

LYMPHOID FOLLICLE IN ENDOMETRIUM

by

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Histological study of the endometrium obtained from biopsy, curetting and surgically removed uteri occasionally shows the presence of lymphoid follicles in the stroma. The significance of lymphoid follicles has not been established because of scant and controversial information in the literature (Henke & Labarsch 1930; Deelman, 1933; Papadia, 1957; Payan *et al*, 1964; Sen and Fox, 1967 and Ishihama and Makino, 1970).

The object of this study was to find out the significance of lymphoid follicle in the endometrial stroma.

Material and Methods

A study of endometria obtained from 926 cases attending outdoor and indoor departments of the Kamala Nehru Me-

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morial Hospital, Allahabad, was carried out (Table 1). The tissue obtained was fixed in 10% formal saline, processed and the sections stained with haematoxylin and eosin.

The lymphoid follicle was detected under the microscope as a compact group of small deeply stained cells segregated from rest of the endometrial stroma with no evidence of any inflammatory process elsewhere in the endometrium.

A distinction was made between cases in which one or two lymphoid follicles per slide (+) were found and those in which three or more were seen. (++)

Observations

A study of 926 endometria was done, of which 882 were obtained after biopsy and curettage while 44 were from uteri removed on hysterectomy. Lymphoid follicles were present in 8.5% of the former group and 15.9% of the latter group. The over-all incidence of lymphoid follicles was 8.85% (Table 1).

The different types of endometria had

TABLE I
Showing Incidence of Lymphoid Follicles in Endometria

Material	No. of specimen	Specimen with No.	lymphoid follicle Percentage
Biopsy & curettage	882	76	8.5
Hysterectomy specimen	44	7	15.9
Total	926	82	8.85

variable incidences of lymphoid follicles. It was 7.64 and 1.3% in proliferative phase, 7.50% and 1.5% in secretory phase, 0% and 3.3% in hyperplasia and 3.2% and 0% in menstruating endometrium as one or two lymphoid follicles per slide and three or more than three lymphoid follicles per slide respectively. The number of cases in hyperplasia and menstruating phase were less. The overall incidence is shown in Table II.

The presence of lymphoid follicles in the removed uteri has been studied. It was 7.6% in fibromyoma, 19.9% with menstrual disorders, 11.1% in prolapse and 33.3% in cervical polyp. There were only three cases with cervical polyp hence this high percentage needs further study in such cases. (Table 3).

The incidence of lymphoid follicles according to the presenting symptom of the patient was also studied. It was 11.4% in sterility, 13.7% in menometorrhagia and 12.3% in the miscellaneous group (Table IV).

Comments

Regarding the lymphoid follicles or lymph follicle like structures in the endometrium (Fig. 1), no view has been definitely accepted as to whether the appearance is physiological or pathological nor as to its significance. Deelman (1933), Henke and Labarsch (1930), and Papadia (1957) believe that endometrial lymphoid follicles are physiological. Payan *et al*, (1964) considered the occurrence of lymphoid follicles one or two per section as physiological, while the presence of three or more per section as pathological.

The presence of lymphoid follicles in endometrium is about 11%. Henke & Labarsch (1930), Payan *et al*, (1964) and Ishihama & Makino (1970) reported 12%, 10.8% and 11.8% respectively. In the present study the lymphoid follicles were noted in 8.85% which was lower than reported by other workers.

