Histo-Pathological Study of Endometrium in Dysfunctional Uterine Bleeding- A Study of 400 Cases

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Abstract

Introduction: Dysfunctional uterine bleeding (DUB) is a common problem in women in the 30-50 years age group. The incidence increases as age advances till menopause. The pathophysiology is not fully understood and it is complex. It accounts for above one third of all gynaecological consultations carried out for abnormal uterine bleeding. **Objectives:** To study correlation of different clinical presentation and clinical findings with histopathology of endometrium in cases of Dysfunctional Uterine Bleeding (DUB). **Results:** A one year retrospective study of DUB cases was conducted in Department of Pathology, B.J. Medical College, Ahmedabad. 400 cases were studied which were clinically diagnosed as DUB with exclusion of structural lesions by radiological investigations and proven histologically. Dilatation and curettage (D & C) was the commonest mode by which endometrium was obtained (79% cases). Largest numbers of patients were in 31-40 years (48%) with mean age being 38.7 years. The most common clinical presentation was menorrhagia (76.5%) followed by Metrorrhagia (13.5%). In present series proliferative phase was most common and found in 39.75% cases. Hyperplasia was seen in 22% cases. Atypical hyperplasia was a rare finding (4.55%). **Conclusion:** The patient who presents with DUB and a history of menstrual cycle irregularity warrants an endometrial biopsy, regardless of age. A higher degree of suspicion, based on clinical findings and associated risk factors, precise histological typing of lesions and to rule out organic causes is essential in the management of DUB.

Key words: Dilatation & Curettage, Dysfunctional Uterine Bleeding, Endometrium, Hysterectomy

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Introduction: Dysfunctional uterine bleeding (DUB) is a common problem in women in the 30-50 years age group. The incidence increases as age advances till menopause.[1] Heavy menstrual bleeding may affect a woman's health both medically and socially, causing problems such as iron deficiency in the developed world and of chronic illness in the developing world.[2] It accounts for above one third of all gynaecological consultations carried out for abnormal uterine bleeding.[3] Menstrual disturbance is one of the commonest gynaecological problems for which curettage or hysterectomy specimen is received by pathologist.[4] Endometrial sampling could be effectively used as the first diagnostic step in DUB, although at times, its interpretation could be quite challenging to the practicing pathologists. This study was done to evaluate histopathology of endometrium and to observe the incidence of various pathology in different age groups presenting with DUB.

This was a retrospective study conducted in a tertiary care centre, namely B. J. Medical College, Civil Hospital, Ahmedabad. All the D & C material & hysterectomy specimen from clinical cases of DUB were enrolled. The charts of eligible cases were retrieved and the histolopathogical diagnosis was logged. The data was then subjected to descriptive statistical tabulation and analysis.

Objectives: To study correlation of different clinical presentation and clinical findings with histopathology of endometrium in cases of Dysfunctional Uterine Bleeding (DUB)

Results and Discussion:

Dysfunctional uterine bleeding (DUB) is defined as excessively heavy, prolonged or frequent bleeding of uterine origin that is not due to pregnancy or any recognizable pelvic or systemic disease. It is therefore a diagnosis of exclusion.[1] Abnormal uterine bleeding (AUB) is the commonest presenting symptom in gynaecology out-patient department. In about 25% of the patients, the abnormal uterine bleeding is the result of a well defined organic abnormality.[5] 410 cases were enrolled in present series which were clinically diagnosed as DUB with exclusion of structural lesions by radiological investigations. Out of which 10 cases turned out to be some organic cause for bleeding on histopathological examination. Those 10 cases (4 leiomyoma, 5 adenomyosis and 1 endometrial carcinoma) were excluded from present series and

further study was carried out on 400 cases proven histologically as DUB.

Our study showed maximum number of patients were in 31-40 years age group (48%) and 31% patients belonged to 41-50 years age group, which is comparable to other series.[3],[4] Low incidence was found in ≤ 20 years age group (0.5%), however actual incidence of DUB is not low in this age group. They are treated on conservative (hormonal) basis and most often they are unmarried and they do not undergo endometrial sampling [Table 1]. Our study significantly revealed that the occurrence of menstrual disorders increases with advancing age.

Table-1: Age incidence Comparison with other series

AGE (Years)	Our study (%) (400 cases)	Muhammad et al.[3] (%) (260 cases)	Sutherland et al.[4] (%) (848 cases)
≤20	0.5	-	3.9
21-30	16	12.7	22.5
31-40	48	39.2	34.5
41-50	31	48.1	37.7
51-60	4.5	-	1.6

A similar incidence was reported by Yusuf et al [6] and Muzaffar et al [3] in their study of endometrium. As women approach menopause, cycles shorten and often become intermittently anovulatory due to a decline in the number of ovarian follicles and the estradiol level. The incidence of DUB between 51 and 70 years was lower as compared to those between 41 and 50 years. The reason for this finding may be due to the fact that the patients were evaluated much earlier and treated appropriately thereby decreasing the incidence in later age group.

