VOLUME-6 | ISSUE-2 | FEBRUARY-2017 • ISSN No 2277 - 8179 | IF : 3.508 | IC Value : 78.46

A STUDY OF GENITAL TUBERCULOSIS IN MENORRHAGIA

Gynaecology

KEYWORDS: genital tuberculosis, TB-PCR

MEENA ANITA — III Year P.G. Student Department of Obstetrics and Gynaecology Zenana Hospital S.M.S. Medical College Jaipur-302012 (Rajasthan)

MENDIRATTA SUMAN — Professor and unit head Department of Obstetrics and Gynaecology Zenana Hospital S.M.S. Medical College Jaipur-302012 (Rajasthan)

ABSTRACT

Objective(s) : To know the occurrence of genital tuberculosis in cases of menorrhagia, including puberty menorrhagia and post menopausal bleeding. **Method(s) :** 165 women suffering menorrhagia of all age group evaluated by detailed history examination and investigations to rule out other causes of menorrhagia. Endometrial aspirate or menstrual blood taken for histopathology, culture, tuberculosis polymerase chain reaction (TB-PCR). Results were analyzed, at least one positive out of these three tests considered as case of genital tuberculosis. **Result(s) :** 86.67% patient were in reproductive age. 63.03% had no additional gynaecological complaints. Menorrhagia (48.49%) was most common pattern. Mantoux test was positive in 89.74% patient of genital tuberculosis. Lymphocytosis in 10.30% and ESR raised in 38.79% cases. Diagnosis of genital tuberculosis was made by polymerase chain reaction (23.03%), Histopathology (6.06%) and culture of acid fast bacilli (12.12%). **Conclusion(s) :** While treating the patients of menorrhagia in outpatient department High index of suspicion, chronicity of complain, non-responding to routine medical therapy, timely and thoroughly investigation make it possible to diagnose it early in adolescent, young or old females as tuberculosis associated with menorrhagia in large number of cases, however these promising results deserves large scale studies.

INTRODUCTION

Tuberculosis is an ancient disease, diagnosed as old as 2500 BC but the disease is just as relevant today as it was at that time. After witnessing a downward trend in the prevalence of disease with the effective chemotherapy, there is a resurgence of the disease worldwide in last two decades, because of HIV and multidrug resistant strains, so much that in 1993, the World Health Organization declared tuberculosis as a "global health emergency".[1]

Female genital tuberculosis is the secondary manifestations of primary site which is mostly in lung. Most common presentation is infertility 70%, followed by menstrual abnormality in 50%, chronic pelvic pain 30% and TO mass 25% cases.[2]

Although Genital tuberculosis is one of the significant etiological factor in menorrhagia including puberty menorrhagia and post menopausal bleeding, despite this fact investigations for tuberculosis not done as routine in such cases. Enough literature is not available regarding association of genital tuberculosis and menorrhagia. Early diagnosis can cure the patient with minimal damage to her future fertility potential and unnecessary major surgical procedures.

METHODS

This prospective study was carried out in Department of Obstetrics and Gynaecology, Zenana Hospital, SMS Medical College, Jaipur during the year 2011-2012.

165 women suffering menorrhagia of all age group or postmenopausal bleeding attending the gynae outpatient department were evaluated by detailed history, systemic, pelvic examination and investigations to rule out other causes of menorrhagia like medical illness, organic or anatomical cause.

Investigations include urine pregnancy test, Pap's smear, CBC, coagulation profile, ESR, Blood sugar, Thyroid profile, ultrasound, X-ray chest, Mantoux test. Diagnosis of genital tuberculosis was done by endometrial aspirate or menstrual blood for histopathology, culture, TB-PCR. Results were analyzed, at least one positive out of these three tests considered the case as genital tuberculosis.

RESULTS

Tuberculosis is prevalent in all age groups our maximum patients (86.67%) were in reproductive age group (Table-1).

Most of the patients had no associated complaint. Out of 38 patients of genital tuberculosis dysmenorrhoea was found in 44.73%. Other non-specific features like chronic cough 2 (1.21%), weight loss 3 (1.81%), loss of appetite 2 (1.21%) cases found (Table-2).

Menorrhagia was the most common menstrual pattern (38.79%), maximum in perimenopausal age group. Out of 38 cases of genital tuberculosis 60.53% had menstrual pattern of menorrhagia (Table-3).

On histopathology 10 (6.06%) cases shows typical granulomatous reaction of tuberculosis. 20 (12.12%) of total cases of present study were found positive on culture on L-J media. 38 (23.03%) out of 165 cases were TB-PCR positive (Table-4).

