



A STUDY ON FEMALE GENITAL TUBERCULOSIS: CORRELATION OF CLINICAL ASSESSMENT AND ENDOMETRIAL HISTOPATHOLOGICAL EXAMINATION

Obstetrics & Gynaecology

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ABSTRACT

Female genital tuberculosis is most enigmatic form of extra pulmonary Tb. It is an important cause of significant morbidity, short and long term sequelae like infertility. The causative agent is *Mycobacterium tuberculosis*. The fallopian tubes are mainly involved upto 90-100% cases. Diagnosis is achieved through combination of clinical suspicion, physical examination and use of appropriate investigations. There is no definitive method to make conclusive diagnosis of genital TB. This is the reason, even in presence of strong clinical suspicion and supportive investigatory findings, clinician remains in dilemma and hesitate to start anti tuberculous treatment. **Aim-** To lay out the clinical symptomatology profile in suspected patient of genital TB. To see endometrial histopathological findings in suspected patient of genital TB. To assess the diagnostic efficacy and correlation of clinical presentation with endometrial histopathology as standard. **Method-** The present study will be carried out in women attending outpatient & Inpatient department as well as emergency admissions in labour room in Swaroop Rani Nehru hospital and Kamla Nehru hospital, department of obstetrics and gynaecology, Motilal Nehru Medical College, Allahabad, over a period of one year. The endometrial sample of women, who had suspicion of having genital Tb on the basis of chief complaint and clinical examination, were sent for histopathological examination for Tb. **Result-** Out of 140 suspicious cases of genital Tb, only 20 (14.2%) cases were have positive findings on histopathological examination of endometrial tissue. **Conclusion-** This study showed that female genital TB poses a great challenge for the treating clinician in terms of diagnosis and treatment. The diagnostic dilemma arises due to varied and ill defining clinical presentation. A high degree of suspicion is required for its diagnosis.

KEYWORDS

INTRODUCTION

Tuberculosis is an ancient disease & has been described in earliest literature as YAKSHAMA (Tubercle) [1]. *Mycobacterium tuberculosis* (*M. tuberculosis*) is an etiological agent that causes tuberculosis (TB), which is a health issue of global importance. The genital organs are also an important site for dissemination. The World Health Organization (WHO) reported 7 million TB cases in 2018 of which 15% were EPTB [2]. Female Genital TB (FGTB) is the most enigmatic form of EPTB, representing 15–20% of EPTB cases [3,4]. The most prevalent site of bacterial infection for FGTB includes the endometrium (50%–60%), fallopian tubes (95%–100%), ovaries (20%–30%), cervix (5%–15%), myometrium (2.5%), and vagina/vulva (1%) [5,6]. FGTB causes caseation, adhesions, ulcerations, and complete distortion of the cavity causing Asherman syndrome. The clinical appearance of FGTB is generally called—the considerable pretender because it mimics ovarian carcinoma [7]. FGTB represent various clinical symptoms of infertility (43%–74%), oligo menorrhea (54%), amenorrhea (14%), dysmenorrhea (12%–30%), abdominal pain (42.5%), menorrhagia (19%), dyspareunia (5%–12%), and postmenopausal bleeding (2%) [5, 8-11].

MATERIAL AND METHODOLOGY

The study was carried out in women attending outpatient & inpatient department as well as emergency admissions in labour room in Swaroop Rani Nehru hospital and Kamla Nehru hospital, department of obstetrics and gynecology, Moti Lal Nehru Medical College, Allahabad, over a period of one year from June 2020 to June 2021.

Total 160 women were enrolled for study, out of which 8 had inadequate sample and 12 lost to follow up. Group A include females with positive endometrial findings for tuberculosis and group B include females with negative endometrial findings for tuberculosis. Group A include cases positive on histopathological examination and Group B include cases negative on histopathological studies.

Inclusion Criteria

Females with:

1. Infertility
2. Chronic discharge per vaginum (discharge > 6 months)
3. Chronic pelvic inflammatory disease (PID > 6 months) not responding to treatment
4. Abnormal uterine bleeding (amenorrhea, infrequent menstruation, heavy menstrual bleeding, irregular bleeding)
5. Post menopausal bleeding.