The detailed examination of resected

TABLE II

Showing the Endometrial Pattern and the Incidence of Lymphoid Follicles

Total	Type of endo.	No. of specimen	Positive		Percentage		
			—	—	Total	—	Total
Proliferative	353	27	4	31	7.64	1.3	8.94
Secretory	468	35	7	42	7.50	1.5	9.0
Hyperplasia	30	0	1	1	0.0	3.3	3.3
Menstruating	31	1	0	1	3.2	0.0	3.2

TABLE III

Showing Distribution of Lymphoid Follicle According to Uterine Pathology

Pathology	No. of uterus	Positive		Total	Percentage		Total
		—	—		—	—	
Fibromyoma	13	0	1	1	0	7.6	7.6
Functional bleeding	15	2	1	3	13.3	6.6	19.9
Prolapse	9	1	0	1	11.1	0.0	11.1
Cervical polyp	3	1	0	1	33.3	0.0	33.3
Miscellaneous (No obvious path.)	4	0	0	0	0.0	0.0	0.0

TABLE IV
Showing Distribution of Lymphoid Follicle According to Presenting Symptom.

Presenting Symptom	Prolifer. phase		Secretory phase		Metro. Haemo.		Menstruat. Endo.		Total		
	Total	%	Total	%	Total	%	Total	%	Total	%	
P. Sterility ..	174	10	31	9.8	2	0	1	5.0	513	42	8.2
S. Sterility ..	23	0	4	4.6	1	0	0	0.0	116	4	3.4
Bleeding (Cyclic & Acyclic) ..	124	18	6	18.1	22	1	3	0.0	182	25	13.7
Other Symptoms ..	32	3	1	3.2	5	0	3	0.0	71	4	5.5

uteri has given a rate as high as 70% (Papadia, 1957). Such a high rate seems to suggest the physiological significance of such a phenomenon. In this study it is only 15.9% which may be due to lack of detailed study but consistent with the finding of Payan *et al*, (1964) which is 19.5%. This high percentage in removed uteri in comparison to curetting may be due to presence almost always of some pathology when the entire uterus is removed such as fibroma bleeding, prolapse or cervical pathology.

According to the conventional view it has been assumed that there is some relationship between the lymphoid follicles and chronic endometritis such as tuberculosis or to some non-specific endometritis as a result of intrauterine device. But no relationship between tubercular endometritis and intrauterine device with the appearance of lymphoid follicles have been found by Matsura (1968) and Ishihama and Makino (1970) respectively.

Papadia (1957) and Payan *et al* (1964) and Ishihama and Makino (1970) claim that lymphoid follicles do not occur before puberty nor after menopause. However, Deelman (1933) reported a case of a 75 years old patient with endometrial hyperplasia and lymphoid follicles. In study ages varied from 16 years to 60 years.

Sen and Fox (1967) proposed that the appearance of lymphoid follicle was a process of facilitating the immunological adaptation of the mother toward the fertilized ovum.

Ovarian function may be related. The incidence of lymphoid follicles in the proliferative phase reported by Payan *et al* (1964) was 9.1% and in this series it was 8.94%. Its presence in the secretory phase as reported by Payan *et al* (1964) was 9.9% as compared to 9.0% in this series.

Ishihama and Makino (1970) noted the presence of lymphoid follicles in the secretory phase as more frequent than in the proliferative phase, both in the control as well as in intrauterine device groups, suggesting a relationship with the secretion of progesterone.

Payan *et al* (1964) reported 44.4% lymphoid follicles in hyperplasia of endometrium which may be due to some pathological factor but no such observation was made in the present series (Incidence 3.3%). In sterility cases and menorrhagia or metrorrhagia the incidence was 11.6% and 13.7% respectively. It can not be due to infection as the lymphoid follicles were well defined and localized rather than diffuse. It may be due to some unknown pathology in the endometrium.

Summary

The frequency of lymphoid follicles in the endometria obtained after biopsy and curetting was 8.85% while in the removed uteri it was 15.9%.

The lymphoid follicles encountered in the proliferative phase was 8.94%, secretory phase 9.0%, hyperplasia 3.3% and menstruating 3.2%.

Lymphoid follicle in the removed uteri with fibromyoma was 7.6%, menometrorrhagia 19.9% and prolapse 11.1% were noted. The incidence of the lymphoid

follicle in sterility was 11.4% and 13.7% with history of bleeding.

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See Fig. on Art Paper V