

DIAGNOSIS OF ENDOMETRIAL TUBERCULOSIS BY SUCTION CURETTAGE

MURALIDHAR RAUT • PREMSHILA RATH

SYNOPSIS

Endometrial aspiration cytology was carried out in 250 women coming with infertility, DUB and other gynaecological complaints. In each, this was followed by curettage to correlate the cytological findings with histology. In 11 cases (4.4%) endometrial tuberculosis was diagnosed by cytology which was confirmed by histology. The incidence was high (12.9%) in association with secondary infertility. Abnormal menstrual pattern was noted in only 35% of these cases. The accuracy of endometrial aspiration cytology was 100% when compared with histology. It is a simple, safe and nontraumatic procedure and can be recommended as a screening method to diagnose genital, especially endometrial tuberculosis in cases of infertility and abnormal menstrual disorders.

Endometrial tuberculosis is not uncommon. It is a frequent cause of menorrhagia, secondary amenorrhoea and infertility. It may also be present without menstrual disorder or a palpable pelvic mass. It is usually diagnosed by endometrial histopathology. But this procedure requires hospitalization, anaesthesia and is time consuming. Hence there is need for a simple OPD procedure to detect this disease as well as a screening method in all the above cases. Endometrial aspiration cytology has been claimed to be simple, inexpensive and nontraumatic. Robert et al, 1974 and Kambour et al, 1974). The present work was taken up to evaluate this method in this area

where tuberculous disease are very common.

MATERIAL AND METHOD

Endometrial aspiration cytology was carried out in 250 patients admitted to the Gynaecology units of VSS Medical College from January 1990 to January 1991. The purpose was to diagnose endometrial tuberculosis among other pathological conditions, and to confirm the diagnosis by endometrial histological study. In each case, endometrial aspiration was done with the help of an aspiration canula fitted to a 20 ml polythene syringe, before D & C operation. Smear of aspirated material was prepared on a glass slide and fixed with 95% ethyl alcohol before drying. The slides were stained by haematoxyline and eosin. Endometrial tuberculosis was diagnosed

Dept. of Obst. & Gyn. V. S. S. Medical College, Burla, Orissa.

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by the presence of typical tubercles, Langhans type of giant cells and epitheloid cells.

chronic cervicitis cervical polyp, fibromyoma of uterus and endometriosis.

OBSERVATION

Most of the cases were in the age group of 21 to 30 years with an average of 28.5 years. Majority (32.2%) were nulliparous who came for investigation of infertility.

ENDOMETRIAL CYTOLOGY IN CLINICAL CONDITIONS

The cytologic picture of endometrium in various clinical conditions is detailed in Table II and Fig. 1, 2, 3.

CLINICAL DIAGNOSIS

The distribution of patients with the clinical diagnosis on first examination is outlined in Table I.

Other conditions included cervical erosion,

CORRELATION OF CYTOLOGY AND HISTOLOGY

In all the cases endometrial aspiration was followed by curettage and histological study of endometrium. The findings of the two proce-

Table - I

Disease	No. of cases	Percent
Primary Infertility	75	30.0
Secondary Infertility	31	12.4
D. U. B.	70	28.0
Other conditions	74	29.6
Total	250	100.0

Table - II

Cytohormonal pattern correlated with clinical condition

Endometrial Cytohormonal Pattern	No. of cases		Clinical Conditions							
	No.	%	Pr. Infert.		Sec. Infert.		D. U. B.		Others	
	No.	%	No.	%	No.	%	No.	%	No.	%
Proliferative	44	17.6	8	10.66	5	16.13	26	37.14	5	6.75
Secretory	183	73.20	61	81.33	22	70.97	37	52.85	63	85.13
Glandular Hyperpl.	8	3.2	-	-	-	-	5	7.14	3	4.50
TB Endometritis	11	4.4	6	8.00	4	12.90	1	1.43	-	-
End. Carcinoma	1	0.40	-	-	-	-	-	1.35	-	-
Inadequate Asp.	3	1.2	-	-	-	-	1	1.43	2	2.70

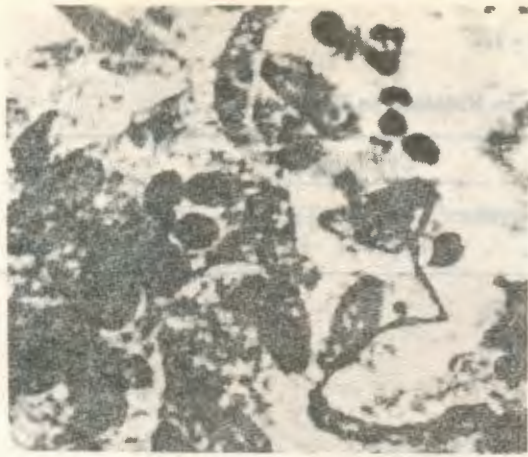


Fig. 1 : TB Endometritis showing epithelioid cells and lymphocyst (cytology)