Exclusion Criteria

1. Pregnancy / Contraceptive related AUB
2. Malignancy related AUB
3. Infertility with proven ovarian & endocrinal cause with normal HSG
4. Postmenopausal
5. Patient on HRT
6. COVID positive patient

Patients were selected for the study based on the inclusion criteria and by subjecting them to history taking, clinical examination (general physical examination, vitals, systemic examination, obstetric examination). Written informed consent was obtained from each woman before inclusion in the study. In infertility patient, detail history of duration of marriage, period of infertility and history of any treatment taken was noted. In patient of abnormal uterine bleeding, detail history (according to FIGO, 2011) of frequency of menses, duration of menses, volume of monthly blood loss, variation over 12 months (days), regularity of cycle and inter menstrual bleeding will be taken. In patients of vaginal discharge, detail history about onset, duration amount, progress, odour, colour, consistency, precipitating factors, relation to menstrual cycle, associated complaints (abdominal pain, urinary complaints, episodes of fever, dyspareunia, itching, any local lesions). In patient of pelvic pain, detail history of site, onset, character, duration, radiation of pain and associated complaints was enquired. Detailed history regarding age, parity, occupation, socioeconomic status, dietary history, family history regarding exposure of Tb, personal history of Tb or any other chronic illness was taken. Menstrual history regarding day of last menstrual period, present and previous menstrual cycle was taken. Clinical examination including weight, height, body mass index, pallor, icterus, edema, pulse, blood pressure and breast examination. Systemic examination of central nervous system, cardiovascular and respiratory system was done. Abdominal examination will be done for any mass, organomegaly and ascites. Pelvic examination include examination of external genitalia was done to look for any lesion over skin, labia majora, labia minora. On Per speculum Vagina was looked for any ulcer, discharge, any other lesion. Cervix was seen for ulcer, growth, erosion, discharge or any other lesion. Per vaginal examination was done with lubricated middle and index. Endometrial sample of 1st day of menses was sent for histopathological examination to document findings suggestive of Tb.

Statistical Analysis

A p-value < 0.05 was considered statistically significant. The data was analysed using SPSS statistical software (version 20.0).

RESULT

The study was carried out in women attending outpatient & inpatient department as well as emergency admissions in labour room in Swaroop Rani Nehru hospital and Kamla Nehru hospital, department of obstetrics and gynecology, Moti Lal Nehru Medical College, Allahabad, over a period of one year from June 2020 to June 2021. Total 160 women were enrolled for study, out of which 8 had inadequate sample and 12 lost to follow up. Group A include females with positive endometrial findings for tuberculosis and group B include females with negative endometrial findings for tuberculosis. Group A include cases positive on histopathological examination and Group B include cases negative on histopathological studies.

GROUP	NO. OF CASES	% OF CASES
A	20	14.29
B	120	85.71
TOTAL	140	100

Table 2: Details Of Chief Complaints Among Group A And Group B

CHIEF COMPLAINTS	Group- A (n=20)		Group-B (n=120)		p-value
	n	%	n	%	
Constitutive Symptoms	2	10.00	18	15.00	0.805
Infertility	7	35.00	53	44.17	0.610
Abnormal Uterine bleeding	6	30.00	34	28.33	0.879
Chronic PID	4	20.00	11	9.17	0.289
Post Menopausal Bleeding	1	5.00	4	3.33	0.710

Table 3: Details Of Chief Complaints With Gynaecological Examination In Group A

Chief Complaints	n	Speculum Examination		Vaginal Examination	
		S/O Tb	NOT S/O Tb	S/O Tb	NOT S/O Tb
Constitutive Symptoms	2	0	2	0	2
Infertility	7	1	6	2	5
Abnormal Uterine Bleeding	6	0	6	1	5
Chronic PID	4	1	3	1	3
Post Menopausal Bleeding	1	0	1	1	0
Total	20	2	18	5	15

(S/O Tb-suggestive of Tuberculosis)

It has been clearly seen that out of 140 enrolled individuals in the study, 20 (14.2%) are histopathologically proven case of Genital Tb (Group A) while 120 (85.71%) are histopathologically negative for Genital Tb (Group B). The reason for low HPE positive cases is because typical caseating granulomas are rare in women of reproductive age group due to periodical loss of endometrium during menses.