Genital tuberculosis found to be associated with puberty menorrhagia in 18.18%, in reproductive age group menorrhagia 24.48% and that of postmenopausal bleeding in 9.09% cases (Table-5).

DISCUSSION

Menstruation is a very important & normal phenomenon in every women's life, when get impaired and takes any form of excessive bleeding per vaginum causes great disturbance in social, economical and psychological well-being. If exact cause can identify and treat, morbidity and mortality due to advancement of disease or unnecessary major surgical procedures can be avoided to a great extent. Genital tuberculosis is one of the very important causes of menstrual irregularities.

It is very difficult to find the primary focus of tuberculosis as the interval between primary and genital infection may be ten years or more. Though tuberculosis is prevalent in all age groups maximum patients seen in reproductive age group as reported by Khan Nawaz et al (2005)[3] and Mehrangiz et al (2005)[4].

Dysmenorrhoea found in 43 (26.06%) cases which was the maximum associated complaint. So genital TB usually show no specific symptoms and it is diagnosed as incidentally during investigation of infertility and menstrual irregularity. Similar thing observed by Madhu Nagpal et al (2001)[2], Khan Nawaz et al (2005)[3], Mehrangiz Hatami et al (2005)[4], UN Jindal et al (2006)[5] and Chinmay Sahu et al (2011)[6].

Lymphocytosis found in 17 (10.30%) cases, out of which 15 were found to have genital tuberculosis. Out of 38 cases of genital tuberculosis, Erythrocyte sedimentation rate was raised in 32 (84.21%). 39 (23.63%) cases found to have positive Mantoux test out of which 35 (89.74%) found to have genital tuberculosis, 4 (2.42%) cases show positive X-ray chest, as observed by Madhu Nagpal et al (2001)[2]. USG finding indicating probability of genital tuberculosis were present in 7 out of 165 cases. This shows that genital tuberculosis in its early stages does not show any detectable abnormality on USG and this was found statistically significant (P = 0.008).

On histopathology 10 (6.06%) cases shows typical granulomatous reaction of tuberculosis as observed by Khan Nawaz et al (2005)[3] and Madhu Nagpal et al (2001)[2]. Higher results obtained by Roya Rozati et al (2008)[7] 26.15% and Chinmoy Sahu et al (2011)[6] in 16%. Lower rate may be due to cyclical shedding of endometrium and absence of re-infection of endometrium in every cycle.

38 (23.03%) out of 165 cases were TB-PCR positive. Roya Rozati et al (2006)[7] found TB-PCR positive in 43.1% and Rajib Gon Chowdhary et al (2010)[8] in 44.46%. Present study shows less result as compared to previous studies, may be due to there cases were of infertility which is the most common presenting feature of genital tuberculosis while the menstrual irregularities stand on second place.

Among puberty menorrhagia cases, genital tuberculosis was associated with 2 (18.18%) out of 11 as observed by BS Bhayani et al (2008)[9] (28.30%). Rest of 9 (81.82%) are most probably due to immature hypothalamo-pituitary ovarian axis that leads to anovulatory bleeding. Genital tuberculosis associated in 24.48% cases of menorrhagia in reproductive age group as seen by Madhu Nagpal et al (2001)[2], Samal S et al (2000)[9] and Chinmoy Sahu et al (2011)[6]. Among the post menopausal age group only one case (9.09%) was found to associated with genital tuberculosis as by Samal S et al (2000)[9] found in 1.6% cases, while rest of cases were associated with atrophic endometritis or simple hyperplasia

CONCLUSION

The influence of genital tuberculosis in causing abnormal uterine bleeding mainly menorrhagia is not well-known. It is fact that late sequelae of endometrial tuberculosis like chronic atrophy, necrosis, fibrosis, synechiae cannot be treated and finally ends up in infertility. While treating the patients of menorrhagia in outpatient department strong clinical suspicion along with simple cost effective laboratory support, not responding to routine medical treatment in adolescent, young or old females should bring the diagnosis to tuberculosis in clinician's mind. Majorities of women with menorrhagia are in early or in latent phase of genital tuberculosis can be treated effectively by antitubercular drugs if diagnosed early. PCR is highly sensitive, reasonably specific and non-invasive test, and can performed in outpatient department or in day care setup under short anesthesia, but along this modern method endometrial biopsy by traditional methods like histopathology and culture are very important as these are highly specific. However these promising results deserves large scale studies.

