

# CLINICO-LABORATORY STUDY OF GENITAL TUBERCULOSIS:

## PART I—ENDOMETRIUM

by

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Tuberculosis is a common disease in industrial township of Kanpur and presents unusual symptomatology and involves both common and rare sites in body (Pratap *et al*, 1972). Genital tuberculosis is frequently encountered in healthy females in sharp contrast to tubercular toxæmia met with in pulmonary, abdominal and glandular tuberculosis, and is, therefore, diagnosed commonly in routine endometrial histology by the pathologist to the utter surprise of the treating doctor and the patient.

The present report is based on the clinico-pathological analysis of 410 cases of endometrial tuberculosis encountered during the eight year period from 1966-1973 in the department of Pathology & Bacteriology, G. S. V. M. Medical College, Kanpur.

### Material and Methods

The present report is based on critical analysis of histological sections of endometrial biopsies received from female patients in the Department of Pathology & Bacteriology, G. S. V. M. Medical College, Kanpur over a period of eight

years from 1965-1973.

The biopsy material obtained by curettage in premenstrual period was fixed in 10 per cent formol saline. Paraffin sections were routinely stained with haematoxylin and eosin, and whenever in doubt about presence of tubercular lesions, acid-fast staining was carried out.

The microscopic examination of endometrium was done for phasing and presence of inflammatory exudate, lymphoid collections, tuberculosis and hyperplastic disease. Whenever histological diagnosis of tuberculosis was made, clinical data from records were analysed laying emphasis on marital and obstetric history, menstrual disorders and presence of extra-genital tubercular lesions.

### Observations

A total of 13192 endometrial biopsies were screened during the period under study. Out of this number 410 cases of endometrial tuberculosis were diagnosed, giving an incidence of 3.1 per cent, as shown in Table I.

Incidence of age and main symptoms observed are shown in Table II. All women were married. The youngest patient was 14 years old and the oldest 52 years of age. It was observed that incidence of tuberculosis was highest in early adult life during active reproductive phase and mostly occurred in women between 20-30 years (48.7%).

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TABLE I  
Incidence of Tubercular Endometritis in Endometrial Diseases

Disease group	No. of cases	Tubercular endometritis	
		Number	Per cent
Sterility—Primary	4150	120	2.9
—Secondary	2376	84	3.5
Menstrual disorders	4089	131	3.2
Pelvic inflammation	1530	57	3.7
Miscellaneous	1047	18	1.7
Total	13192	410	3.1

TABLE II  
Age and Presenting Symptoms

	No.	Per cent	AGE							
			Under 20		21-30		31-40		Above 40	
			No.	%	No.	%	No.	%	No.	%
Primary sterility	120	29.3	10	8.3	84	70	23	19.2	3	2.4
Secondary sterility	84	20.5	—	—	42	50	40	47.6	2	2.4
Amenorrhoea	18	4.4	9	50	7	38.9	2	11.1	—	—
Oligomenorrhoea	90	21.9	21	23.3	44	48.9	20	22.2	5	5.5
Menorrhagia	41	10.0	6	14.6	5	12.2	26	63.4	4	9.8
Tubercular Toxaemia	57	13.9	20	35.1	18	31.6	13	22.8	6	10.5
	410		66	16.1	200	48.8	124	30.2	20	4.9

The commonest presenting symptom in our series was sterility in 49.9 per cent cases (primary in 29.3%, secondary in 20.5%) followed by oligomenorrhoea in 21.9 per cent cases. Amenorrhoea was encountered only in 4.4 per cent patients. It was surprising to note that tubercular toxaemia characterised by fever, pain in abdomen and weakness was present in 13.9 per cent cases.

It is evident from Table II, oligomenorrhoea brings younger patients to hospital usually under 30 years, while menorrhagia or profuse menses is mainly complained earlier and hence younger patients seek treatment, while secondary sterility is commonly present in older patients past the age of 30 years.

#### Histological Pattern

Tuberculosis was seen in association with both normal and abnormal endometrial gland pattern as shown in Table III.

