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Research Article

To evaluate the prevalence of female genital tuberculosis in Hyderabad

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ABSTRACT

Background: Tuberculosis (TB) is an increasing public health concern worldwide. It is one of the most important causes of infectious morbidity and mortality. Genital TB is one form of extra pulmonary TB and is not uncommon, particularly in communities where pulmonary TB is prevalent. The objective of the study was to evaluate the prevalence of female genital tuberculosis in Hyderabad and its presentational symptoms and methods of diagnosis.
Methods: A total of 1102 cases of suspected genital TB who had been registered and treated in the AIMSR and few selected government urban health post and private hospitals and clinics in different zones of Hyderabad, from 2012 January to 2013 March were retrospectively and prospectively studied. From this group, 23 women were diagnosed as having genital TB based on the standard pathological and microbiological criteria of tissue specimens.
Results: Out of 23 cases diagnosed as having genital tuberculosis, 3 patients (13.04 %) presented with abdominal or pelvic pain. In 17cases (73.91%) tuberculosis was diagnosed during studies performed to evaluate the cause of their infertility, and the most common diagnostic procedure was endometrial curettage. Remaining 3 cases (13.05 %) have past, present or contact history of tuberculosis. Female genital TB accounted for 2.08 % of all tuberculosis patients in this study.
Conclusions: This study indicates the presence of a strong relationship between genital TB and infertility; therefore genital TB would be more frequently diagnosed if this possibility was considered in the evaluation of every infertile patient in areas where tuberculosis is endemic.

Keywords: Tuberculosis (TB), Female genital tract tuberculosis (FGT)

INTRODUCTION

Tuberculosis (TB) is an increasing public health concern worldwide. It is one of the most important causes of infectious morbidity and mortality. Genital TB is one form of extra pulmonary TB and is not uncommon, particularly in communities where pulmonary TB is prevalent. Genital TB may be asymptomatic and diagnosis requires a high index of suspicion. Moreover, the disease may masquerade as other gynaecological conditions and can go unrecognized. The most common form of extra pulmonary TB is genitourinary disease, accounting for 27% (range, 14 to 41%) worldwide.[1] Tuberculosis is one of the major etiological factors of female tubal infertility.[2]

Infertility is a worldwide problem. World Health Organization has defined infertility as failure to conceive despite over 12 months of regular and unprotected intercourse. Primary infertility is the term used to

describe a couple that has never been able to conceive a pregnancy, after a minimum of one year of attempting to do so through unprotected intercourse.[3,4]

Female genital tract tuberculosis (FGT) as a cause of infertility is one of the commonest causes of infertility in developing countries.[5,6] The prevalence of genital tuberculosis is higher than one might imagine, based on the lack of reports in the literature, and may account for a significant amount of female infertility.[10] It is therefore, suggested that every patient consulting for infertility in developing countries should be investigated for female genital tract tuberculosis (FGT).

Predisposing factors include poverty, ill health, and immuno-suppression. FGT involves mucosa of fallopian tube with or without involvement of uterus and ovaries. Spread is either haematogenous, lymphatic or direct spread from neighbouring viscous. It is always secondary to tuberculosis elsewhere in the body usually the lungs. Frequency of involvement of genital organs is fallopian tubes 100%, endometrium 90%, ovaries 20%, cervix, vulva and vagina 1%. Sinha et al (1997) found myometrial involvement in FGT [8] Diagnosis of early TB is very difficult. Early diagnosis may be associated with a more favorable result before extensive genital damage occurs.[7]

Objectives

A study was conducted to evaluate the prevalence of female genital tuberculosis in Hyderabad and its presentational symptoms and methods of diagnosis.

METHODS

A total of 1102 patients of reproductive age group between 18-30 years were selected for this study who have registered as in patient and outpatient in Government area hospital (OBG Dept.) Hyderabad, JJ Hospital Hyderabad and OBG Dept. of Apollo Institute of Medical Sciences and Research, Jubilee Hills, Hyderabad and also from the clinics of prominent Gynaecologist from different zones of Hyderabad. This study was conducted retrospectively and prospectively from 2012 January to 2013 March. From this group, 23 women were diagnosed as having genital TB. The diagnosis in 23 cases was based on the standard Pathological and Microbiological criteria.