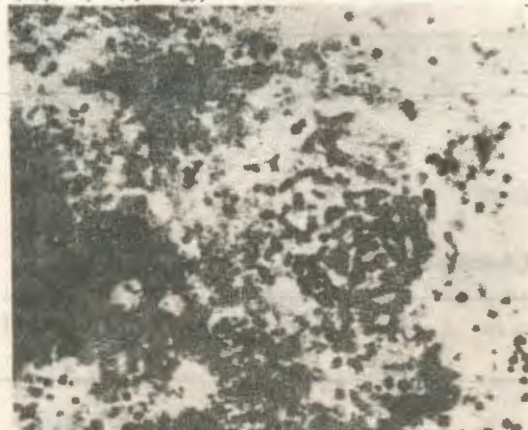


Fig. 2 : Tuberculous Endometritis showing Langhan's giant cells (cytology)

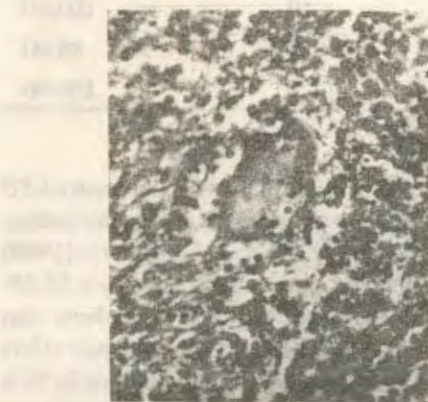


Fig. 3 : Non-caseating granuloma with Langhan's giant cells (Histology)

dures are correlated in Table III.

There were 3 cases in which the endometrium on aspiration was inadequate for interpretation where as in 2 cases the curetting were inadequate one with proliferative endometrium and the other with endometrial tuberculosis, in the latter, cytological interpretation could be done satisfactorily. Thus the two procedures complement each other.

ACCURACY OF CYTOLOGY

Taking histological finding as standard, the accuracy of the aspiration cytology was judged. This is depicted in Table IV.

The findings of both procedures had a high correlation (80-100%) with an overall accuracy of 93%.

DISCUSSION

In this series of 250 cases whose endometrial aspiration was done, there were only 3 cases (1.2%) where adequate material could not be obtained for cytological interpretation. The findings of Hecht (1956), Regan (1965), Isaacs and Wilohoit (1975) were similar whereas Baijal et al (1980) using Carey's canula had 13.5% failure rate.

The cytological picture of endometrium was commensurate with menstrual pattern being more abnormal with menstrual deviation. The correlation with histology was very high (100%) except in proliferative endometrium (80%).

There was one case of adenocarcinoma of the endometrium suspected by cytology in a case of DUB and confirmed by histology. The cytological accuracy of this condition as reported by Robert et al (1974), was 84.4%.

In all cases (4.4%) the aspirated material showed evidence of endometrial TB. This could be confirmed by histology in 10 cases, the nonconfirmation in the single case being due to insufficient material for histological study.

The incidence of genital tuberculosis in India varies from 3.2% to 6.5% (Padubidri et al, 1980)

Table - III

Cytological Interpretation in Relation to Histology

Endometrial Histological Pattern	No. of cases	Cytological Pattern					
		Proliferative	Secretory	Gland. hyper pl.	TB Endometritis	Endomet. carci.	Inadequate
Proliferative	45	36	8	-	-	-	1
Secretory	183	7	175	-	-	-	1
Gl. hyperplasia	9	-	-	6	-	-	1
TB Endometritis	10	-	-	-	10	-	-
End. Carcinoma	1	-	-	-	-	1	-
Inadequate	2	1	-	-	1	-	-
Total	250	44	183	8	11	1	3

Table - IV

Cytological Accuracy

Histological Diagnosis	No. of cases in Histology	Cytological confirmed cases	Percent of accuracy
Proliferative	45	36	80.00
Secretory	183	175	95.62
TB Endometritis	10	10	100.00
Glandular Hyperplasia	9	8	88.00
Endometrial carcinoma	1	1	100.00

whereas workers in western countries report a low incidence of 0.05% to 1.8%. In the present study, maximum number (80%) were found in 21 to 30 year age group. Similar were the findings of Minkowitz Muechler (1971). In the present study the incidence was high in association with secondary infertility (12.90%) whereas Abbasi et al (1977) found this to be more in primary (4.21%) than secondary infertility (2.08%).

Most of the cases (55%) with endometrial TB had normal menstrual pattern as was the finding of Abbasi et al (1977) where as Singh et al (1980) et al (1980) found menstrual irregularity in 55.2% of their cases. Tyagi et al (1977) believe that local endometrial changes with systemic effect account for abnormality in menstruation. In 35% of the present cases abnormal menstruation was noted.

The principal clinical presentation was infertility (82%) which correlates well with the findings of Schaefer (1976).

The accuracy of endometrial aspiration cytology was 100% when correlated with histology. This was also the finding of Baijal et al (1980) and Padubidri et al (1980). The inherent diagnostic accuracy and interpretation of cytological study depends on the competency of the technique involved. It was experienced that the use of H & E stain yielded superior results than other stains. The above authors were of the opinion that endometrial cytology was superior to histology in diagnosing endometrial TB. This was proved in this study where one case could not be confirmed by histology due to inadequate material. The ability of endometrial aspiration cytology in establishing the diagnosis of endometrial tuberculosis is further strengthened by the present study. The high incidence of this condition (4.4%) especially in infertility emphasizes the need for its epidemiological study. The technique is simple, inexpensive and painless and can be taken up as an OPD procedure.

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