

ENDOMETRIAL TUBERCULOSIS (A TEN YEAR STUDY OF 525 CASES)

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SUMMARY

A study was conducted in the Calcutta National Medical College and Hospital on a total number of 525 cases of Endometrial Tuberculosis (ten year retrospective study from 1983 to 1993). This was based on Clinicopathological studies of the non-pregnant endometrial curettages in the age group of 17-39 years. The curettage was done between the 20th to 25th day of the cycle wherever possible. A curettage was preferred to endometrial biopsy as more tissue is available for examination. The principal complaints were sterility in 415 cases (79.04%). This included both primary and secondary sterility. Other complaints being menstrual disorders like oligomenorrhoea, menorrhagia, metrorrhagia, dysmenorrhoea and amenorrhoea (both primary and secondary). Vaginal discharge was seen in 405 cases (77.14%).

INTRODUCTION

Tuberculosis probably stands as the most important infectious disease in humans. India tops South East Asia region countries in tuberculous infection. 40% of the Indian population is exposed to tuberculosis, claiming 5 lakh lives every

year. In 1993 WHO declared Tuberculosis "a global emergency" (Talib 1993). About 50 to 60% women with genital tuberculosis develop tuberculous Endometritis (Talib 1993). The incidence is higher in India (Schaeffer 1970) but much lower in U.S.A. and U.K. (Gupta 1957). India has endemic tuberculosis. The incidence of genital tuberculosis varies directly with the geographic and the

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endemic rate of tuberculosis (Israel et al 1963).

MATERIALS AND METHODS

Out of the 2025 gynaecological specimens sent of the Department of Pathology during a period of ten years from 1983 to 1993, 525 cases of Endometrial tuberculosis were diagnosed, representing 25.92% of the total specimens. In all these cases, clinical findings were noted and light microscopic details were reviewed. Specimen of the endometrial curettage was collected in 10% Formalin for histological examination. Curettings were performed either for diagnostic or therapeutic purposes for various indications other than abortion. Paraffin section of formalin-fixed tissue stained by H & E was studied histologically.

OBSERVATION

The clinical details are displayed in Table I, the pathological findings in Table II and age-wise histological features in Table III. There was a definite past history of primary extra-genital Tuberculosis in 26 women, pulmonary lesion in 10 and lymph adenitis in 16 cases.

Age : The age of the patients ranged from 17 to 39 years and the majority - 293 cases (55.8%) - were between 21 and 30 years. The infertile patients (primary and secondary) were between 17 and 39 years.

Laboratory Investigations : Blood for TC, DC, Hb% revealed nothing of significance. E.S.R. : 5-25 mm/hr in 275 cases; 30-60 mm/hr in 165 cases; 70-125 mm/hr in 85 cases.

X-ray Chest : (done in 300 cases)

Table I
Clinical data in 525 patients of Tuberculous Endometritis

Clinical details	No. of cases	Percentage
Sterility	415	79.04
Primary	310	59.04
Secondary	105	20.00
Menstrual disturbances		
Oligomenorrhoea	305	58.09
Menorrhagia	45	8.57
Metrorrhagia	52	9.90
Dysmenorrhoea	85	16.19
Amenorrhoea		
Primary	22	4.19
Secondary	101	19.23
Vaginal discharge	405	77.14

Table II

Pathological findings in Tuberculous Endometritis

Endometrial features - curettage done between 20th & 25th day wherever possible.

(1) Macroscopical -		
(a) Normal amount	294 (56%)	
(b) Scanty amount	215 (40.9%)	
(c) Profuse amount	16 (3.4%)	
(2) Microscopical		
(a) Proliferative endometrium	395 (75.2%)	
(b) Secretory endometrium	95 (18.9%)	
(c) Atrophic endometrium	16 (3.4%)	
(3) Nature of Tuberculous lesion		
Sub - Group 1		
(a) Caseating tuberculous granulomatous lesions - - Epithelioid and giant cell granuloma.	146 (27.8%)	
Sub - Group 2		
(b) Non-caseating nodular granulomatous lesions - - non-reactive epithelioid cell granuloma showing small number of epithelioid cells and scant necrosis.	335 (63.8%)	
Sub - Group 3		
(c) Granulomatous lesion with extensive fibrosis -	35 (6.6%)	

only) revealed no abnormality in 290 cases; unilateral pulmonary infiltration in 8 cases and bilateral pulmonary infiltration in 2 cases.

Besides the endometrial curettage, 108 cases (20.57%) showed associated lesions in other parts of the genital tract as - cervix 25 (4.76%); tubes 33 (6.28%); ovaries 30 (5.71%); vagina 20 (3.8%). Of these, 3 were from hysterectomy done for severe haemorrhage and the rest were from wedge biopsy.

Vaginal Discharge : The nature of

leucorrhoea as observed in the present study group was thick mucoid in 278 (52.95%), thin watery in 102 (19.42%) and blood stained in only 25 (4.76%) of cases.

The prevalence of tuberculous endometritis in different parts of India described by various previous authors is shown in Table IV.