Criteria for Selection of Patients

The present study only considered the female factor of infertility, past and present contact history of tuberculosis, abdominal pain associated with suspected genital TB.

Laboratory Investigations

The diagnosis of endometrial tuberculosis in this study was made on histo pathological grounds, Ziehl-Neelsen staining and culture of Acid fast bacilli on conventional methods and automated liquid cultures. All the clinical samples were screened with conventional microbiological tests such as Ziehl-Neelsen acid fast staining for recording smear-positivity, identification by cultural isolation and biochemical tests. For culture, each specimen was de-contaminated by N-acetyl-L-cysteine-sodium hydroxide as per Kubica (Kubica et al 1963).[13] The processed sediment was cultured for more than six weeks on two Lowenstein-Jensen medium slants at 37°C. These culture slants were inspected for growth every week. Positive cultures were further examined to confirm the presence of M. tuberculosis. The confirmed isolate was subjected to Line Probe Assay for drug sensitivity testing.

RESULTS

In total of 1102 cases selected for this study, 23 were diagnosed as having Genital tuberculosis. The mean age of the patients at the time of diagnosis was 28.4 years. 3 patients (13.04%) presented with abdominal or pelvic pain. In this group one patient (4.35%) underwent laparotomy for tubo -ovarian abscess and one case due to abdominal mass (4.35%) which led to the diagnosis. Abnormal uterine bleeding was the cause of diagnostic dilatation and curettage in one patients (4.35%). However, in 17cases (73.91%) Tuberculosis was diagnosed during studies performed to evaluate the cause of their infertility, and the most common diagnostic procedure was endometrial curettage. Remaining 3 cases (13.05%) have past, present or contact history of tuberculosis. Female genital TB accounted for 2.08% of all tuberculosis patients in this study.

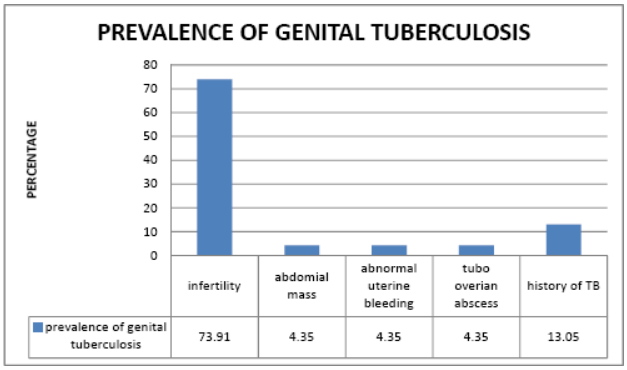

Figure 1: Prevalence of genital tuberculosis.

DISCUSSION

The prevalence of female genital TB in and around Hyderabad accounted for 2.08% in our study. According to Prasad et al (2012), a total of 22 (14.6%) women were diagnosed with genital tuberculosis on the basis of laboratory tests and laparoscopic/hysteroscopic findings.[11]

During the present study, different kinds of symptoms were seen in the female genital tuberculosis patients like

Abdominal or pelvic pain, abdominal mass and abnormal uterine bleeding. While 17 patients did not show any symptoms. Past, Present and contact history was seen in 3 cases out of a total of 23 confirmed cases. Similar results were demonstrated by Shukla et al (2011) who reported that about 20% of the patients with genital TB showed a history of TB in their immediate family.[14]

Genital tuberculosis is regarded as a common cause of infertility in developing countries and where tuberculosis is endemic. The prevalence of genital tuberculosis varies widely. Schaefer states that the prevalence of genital tuberculosis world-wide is between 5% and 10%, while in India it is 19%.[15]

CONCLUSIONS

This study also indicates the presence of a strong relationship between genital TB and infertility. Schafer in his autopsy finding revealed that 2-12% of women who died from pulmonary tuberculosis have evidence of genital tuberculosis.[12] Therefore genital TB would be more frequently diagnosed if this possibility was considered in the evaluation of every infertile patient in areas where tuberculosis is endemic. This high prevalence is attributable to an intensive search for the disease. An effective diagnostic programme is therefore essential to eradicate it. The success of such a programme is largely dependent on standards in the microbiology laboratory. These should be maintained by performing tests on a regular basis.

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