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PREVALENCE AND CLINICOPATHOLOGICAL STUDY OF THE FEMALE GENITAL TUBERCULOSIS

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ABSTRACT
Genital tuberculosis can affect any age group, most common being reproductive women. Infertility, menstrual irregularities and persistent pelvic pain are the most commonplace manifestations of woman genital tuberculosis. The aim of the study Prevalence and clinicopathological study of the Female genital tuberculosis. Prospective observational study in Tertiary health care setting of the Department of Obstetrics and Gynaecology and Paediatrics. Sree Balaji Medical College and Hospital, Chrompet, Chennai, India. Since it was a time bound study, all the samples received during the study period and satisfying the inclusion and exclusion criteria were considered. On the basis of the clinical presentation, 56 women of infertility were included. The frequent symptom was primary infertility. Twenty one women (37.5%) had primary infertility. The second commonest symptom was secondary amenorrhoea which was seen in twelve women (21.4%) and six women (11%) suffered from chronic abdominal pain. Five women (9%) had secondary infertility, four women (7%) had menstrual disturbances, three women (5%) were asymptomatic, two women (5%) had white discharge per vagina and woman had (4%) pruritus vulvae. Genital tuberculosis regularly reasons infertility and secondary amenorrhea. Therefore, in nations where tuberculosis is endemic, early and competitive strategies should be pursued to diagnose and treat it. A multi-pronged method to analysis will increase the probabilities of effectively diagnosing this damaging sickness.

Key words: Fallopian tubes, Infertility, Tuberculosis, Endometrium.

INTRODUCTION

Tuberculosis impacts a predicted 10 million people every 12 months and is a leading reason of mortality globally. Although Mycobacterium tuberculosis (MTB) typically influences the lungs, it could additionally unfold to other sites together with the lymph nodes, pleura, bones, joints, meninges, and urogenital tract. Extrapulmonary tuberculosis (EPTB) represents sixteen percentage of suggested instances globally, with considerable local version. [1] FGTB is an extraordinary yet crucial reason of morbidity and infertility in international locations with a excessive general incidence of TB. Genital tuberculosis can affect any age group, most common being reproductive ladies of 20-40 years. Infertility, menstrual irregularities and persistent pelvic pain are the most commonplace manifestations of woman genital tuberculosis. [2] others included fever, ascites, irregular vaginal bleeding, chest ache and ache within the flanks.

Genital tuberculosis seems to be an crucial and common motive of Asherman's syndrome in India, causing oligomenorrhoea or amenorrhoea with infertility 3 Fallopian tubes are the primary and the maximum commonly affected genital organ followed via endometrium, ovary and cervix.

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It reasons irreversible damage to the fallopian tubes leading to infertility that is tough to deal with both with the aid of clinical and surgical strategies.

Endometrial involvement in genital TB is secondary to tubal involvement. It occurs in 50-eighty % of genital TB. Since, there may be no manner to take the fallopian tubes out, sampling from the ovaries and endometrium changed into advised for the detection of female genital tuberculosis. Use of menstrual blood for bacteriologic or molecular prognosis has been advocated however turned into pronounced to expose low sensitivity [4]. Granulomas in endometrial tissue biopsy are better seen in premenstrual phase or within 12 hours after onset of menstruation. Focal collection of chronic inflammatory cells or presence of proliferative endometrium in the premenstrual week in a patient with past history of TB in other parts of the body or a family history of TB would favour a analysis of woman genital TB. Ovaries are involved in 15-25% of instances [5].

Presence of tubo-ovarian mass, tubo-ovarian cyst with adhesions surrounding them is found in such cases. Cervical tuberculosis takes place in 5-15% of instances while TB of vagina and vulva happens in 1% of cases. Genital TB changed into an critical aetiological reason in sufferers with unexplained infertility with repeated IVF failure. The prevalence of FGTB is tough to estimate, as many human beings have asymptomatic disorder and are most effective identified after evaluation for infertility. Incidence of FGTB at infertility clinics varies.