DISCUSSION

The total number of cases in the present study was 525 (ten years study from 1983 to 1993). The complaints of

Table III
Histologic features of Endometrial curettage

Age range	Proliferative				Secretory				Atrophic			
	CG	NCG	GF	Total	CG	NCG	GF	Total	CG	NCG	GF	Total
17 - 20	17	57	1	75	4	10	1	15	4	1	0	5
21 - 25	48	75	2	125	13	30	7	50	3	0	2	5
26 - 30	18	69	3	90	3	3	2	8	11	1	3	15
31 - 35	10	63	2	75	3	7	5	15	3	0	2	5
36 - 39	12	16	2	30	2	3	2	7	4	0	1	5
Total	105	280	10	395 (75.2%)	25	53	17	95 (18.9%)	25	2	8	35 (6.6%)

CG = Caseating granulomatous lesion

NCG = Non-caseating nodular granulomatous lesion

GF = Granulomatous reaction with fibrosis

Table IV
Prevalence of Tuberculous Endometritis in India

Series	Place	Year	No. of cases	Age distribution			
				Below 20 yrs	21-30 yrs	31-40 yrs	Above 40 yrs
				Percentage			
Bose	Calcutta	1959	71	14	63	19	4
Rao	Madas	1960	116	15	58	21	6
Sant & Limaye	Bombay	1966	301	22.67	69	8	0.33
Mahrotra et al	Allahabad	1971	117	23.1	58.9	16.2	1.8
Roy et al	Darjeeling	1992	87	24.5	43.2	24.1	8.2
Present series	Clacutta (CNMC)	1993	525	18.09	55.80	26.09	0.02

infertility alone were seen in 415 cases (79.04%). This is comparable with other reports from India (Sant and Limaye 1966, Mukherjee et al 1967, Mehrotra et al 1971, Roy et al 1992). The high incidence in India has been attributed to high endemic rate of tuberculosis in the Indian population. This is probably due to the poor socio-economic status and over crowded accommodation aggravating the situation. Maximum incidence was in the third decade (Table III). Proliferative endometrium in 395 cases (75.23%) and atrophic in 35 cases (6.66%) may reflect some hormonal disturbances. It is a well known fact that the incidence of tuberculous endometritis decreases and is rare in atrophic as well as post-menopausal women, possibly because of decreased vascularity of tissues. These findings are in agreement with many other studies conducted on the endometrium (Agarwal & Gupta 1993). Secretory endometrium was seen only in 95 cases i.e. 18.09% (Table III). In the late secretory and shedding stage even if tuberculosis lesions were present, they could not be obtained in most of the curettings, having been shed. Interestingly, among the cases showing menstrual disturbances those with amenorrhoea 123 (23.42%) showed almost total replacement by caseous granuloma (Table I). This important finding explains why caseation is so often lacking in cases of abnormal uterine bleeding. Infective focus is shed during early menstruation before there is time for caseation to occur. But in amenorrhoea, there is ample scope for the lesion to progress to a full blown caseous granuloma. A diagnosis of endometrial tuber-

culosis made on histological grounds alone is reasonably dependable. Granulomatous endometritis, even with a negative acid fast stain and culture, is generally presumed to be of tuberculous origin although theoretically there are other possible agents such as sarcoid or foreign body reactions (Novak & Woodruff 1979). Endometrium is one of the few tissues in which granulomas that simulate tuberculosis are extremely rare. A more frequent, but still rare source of mistaken diagnosis is the presence of residual small islands of decidual cells following a miscarriage. Multiple sections should be examined in doubtful case (Symmers 1978). The typical and almost pathognomic lesions of tuberculous endometritis is the non-caseating granulomas composed of epithelioid cells, giant cells and peripheral lymphocytes (Govan 1962). The granulomas are usually situated in the superficial part of the endometrium, often in close apposition to a gland. When a granulomatous endometritis is present, it is probably tuberculous (Novak 1979).

Only the histological criteria detected by one or more studies were taken to make the diagnosis. Each of the cases was thoroughly examined and investigated for pulmonary and extrapulmonary tuberculosis and for any systemic or genital disease. In all our cases repeated D & C followed by microscopical study were done. Abnormal menstrual cycles, including dysmenorrhoea, were seen in most of the cases. Oligomenorrhoea was by far the most common symptom. This is compared with some studies conducted to see genital involvement in pulmonary

tuberculosis (Tripathi & Tripathi 1981) where amenorrhoea was by far the commonest symptom. We did chest x-ray in 300 of our patients and found no involvement of the lungs in 290 cases. Probably it was the pulmonary tuberculosis exerting a general effect on the genital tract giving rise to amenorrhoea Tripathi & Tripathi study (1981). Whereas, oligorrhoea was the commonest symptom in our study.

Vaginal discharge in 405 cases (77.14%) was more apparent than real because of the inclusion of cases of tuberculosis of the female genital tract - 108 cases of cervix, tubes ovaries and vagina (Tripathi 1981). 294 (56%) of our cases had normal amount of endometrium at curettage and the remaining had quantitative abnormality of endometrium, (40.9%) 215 scanty amount and 16 (3.04%) profuse amount.

Age wise-distribution of endometrial tuberculosis as observed in the present study tallies well with that of Bose (1959) and Rao (1960). In the series of Sant Limaye (1963), Malhotra et al (1971) and Roy et al (1993) the incidence is comparatively more in the second decade of life (Table IV). Endometrial involvement by tuberculosis shows a declining trend as the menopausal age approaches. In the present study it appears to be 0.02%, though Bose (1959), Rao (1960) and Roy et al (1992) documented 4%, 6% and 8.2%

respectively in the menopausal age.

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