

# ENDOMETRIAL HISTOPATHOLOGY IN DYSFUNCTIONAL UTERINE BLEEDING

by

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Dysfunctional uterine bleeding is one of the commonest gynaecological problems. According to Bickers (1948), 45% of all women between the ages of 17 and 40 years are likely to consult the gynaecologist at some time or other for this menstrual disorder. In India, the incidence has been reported to vary between 12.6% to 23.1% of all admissions in the gynaecological wards. The case may present any pattern from moderate bleeding to prolonged flooding, so as to exsanguinate the patient. The rhythm may be preserved or quickened or there may be non-bleeding phases of considerable duration.

A total of 12,676 patients attended the gynaecological out-patients department of the All-India Institute of Medical Sciences Hospital, New Delhi, during the period of three years, from

June 1959 to May 1962. Diagnosis of dysfunctional uterine bleeding was made on 681 patients, an incidence of 5.3%. Two hundred and thirty-one patients were admitted in the hospital for treatment. In all patients with cyclic bleeding, curettage was done in the premenstrual phase. This was not possible where there was acyclic or continuous bleeding. Seven patients with organic disease and four patients with post-menopausal bleeding were excluded from the study. An analysis of the endometrial histology and clinical findings was made in 220 patients.

The bleeding was cyclic in 73 patients, acyclic in 108 and continuous in 39 patients. The histological picture in these is summarised in Table I.

*Secretory endometrium* was seen

TABLE I  
*Endometrial histology in relation to bleeding*

	Total	Secretory		Proliferative		Hyperplasia		Atrophic	
		NO	%	NO	%	NO	%	NO	%
Cyclic bleeding	73	43	59	18	24	11	15	1	1.4
Acyclic bleeding	108	34	31.5	41	37.9	25	23.4	8	7.4
Continuous	39	2	5	24	61.5	10	25.8	3	7.7
<b>Total</b>	<b>220</b>	<b>79</b>	<b>35.9</b>	<b>83</b>	<b>37.78</b>	<b>46</b>	<b>21</b>	<b>12</b>	<b>5.8</b>

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in 35.9% of all the cases. Sutherland found it in 30.7% of 861 cases analysed by him. Secretory endometrium was most common in association with cyclic bleeding and was observed in

59%. It was seen in 31.5% of those with acyclic bleeding and 5% of those with continuous bleeding.

*Proliferative endometrium* was found in 37.78% of this series. It was seen more often in patients with continuous bleeding, an incidence of 61.5%. In patients with acyclic bleeding it was found in 38% and in those with cyclic bleeding it was observed in 24.6%. Proliferative endometrium was seen in 33% of Sutherland's cases.

#### *Hyperplasic endometrium*

*Hyperplasic endometrium* was seen in 21% cases. Incidence of hyperplasia has been quoted to vary between 28% to 68% by different authors. Sutherland in his series found it in 30.8% and in 39.4% in a review of 31 papers. Hyperplasia was seen more often in patients with continuous bleeding, an incidence of 25.8%. In acyclic bleeding it was observed in 23.4% and in cyclic bleeding in 15% of the patients. When the group with acyclic bleeding was analysed further, it was found that hyperplasia was most common in those patients who presented with periods of amenorrhea alternating with prolonged bouts of bleeding. The incidence in these was 44% while in those patients who had irregular but frequent haemorrhages, hyperplasia was seen in 18.8% only.

*Atrophic endometrium* was observed in 5.8% of all cases. Incidence of this type of endometrium has been reported to vary between 1.9 to 21.9%. The difference may be due to the criteria used for diagnosis. In this group, scanty endometrium with few small inactive glands, or when no

endometrium was obtained on curettage was taken as atrophic endometrium. In Sutherland's series it was found in 1%. Bhattacharjee found it in 7.3%. Atrophic endometrium was seen in 7.7% of those with continuous and 7.4% of those with acyclic bleeding. It was uncommon in association with cyclic bleeding and was seen only in 1.4%.

Irregular shedding and irregular ripening of endometrium was not observed in this series. Irregular shedding may have been missed due to the timing of the curettage in the premenstrual phase.

It will be observed from Table I, that there is no constant relationship between the endometrial histology, and the type of bleeding in cases diagnosed as dysfunctional uterine bleeding.

Dysfunctional uterine bleeding may be found at any age during reproductive life. It is supposed to be more frequent at menarche and menopause. In these 220 cases the maximum number belonged to the age group between 20-39 years. Those above 40 years form 39%, and adolescent or those below 20 years form 4.4% of the total cases. Acyclic bleeding was more common below the age of 29 years and above the age of 50 years. The age has definite influence on endometrial histology. Table II.

