalysis, montoux test (upto 10 mm response was considered normal) and chest X-rays for any evidence of previous or current pulmonary tuberculosis. Every case did not have these investigations.

Results

A total of 40 cases of genital TB were reported at the AKUH during twelve-year period. Majority of cases (75%) were between 20-45 years. Two cases were discovered in women who were in their seventies and both died from other medical problems apart from genital TB. The clinical presentation of genital tuberculosis was very variable. The commonest presenting symptoms were infertility in 18 cases (42 .5%) of which it was primary in 78% and secondary in 22% cases. Seventeen (42%) of cases presented with abdominated pain. Other less frequent presenting symptoms included fever, ascites, irregular vaginal bleeding, oligomenorrhea, chest pain and pain in the flanks (Table).

Table. Presenting complaints of tuberculosis study at AKUH.

Symptom	No.	%
Infertility	18	42.5
Dysmennhorrea	5	12.5
Abdominal pain	17	42.5
Dysperunia	2	5
Ammenorrhea	6	15
Others	17	42.5

Certain non-specific symptoms of backache and weakness were seen in few cases. One out of five patients had a previous history of extra-genital tuberculosis, the commonest being pulmonary in 50% of cases. Bacterial culture for acid-fast bacilli (AFB) was performed in 36 cases but was positive in only 10 cases (25%). Histopathological confirmation was obtained in 30 cases (75%) and included chronic granulomatous inflammation compatible with tuberculosis. The treatment was medical intervention in all the cases that presented for follow-up (85%). Only 52.5% of patients followed-up in the out patient clinic for 6 months, even fewer (47.5%) up to one year.
For chemotherapy, multi drugs therapy was used. The most common regimen was Isoniazed, Rifampicin, Pyrazinamide and Ethambutol. Only 3 patients had successful pregnancies.

Discussion

Genital tuberculosis with its variable presentation is a challenging problem for the gynecologist. Patients are usually upset when they learn of the diagnosis as the disease carries a social stigma[20]. As with pulmonary tuberculosis it usually presents during the active period of life[21]. There is limited information of the natural history of genital tuberculosis[22-23].
Infertility appears to be the main presenting complaint[22]. It is unclear as to the impact of this disease in the causation of primary infertility in our population. The clinical presentation of genital tuberculosis is very variable[22]. The commonest presenting symptoms is infertility as seen in our cases, mainly of primary type[23].
The clinical presentation varies from patient to patient, symptoms like abdominal pain, dyspareunia and dysmenorrhoea are characteristics indicating a pelvic inflammatory disease. Amenorrhoea is a classical symptom of TB as endometrium gets involved with tuberculosis.
Complete blood picture did not reveal any characteristic picture except that ESR was raised in 37.8% of cases. Chest X-ray may be suggestive of past tuberculosis involvement of lungs. AFB culture reports cannot be used as diagnostic parameters because of their high false negative rates[24]. Histopathological findings of granulomatous inflammation are more reliable in the diagnosis of genital tuberculosis. PCR is a more sensitive and specific test, but is not routinely used in Pakistan[24]. Even though presentation is variable and diagnosis is difficult, however genital tuberculosis should be considered in cases of female infertility. In chemotherapy, multi drug regimens were used. The effectiveness of the various modalities used in the treatment of genital tuberculosis could not be established with the data available.

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