We found normal secretory phase of endometrium in 211 women (51.5%). Of those, 106 (50.2%) were cases of sterility 60 (28.4%) of menstrual disorders and 45 (21.3%) of tubercular toxaemia. Anovulatory cycle was demonstrated in 15 (3.7%) women. In 28 (13.7%) sterility cases no phasing could be done as biopsy material consisted of only tubercular granulation tissue. Tuberculosis appeared in classical granuloma formation and comprised of caseation, epitheloid cells and Langhan's giant cells in 216 cases

TABLE III  
Histology Pattern

	No.	Percent	Sterility		Menstrual disorders		Tubercular Toxaemia	
			No.	%	No.	%	No.	%
Proliferative phase	76	18.5	26	34.2	43	56.6	7	9.2
Secretory phase	211	51.5	106	50.2	60	28.4	45	21.3
Hyperplastic	41	10.0	18	43.9	21	51.2	2	4.9
Mixed pattern	39	9.5	16	41.0	22	56.4	1	2.6
Anovulatory	15	3.7	10	66.7	3	20.0	2	13.3
Tubercular granulation tissue	28	6.8	-	-	-	-	-	-

Total 410

(52.7%), tuberculous granulation tissue diffusely infiltrating in 160 (39.0%) cases and occasional granuloma with very little caseation in remaining 34 (8.3%) of the cases. Other endometrial damages noted were chronic endometritis in 68 (16.6%); cases lymphoid follicle formation in 49 (11.9%) and endometrial fibrosis in 18 (4.4%).

Evidence of tuberculosis elsewhere was noticed in 99 persons (24.1%) as detailed in Table IV. Cervical biopsy was available in 108 patients and 51 of these showed presence of tuberculosis. Cervical lymph nodes were enlarged in 43 patients and lymph node biopsies were done in 29 persons, of which 14 were positive for tuberculosis. Abdominal lymph nodes were palpable in 17 patients, of these five were subjected to laparotomy and all showed tubercular lymphadenitis. X-ray chest was done in 54 cases and was positive for old or fresh tubercular lesion in 26 persons. In 3 patients tubes and ovaries showed tubercular lesion.

#### Comments

The incidence of tubercular endometritis in the present study correlates well with the findings of Devi, 1962

TABLE IV  
Incidence of Tuberculosis Elsewhere in Association With Tubercular Endometritis

Site	No. of cases	Per cent (of 410)
Cervix	51	12.4
Tubes and Ovaries	3	0.7
Cervical lymph nodes	14	3.4
Abdominal lymphnodes	5	1.2
Pulmonary	26	6.3
Total	99	24.1

(3.1%); Sant and Limaye, 1966 (3%); Munjal *et al*, 1970 (3%) and Mehrotra *et al*, 1971 (3.8%), but is fairly low when compared to findings of Gupta, 1957 (10.1%).

It is interesting to note that genital tuberculosis affects fertile and infertile females with same frequency. However, it is more associated with oligomenorrhoea than with menorrhagia, as pointed out by Mehrotra *et al*, (1971). Genital tuberculosis is more frequent in active reproductive phase, with maximum incidence in 21-30 years age group (48.7%).

Our figures are lower than most of the reported series viz; Gupta (1957) 68.0%, and Hafeez and Tandon (1966) 89.1%. The mean age in our series was 28 years

as compared to 24.5 years reported by Mehrotra *et al*, (1971) and 26.5 years by Bose (1959). Oligomenorrhoea is more common in patients under 30 years of age. The incidence of profuse menses is mostly seen in women after 30 years of age.

History suggestive of pelvic inflammation and tubercular toxæmia was present in 57 (13.9%) patients indicating that tuberculosis is an important disease to be kept in mind in investigation of a case of pelvic inflammation. Fever and pain in abdomen was seen more in younger women under the age of 30 years and mostly in parous females. History of fever, pain and adnexitis indicative of inflammation was also observed in 50 cases reported by Heera and Das (1971), who also commented that latent partially healed tubercular focus in body elsewhere is reactivated under strain during reproductive phase and active lesion is induced in vulnerable organs like tube and uterus, especially at delivery or abortion.

Association of tuberculosis in cervix and other organs was present in our series in 24.1 per cent cases, although this incidence is fairly high it is not real because all patients could not be followed properly in this retrospective study. In our opinion the real incidence is much

higher, since tuberculosis is very common in Kanpur. Paranjothy (1971), found positive X-ray in 37.2% of his cases of tubercular endometritis.

*Summary*

A report of clinico-pathological features of 410 patients of endometrial tuberculosis is submitted. Overall incidence of endometrial tuberculosis in all endometrial biopsies seen during the period under study was 3.1%. The disease is equally common in fertile and infertile females and is most frequent in young adults under the age of 30 years.

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