#### *Endometrial hyperplasia*

Incidence of endometrial hyperplasia was found to be higher below the age of 20 years and above the age of 40 years. Many workers believe that hyperplasia of the endometrium is the most common finding below the

TABLE II  
Endometrial histology in relation to age

Endometrium	Total	Below 20		20 - 29		30 - 39		40 - 49		Above 50		Unknown
		No	%	No	%	No	%	No	%	No	%	
Secretory	79	0		16	28.2	38	52.77	20	31.25	4	24	1
Proliferative	83	7	70	28	50.1	21	29.16	22	34.4	5	29	
Hyperplasia	46	3	30	10	18	12	16.66	20	31.25	1	6	
Atrophic	12	0		2	3.5	1	1.4	2	3.11	7	41	
Total	220	10	100	56	100	72	100	64		17	100	

age of 20 years, but in this group it was seen in 30% cases. Sutherland found it in 27.2% of his series, a figure very close to ours. Above the age of 40 years the incidence of hyperplasia is again increased, Schroedar found it in 78%. In Sutherland's series it was observed in 44.3% and in the present series it was seen in 31.25%.

*Secretory endometrium* was the most frequent finding between the ages of 30 and 40 years, an incidence of 52.7%. No patient below the age of 20 years was found to have secretory endometrium. On the whole, incidence of this type of endometrium was reduced below the age of 30 years and above the age of 40 years.

*Proliferative endometrium* was seen most often in the adolescent group. It was found in 70% patients of those below the age of 20 years and 50% patients between the age group 20-29 years. Anovulatory cycles are more common in cases of dysfunctional uterine bleeding below the age of 30 years even when the bleeding is cyclic. Above the age of 30 years proliferative endometrium is equally distributed in the various age group.

*Atrophic endometrium* was the

most frequent finding above the age of 50 years and was seen in 41%. Arena and Fox found atrophic endometrium in 7.1% in a large series between 30 and 79 years of age. The largest number was seen above the age of 50 years. In Sutherland's cases this type of endometrium was found in 15% of patients above the age of 50 years.

There was no relationship between the endometrial histology and parity. Most of the patients had more than two children. Clinically, it was found that patients with infrequent and prolonged bouts of bleeding had poor obstetric histories. Out of 25 patients presenting with this picture 48% had no living child and only 16% had more than two children.

#### Clinical findings

Clinical examination showed bulky uterus in 22.3% and cystic ovaries in 18% of all cases; in comparison, bulky uterus was seen in 51% of Sutherland's series.

Bulky uterus was most frequently seen in patients with endometrial hyperplasia while clinically it was more common in those with cyclic bleeding. Tables III and IV.

TABLE III  
Clinical findings in relation to bleeding

	Total	Normal uterus		Bulky uterus		Cystic ovaries	
		No	%	No	%	No	%
Cyclic bleeding	73	53	72.6	20	27.4	10	13.2
Acyclic bleeding	108	88	81.6	20	18.4	22	20.3
Continuous bleeding	39	30	77	9	23	7	18
Total	220	171	77.7	49	22.3	39	18

TABLE IV  
Clinical findings in relation to endometrial pattern

	Total	Normal uterus		Bulky uterus		Cystic ovaries	
		No	%	No	%	No	%
Secretory endometrium	79	85	82.3	14	17.7	6	7.6
Proliferative endometrium	83	66	79.5	17	20.5	11	13.2
Hyperplasia endometrium	46	31	67.4	15	32.6	21	45.6
Atrophic	12	9	75	3	25	1	8.3
Total	220	171		49	22.3	39	17

Cystic ovaries were seen more often in patients with acyclic bleeding. Considering histopathology, cystic ovaries were more common in association with endometrial hyperplasia.

#### Treatment

Total hysterectomy was done in 48 or 19% of patients. A total of 83 patients were followed up after dilatation and curettage; 50% of these showed improvement. The rate of improvement was not influenced by bleeding pattern or endometrial histology.

#### Summary

Endometrial histology in relation to bleeding pattern was studied in 220 cases of dysfunctional uterine bleeding.

There was no definite relationship between the endometrial pattern and

bleeding. Ovulatory cycles were more common in association with cyclic bleeding while proliferative endometrium was the most common finding in acyclic and continuous bleeding.

Endometrial hyperplasia was more common in association with acyclic and continuous bleeding. Atrophic endometrium was rare in cyclic bleeding but was more often observed in acyclic and continuous bleeding.

Age had definite influence on endometrial histology. Hyperplasia was more common below 20 years and above 40 years of age. Atrophic endometrium was common above the age of 50 years. No relation between parity and endometrial pattern was observed.

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