Among Group A, most of cases present with complaint of infertility 7 (35%) while menstrual irregularity present in 6 (30%) cases, chronic pain & chronic per vaginum discharge in 2 cases (10%) each, weight loss, evening rise temperature & post menopausal bleeding in 1 (5%) case each. Among Group B, most of cases present with complaint of infertility 53 (44.17%) while menstrual irregularity present in 34 (28.3%) cases, chronic pelvic pain in 4 (3.33), chronic per vaginum discharge in 7 (5.83) cases, weight loss in 3 (2.5%), evening rise temperature in 2 (1.67%) & post menopausal bleeding in 4 (3.33%) cases. In present study, 7 (35%) cases among proven cases of genital TB while 53 (44.17%) cases among other group had presented with Infertility. This is because Tb bacilli initially and most commonly affect fallopian tubes.

Among proven cases of genital Tb, out of 7 cases of infertility, only 1 case on speculum examination & 2 cases on vaginal examination showed features suggestive of genital Tb. None of abnormal uterine bleeding case showed any feature of genital Tb on speculum examination while only 1 case on vaginal examination had features of genital Tb. Only 1 patient of chronic PID on speculum & vaginal examination had features of genital Tb. Only 1 case of Post menopausal bleeding had positive findings of genital Tb on vaginal examination. Patients with constitutive symptoms had not showed any feature of genital Tb on speculum and vaginal examination. Out of 20 proven cases of genital Tb only 2 (10%) cases on speculum examination and 5 (25%) cases on vaginal examination had positive findings for genital Tb.

CONCLUSION

The study was carried out in 140 suspected women for genital Tb. A detailed history regarding age, address, education, occupation, socio-economic status was recorded followed by systemic and gynaecological examination along with histopathological examination of endometrial tissue.

On the basis of observations made in the study, following conclusions were drawn-

- Out of 140 suspected cases of genital TB, 20 (50.0%) were found to be histopathologically positive for Genital Tb while 120 (85.71%) were found to be histopathologically negative for Genital Tb.
- Majority of suspected cases i.e 7 (35%) among proven cases of genital Tb and 53 (44.17%) among other group were presented with chief complaint of infertility. Abnormal uterine bleeding was presented in 6 (30%) cases among genital Tb proven cases and in 34 (28.33%) cases among other group. 4 (20%) cases among proven cases of genital Tb and 11 (9.17%) cases among other group had chronic pelvic inflammatory disease. Only 1 (5%) case had Post menopausal bleeding and 2 (10%) cases had constitutive symptoms among proven cases of genital Tb while other group had 4 (3.3%) cases of post menopausal bleeding and 18 (15%) cases of constitutive symptoms. As fallopian tubes are most common site involved followed by uterine endometrium, blockage of fallopian tube and destruction of endometrium leads to infertility.
- On gynaecological examination, majority of suspected cases do not showed any feature of genital Tb. Only 2 (10%) cases on speculum examination and 5 (25%) cases on vaginal examination showed features of genital Tb while Conclusion 71 among other group 7 (5.83%) cases on speculum examination and 15 (12.5%) cases on vaginal examination had features of genital Tb. Absence of features suggestive of genital Tb on examination make it difficult to diagnose genital Tb on basis of clinical examination.

In this study, the final diagnosis was made by good history taking, careful systemic and gynaecological examination along with endometrial tissue histopathological examination as diagnostic modality, which can be helpful to diagnose FG TB at a low resource centre where newer and advanced diagnostic modalities are still not available. Available histopathological test of endometrial sample is helpful to get a collective evidence for diagnosis of TB but to a limited extent. FG TB leads to significant reproductive and genital morbidity, therefore at a point of care there is an urgent need to develop a definitive test for making conclusive diagnosis of FG TB and starting ATT to avoid its deleterious complications.

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