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INCIDENCE , LAPAROSCOPIC AND HYSTEROSCOPIC FINDINGS OF FEMALE GENITAL TUBERCULOSIS

Gynaecology

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ABSTRACT

Objective of the study was to note the Incidence,Laproscopic and Hysteroscopic appearances of genital TB in infertile women.Which was conducted in Department of Obstetrics and Gynaecology, Vardhman Laparoscopy Centre from 1st july 2014 to 31st june 2017. 2,200 infertility patients were subjected to diagnostic laparoscopy and hysteroscopy and findings suggestive of tuberculosis was then recorded.

Out of total 2,200 patients who underwent video laparoscopy and hysteroscopy for infertility,33% had findings suggestive of tuberculosis on laproscopy and 21.5% patients on hysteroscopy. Out of total laparoscopic findings 59.5% were diagnosed in early stage and 55.6% of hysteroscopic findings were of early stage.

Laparoscopic and hysteroscopic evaluation of unexplained infertility to study the tubo peritoneal factors ,has picked up many cases of genital tuberculosis in early forms .Hence offer conclusive medical /surgical management and improve fertility potential.

KEYWORDS

Genital TB,Infertility,incidence,Laparoscopy,Hysteroscopy

INTRODUCTION

Genital TB affects about 12% of patients with pulmonary tuberculosis and represents 15–20% of extrapulmonary tuberculosis.[1]

A recent study by Indian Journal of Medical Research through its survey stated that the number of women with Genital T.B. in Infertility has increased to 30% in 2015 from 19% in 2011.

High degree of suspicion ,good history taking ,thorough clinical examination and judicious use of investigations may help in early diagnosis and timely treatment preventing poor prognosis.

Investigations like Tuberculin Skin test has senstivity of 55% and specificity of 80% in patients with Genital T.B.[2]

Abdominal and pelvic ultrasound ,computed tomography and Magnetic Resonance Imaging are able to diagnose in circumstances where abdominal or pelvic mass,loculated fluid ,septate ascites,thickened peritoneum or adnexal masses are present .In such end stage the prognosis for fertility becomes very poor.By the virtue early or moderately severe cases have the limitation of not presenting with specific sign or masses which could be detected.

Hysterosalpingogram is performed frequently as an investigation for infertility.Although the various features that HSG describes are not specific for genital TB,they are highly suggestive of it.But again all the features considered for diagnosis of TB are very late presentations.

Microscopy and culture are less sensitive modalities.

PCR can help in early diagnosis but false negative results were an important limitation.

Genital TB becomes overt only when the disease is progressed too far has caused organ damage beyond repair with loss of anatomy and functional capability .They patients present with very scanty periods or amenorrhoea or irreversible damage to tubes.

Diagnostic laparoscopy ,hysteroscopy with directed tissue,biopsy are very important and carry senstivities upto 96%.[3]

Although definitive diagnosis of genital tuberculosis recquires definitive histopathological confirmation but this can be proven in only few number of cases.Hence RNTCP Guidelines 2016 allows use of other lesser sensitive tests or high clinical suspiscous for provisional diagnosis and starting treatment of genital tuberculosis.[4]

We can describe the laproscopic picture as follows.

Stage of Disease	Presentations	Prognosis
A. ACUTE STAGE	• Diffuse miliary tubercles • Tubal and peritoneal congestion and edema	Very good recovery
B. CHRONIC STAGE 1.Milder form	• Shortened and thickened tubes with fimbrial agglutination • convolutions, sacculations	• Good chances with Medical Treatment
2.Moderate form	• V thick coiled , beaded,lead pipe appearance • Bowel adhesions	• Medical Treatment should offered with surgical to prevent flare of disease • Average prognosis with risk of ectopic
3. Severe form	• Frozen pelvis • complex encysted masses • tubo ovarian masses • hydrosalpinx • caseation • pyosalpinx	• Better is first surgical intervention ,draining of straw color,fluid,caseous material ,pus and even removal of tubes with hydrosalpinx • After completion of medical Treatment IVF -ET

MATERIAL AND METHODS

The study was undertaken from1st july 2014 to 31st june 2017. 2,200 infertility patients were subjected to diangostic laparoscopy and hysteroscopy and findings suggestive of tuberculosis was then recorded.

The resource population for this study comprised of 2,200 female individuals visiting the clinic with complaints that were within the purview of inclusion criteria. The parameters for selection were complaining of unexplained infertility . Previous operative interventions and operative findings were recorded in detail.

RESULTS

In our study out of total 2,200 infertility patients who underwent diagnostic endoscopy for infertility,33% (726/2200) had findings suggestive of tuberculosis on laparoscopy and 21.5% (474/2200) patients on hysteroscopy.

The median age of these patients was 30 years . The duration of infertility was median 7 years. 52% women out of total 726 patients

diagnosed on laparoscopy suffered from primary infertility while 47.9% had secondary infertility.

8.2% (60/726)patients had history of previous ectopic pregnancy .16.5%(120/726) patients had previous history of pulmonary tuberculosis.

Out of total laparoscopic diagnosed cases 59.5% patients were picked up in mild form,23.7% patients in moderate and 16.8% in severe form.72.7% patients had milder form of tuberculosis on hysteroscopy 27.3% had moderate to severe form of disease.

Table 1. Diagnostic Laproscopic findings.