Laparoscopy usually detects macroscopic adjustments together with peritubal adhesions, tubercles on the tubes and small tubo-ovarian hundreds that are normally visible in chronic cases. Female genital tuberculosis also affords one-of-a-kind diagnostic challenges together with diffused clinical manifestations that were over-regarded in laparoscopy for the duration of early stages of infection. The presence of periovarian adhesions, cornual block, tubal beading, tubercles, intrauterine adhesions, and ostial fibrosis had very sturdy association with effective TB PCR. Total predictive price of endoscopic assessment in prognosis of genital TB was 42.52%. The intention of present study Prevalence and clinicopathological take a look at of the Female genital tuberculosis.

MATERIAL AND METHODS

Study setting

Tertiary health care setting of the Department of Obstetrics and Gynaecology and Paediatrics. Sree Balaji Medical College and Hospital, Chrompet, Chennai, India

Study design

Prospective observational study

Duration of study

One year study from July 2018 to july, 2019

Study participants

Infertile women attending the out-patient Department of Obstetrics and Gynaecology, Srilakshmi Narayana institute of medical sciences Pondicherry,India

Sample size

Since it was a time bound study, all the samples received during the study period and satisfying the inclusion and exclusion criteria were considered. On the basis of the clinical presentation, 56 women of infertility were included.

Inclusion criteria

The All patients who presented with infertility, menstrual disturbances, chronic pelvic pain, and recurrent pelvic inflammatory disease refractory to conventional therapy were included in the study.

Exclusion criteria

Antenatal patients, unmarried female and those with any other medical disorder were excluded from the study.

METHODOLOGY

After getting approval from the ethical committee and after taking informed consent from the patients, they were called for endometrial aspiration or biopsy one week before start of menstrual cycle or within 12 hours of onset of menses. Patients were advised abstinence in menstrual cycle before the month of procedure. Two samples were taken by Karmann‟s cannula number 4 or endometrial biopsy curette. One sample was sent for Histopathological Examination in formalin and second sample in normal saline for GeneXpert test. The results of the two were analysed and compared.

DATA ANALYSIS

In the statistical analysis, percentages (frequencies) of various parameters were calculated and subjected to statistical test using chi-square test. The computation was done using Microsoft Excel 2007.

RESULTS

Fifty six women diagnosed to be having genital tuberculosis were included in this study. Only the fifteen patients (27%) had past history of pulmonary tuberculosis. Genital tuberculosis affects the adolescent and young women. Eight women (14%) were less than 20 years; nineteen women (34%) were between 20-29 years of age. seven women (13%) were between 30-39 years, five women (9%) were 40-49 years, and two women (3.5%) were more than 50 years of age (Table 1).

The frequent symptom was primary infertility. Twenty one women (37.5%) had primary infertility. The second commonest symptom was secondary amenorrhoea which was seen in twelve women (21.4%) and six women

(11%) suffered from chronic abdominal pain. Five women (9%) had secondary infertility, four women (7%) had menstrual disturbances, three women (5%) were asymptomatic, two women (5%) had white discharge per vagina and woman had (4%) pruritus vulvae.(Table 2).

On clinical examination six (11%) patients presented with adenexal mass, four patients (7%) had an unhealthy cervix and two patients (3.5%) presented with mass per abdomen. Ultrasound examination revealed tubo-ovarian mass in fourteen patients (25%), two women (3.5%) had an irregular uterine cavity and one woman (2%) had endometrial calcification.

Of the 56 patients, twenty five women (45%) underwent laparoscopy, ten (18%) underwent laparotomy, seven (13%) underwent an endometrial biopsy and six cases (11%) had a cervical biopsy. four cases (7%) who were asymptomatic and were diagnosed post-operatively after vaginal hysterectomy with pelvic floor repair for uterine prolapse. two woman (4%) had tubercular pelvic lymphadenitis and two woman (4%) had associated intestinal tuberculosis. Histopathology revealed tubercular endometritis in eighteen cases (32%), tubercular salpingitis in ten cases (18%), tubercular cervicitis in seven cases (13%), associated intestinal tuberculosis in six cases (10.7%), tubercular vulvitis five case (9%) and tubercular lymphadenitis in four cases (7%). All patients were treated with antitubercular drugs.