TABLES

Table-1 Distribution of Cases According to Occurrence of Genital Tuberculosis in Menorrhagia in Different Age Groups

Age Group (in years)	Positive for Genital TB		Negative for Genital TB		Total	
	Number	%	Number	%	Number	%
< 20	2	18.18	9	81.82	11	6.67
20 – 29	12	29.27	29	70.73	41	24.84
30 – 39	8	21.05	30	78.95	38	23.03
40 – 49	15	23.44	49	76.56	64	38.79
> 50	1	9.09	10	90.91	11	6.67
Total	**38**	**23.03**	**127**	**76.97**	**165**	**100.00**

Table-2
Distribution of Cases According to Associated Complaints

Associated Complaints	Positive for Genital TB		Negative for Genital TB		Total	
	Number	%	Number	%	Number	%
White Discharge	5	35.71	9	64.29	14	8.49
Lower Abdomen Pain	5	71.43	2	28.57	7	4.24
Dysmenorrhoea	17	39.53	26	60.47	43	26.06
Chronic Cough	2	100.00	0	0	2	1.21
Weight Loss	3	100.00	0	0	3	1.81
Loss of Appetite	2	100.00	0	0	2	1.21

*some patient had more than one complaint.

Table – 3
Distribution of Cases According to Menstrual Pattern

Menstrual Pattern	Positive for Genital TB		Negative for Genital TB		Total	
	Number	%	Number	%	Number	%
Menorrhagia	23	28.75	57	71.25	80	48.49
Menometrorrhagia	7	15.56	38	84.44	45	27.27
Metrorrhagia	3	16.67	15	83.33	18	10.91
Polymenorrhoea	5	22.73	17	77.27	22	13.33
Total	**38**	**23.03**	**127**	**76.97**	**165**	**100.00**

Table – 4
Distribution of Cases According to Specific Tests Used for Diagnosis of Endometrial Tuberculosis in Menorrhagia Cases

Name of Test	Positive for Genital TB		Negative for Genital TB		Total	
	Number	%	Number	%	Number	%
Histopathology	10	6.06	155	93.94	**165**	**100.00**
Culture	20	12.12	145	87.88	**165**	**100.00**
TB-PCR	38	23.03	127	76.97	**165**	**100.00**

Table –5
Distribution of Cases of genital TB according to Type of Menstrual Disturbance Related to Age

Type of Menstrual Disturbance	Positive for Genital TB		Negative for Genital TB		Total	
	Number	%	Number	%	Number	%
Puberty Menorrhagia	2	18.18	9	81.82	11	6.67
Menorrhagia in Reproductive Age Group	35	24.48	108	75.52	143	86.66
Postmenopausal Bleeding	1	9.09	10	90.91	11	6.67
Total	**38**	**23.03**	**127**	**76.97**	**165**	**100.00**

VOLUME-6 | ISSUE-2 | FEBRUARY-2017 • ISSN No 2277 - 8179 | IF : 3.508 | IC Value : 78.46

REFERENCE LIST

1. Mishra Renu. Other medical disorders - Tuberculosis. Ian Donald's - Practical Obstetrical Problems, Sixth edition, pg. no.194-198.
2. Madhu Nagpal, Davinder Pal. Genital tuberculosis - A diagnostic dilemma in OPD patient. Journal of Obs & Gynae, Dec 2001; Volume 51, No. 6. : 127-131.
3. Khan Nawaz. Frequency of endometrial tuberculosis. JPMI, 2005; Vol. 19, No. 11 : 97-100.
4. Mehrangiz Hatami. Tuberculosis of the female genital tract in Iran. Archives of Granian Medicine, 2005; Volume 8, No. 1 : 32-35.
5. Jindal UN. An algorithmic approach to female genital tuberculosis causing infertility. Int J Tubere Lung Dis, 2006 Sep; 10(9) : 1045-50.
6. Chander Prakash Baveja, Chinmoy Sahu4, Usha Manaktala, Vinay Kamal, Vidya Nidhi G, Himanshu Jha. Correlation of different diagnostic techniques and laparoscopy with PCR in diagnosis of female genital tuberculosis J Biosci Tech, Vol 2 (5), 2011 : 385-392.
7. Rozati Roya and et al. Evaluation of women with infertility and genital tuberculosis. J Obstet Gynecol India. Vol 56, No. 5, Sept/Oct 2008; pg 423-426.
8. Rajib Gon Chowdhary, Suman Kalyan et al. Infestation of endometrium by Mycobacterium. Al Ameen J Med Sci, 2010; 3(4) : 322-331.
9. Samal S, Gupta U, Agarwal P. Menstrual disorders in genital tuberculosis. J Indian Med Assoc, 2000; 98 :126-7.