S. No.	Observations	No of patients (726)	%
1.	Tubes are sacculated ,convoluted,fluid filled vesicles,yellow discolouration of mesosalpinx	432	59.5
2.	Hydrosalpinx	30	4.1
3.	Lead pipe appearance	12	1.6
4.	Encysted fluid collection	30	4.1
5.	T.O.Mass	72	9.9
6.	Pyosalpinx	6	0.8
7.	Various grades of pelvic adhesions	220	30.3
8.	Miliary tubercles	12	1.6

Table 2. Diagnostic Hysteroscopic findings.

S. No.	Observations	No of pts(474)	%
1.	Microcaseations and micropolyps	264	55.7
2.	Fibrosed ostia	96	20.2
3.	Synechia bands	24	5
4.	Narrow cavity/T shaped cavity	78	16.4
5.	Hysterocopy not done	12	2.5
6.	Asherman	6	1.2

DISCUSSION-

Female genital TB is an important cause of significant morbidity, short- and long-term sequelae especially infertility . Timely diagnosis and prompt appropriate treatment may prevent infertility and other sequelae of the disease.

In our study we found that 33% (726/2200) of cases had genital tuberculosis contributing to infertility.Which was similar a prospective observational study in Al Thawra General Hospital (from March 2012 to February 2014)in Yemen.(Arab country.) where they recorded 31.1% [5]

The high incidence in the study population correlates well with studies conducted among infertile women in developing countries.

The disease has a worldwide distribution, and the incidence is high in developing countries [7]

The incidence of genital tract TB is 0.69% in Australia,0.07% in the United States, less than 1% in Finland,4.2% in Saudi Arabia, 5.6% in Scotland[15]

The incidence of genital tuberculosis in patients presenting with infertility was 16.4% only in study in 2005 , conducted in India.[6] Hence the incidence of female genital TB is increasing, so gynaecologists will be increasingly faced with cases of TB and its consequences. The actual incidence of genital TB in the general population cannot be accurately determined, as most patients are asymptomatic and may remain undiscovered.[8]

In our study 80-90% of cases Female genital TB affects young women between 25 and 35 years of age .Median age is 30years . Nearly similar to study in 1976,where the median age was 31years.[9].

The median age of these patients was 31 years (range 22 to 40 years) in study in jaipur in 2005.[6].Mean age was 26.33 years in study conducted in Surat in 2016.[11]The Female genital TB is present in younger age (20–40 years) as compared to premenopausal age in developed countries [10].

Genital TB generally occurs secondary to pulmonary (commonest) or extra pulmonary TB like gastro-intestinal tract, kidneys, skeletal system, meninges and miliary TB through hematogenous and lymphatic route.In our study patients with previous history of pulmonary T.B. was 16.4% and extrapulmonary T.B was 11.4%.

Past history of Pulmonary TB was seen in 22.35% women and extrapulmonary in 11.7% women in study conducted in study conducted in AIIMS delhi .[12] Genital TB affects about 12% of patients with pulmonary tuberculosis and represents15–20% of extrapulmonary tuberculosis.

History of extra-genital tuberculosis was present in 28.04% and tubercular abdomen in 50% of patients[6].

The cases of primary infertility were 52% and secondary infertility were 47.9% in our study.The cases of primary infertility were 81.5% and secondary infertility were 18.5% in this study in surat in 2009.[11] In our study previous history of ectopic pregnancy was presnt in 8.2% (60/726) patients .

Genital tuberculosis was responsible for 13.2% of all cases of ectopic pregnancy .[13]

After medical treatment, the risk of ectopic pregnancy in patients with pelvic TB is estimated to be 33–72%[15]

Merchant used endoscopy (laparoscopy, cystoscopy, hysteroscopy) in evaluating women for pelvic TB.Among 687 patients who underwent laparoscopy, pelvic TB was suspected in 101 (14.7%) from the appearance alone. Definitive evidence was found in 70 cases.[15]

Laparoscopic and hysteroscopic findings in other studies were encysted ascitis in 7.1% women. Various grades of pelvic adhesions were seen in 65.8% women. The various findings on fallopian tubes were normal looking tubes in (7.1%), inability to visualize in (14.1%), presence of tubercles on tubes in (3.52%), caseous granuloma in (3.52%), hydrosalpinx in 15(17.6%) (Right tube 11.7%, left tube 5.9%), pyosalphinx in 3 (3.5%) on right tube and 2 (2.35%) in left tube, beaded tube in 3 (3.5%) on right tube, 4 (4.7%) in left tube with tobacco pouch appearance in 2 (2.35%) women.[12]

frozen pelvis in 17.2%. 24.4% patients had synechias of varying degrees at hysteroscopy[6].

In a laparoscopic study on 85 women with FGTB, they observed tubercles on peritoneum (15.9 % cases), tuboovarian masses (26 %), caseous nodules (7.2 %), encysted ascites (8.7 %), various grades of pelvic adhesions (65.8 %), hydrosalpinx (21.7 %), pyosalpinx (2.9 %), beaded tubes (10 %), tobacco pouch appearance (2.9 %) and inability to see tubes due to adhesions (14.2 %) [14].These above findings were comparable to our study.

Conclusion-

This study highlights the fact that tuberculosis, a chronic infectious disease is one of the major etiological factors of female tubal infertility especially on the Indian subcontinent .Laparoscopic and hysteroscopic evaluation of unexplained infertility to study the tubo peritoneal factors ,has picked up many cases of genital tuberculosis in early forms .Hence offer conclusive medical /surgical management and improve fertility potential.

Because of the silent nature of GTB, which allows development of fulminating disease, the conception rate is very poor and therefore, early diagnosis and treatment is vital to improve outcome.

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