Table 1: Age wise distribution

Age wise distribution	Number	Percentage
Less than 20yrs	8	14%
21-29yrs	19	34%
30-39	7	13%
40-49	5	9%
More than 50years	2	4%

Table 2: Symptoms of genital tuberculosis

Symptoms	Number	Percentage
Primary infertility	21	37.5%
amenorrhoea	19	34%
chronic abdominal pain	6	11%
secondary infertility,	4	7%
menstrual disturbances,	4	7%
white discharge	2	3.5%
pruritus vulvae	1	1.7%

Table 3: Histopathological findings of FGTB

Histopathology	Number	Percentage
Tubercular endometritis	18	32%
Tubercular salpingitis	10	18%
Tubercular cervicitis	7	13%
Intestinal tuberculosis	6	10.7%
Tubercular vulvitis	5	9%
Tubercular lymphadenitis	4	7%

DISCUSSION

India is one of the twenty nations with a high burden of tuberculosis. Tuberculosis is a critical motive for mortality and morbidity in India. Female genital tuberculosis is usually secondary to a number one cognizance somewhere else inside the frame. It typically spreads via the haematogenous route. Genital tuberculosis can rarely occur as number one infection when a female has sexual intercourse with a male companion tormented by genital tuberculosis [6]. Genital tuberculosis manifests in to twenty percent of patients with pulmonary tubercolosis. In the developed countries genital tuberculosis is the causative factor in 1% of infertile women, whereas in India genital tuberculosis is the causative factor in 18% of infertile women.

Tuberculosis almost always causes salpingitis and tubal block (92-100%), endometritis and secondary amenorrhoea in half the cases (50%). Ovarian involvement is a late feature (10-30%).The cervix is involved in 5% cases and vagina and vulva are rarely involved (1%) Tuberculosis also causes pelviperitoneal adhesions. Tubercular salpingitis causes exudative changes followed by adhesions. The tissues heal by fibrosis and calcification [7].

Genital tuberculosis causes menstrual disturbances. Oligomenorrhoea occurs in 54% of women, menorrhagia in 19%, amenorrhoea in 14.3% of women and postmenopausal bleeding in 1.6% of women. Tuboovarian mass is seen 19.8% of the women. Several investigations are accomplished to diagnose pelvic tuberculosis like hystero-salpingography, endometrial biopsy and cervical biopsy. Hystero-salpingography is a beneficial research in low aid settings wherein laparoscopy is unavailable or unaffordable. Findings like salpingitis isthmica nodosa, rosary bead appearance, lead pipe tubes and tobacco pouch look are characteristic of genital tuberculosis. Laparoscopy and laparoscopy directed biopsy are useful in prognosis of tubercular salpingitis. Endometrial TB-PCR is a beneficial device for diagnosis of genital tuberculosis [8].

Genital tuberculosis is mainly treated by anti-tubercular drugs for 6-9 months. Surgery is indicated for unresolved tubo-ovarian masses or intestinal obstruction. Early diagnosis and treatment with anti-tubercular drugs may restore fertility in women with minimal damage to the tubes and endometrium. However, with advanced disease with tubercular salpingitis or endometritis conception is rare. The outcome is poor in tuboplasty or even in-vitro fertilization [9].

The low incidence of M. Tuberculosis in endometrial biopsy can be because of various motives. Due to secondary nature of the genital tuberculosis, the infecting organisms are sparse in quantity, and the sampled website won't represent the inflamed vicinity; or in 50% of cases, the contamination can be confined to the fallopian tube. Moreover, due to the cyclical losing of the endometrium, granulomas do no longer have sufficient time to shape; so, the endometrium may not display evidence of tuberculosis in all of the cycles. The incidence can also be lower because of progressed health care facilities over the years [10].

CONCLUSION

Genital tuberculosis regularly reasons infertility and secondary amenorrhea. Therefore, in nations where tuberculosis is endemic, early and competitive strategies should be pursued to diagnose and treat it. A multi-pronged method to analysis will increase the probabilities of effectively diagnosing this damaging sickness.

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