For 79% cases Dilatation and curettage was the procedure and in 21% cases hysterectomy was done for histopathological examination. Dilation and curettage can be a diagnostic as well as therapeutic procedure.[7] The sensitivity of endometrial biopsy for the detection of endometrial abnormalities has been reported to be as high as 96%.[7],[8] The most common clinical presentation was menorrhagia (76.5%) followed by Metrorrhagia (13.5%) [Table 2].

Table 2: Incidence of Menstrual Disorders in DUB

MENSTRUAL DISORDER	NUMBER OF CASES	PERCENTAGE (%)
Menorrhagia	206	76.5
Polymenorrhoea	32	8
Metrorrhagia	54	13.5
Oligomenorrhea	8	2
Total	400	100

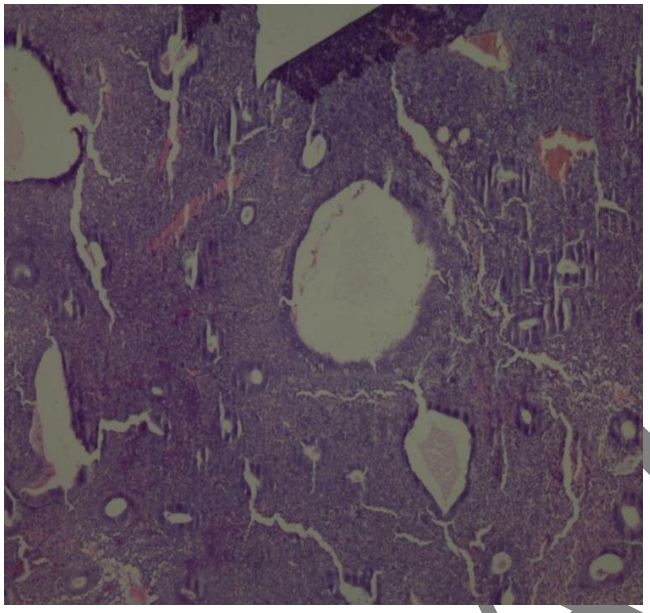

Figure 2: low power view- Proliferative Phase of Endometrium

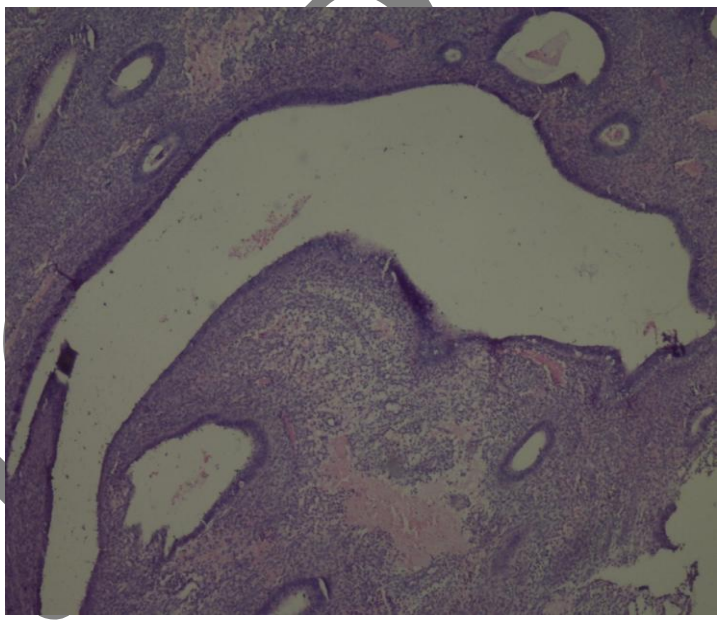

Figure 3: Low power view- Endometrial Simple Cystic Hyperplasia

Proliferative pattern was commonest in our study (39.75%) which is nearly comparable with R. K. Narula et al study.[9],[10] It is evident that large proportions of patients showed proliferative or hyperplastic endometrial pattern. The incidence of disordered proliferative pattern was significantly high in this study, suggesting an early presentation of these patients. The bleeding in the proliferative phase may be due to anovulatory cycles and bleeding in the secretory phase is due to ovulatory dysfunctional uterine bleeding.[11] Among the hyperplastic endometrium in our study, maximum number of patients (68.18%) had simple hyperplasia of endometrium which is comparable with other series. In our study atypical hyperplasia was less common (4.55%) which is also comparable with Muhammad et al. [3] Overall findings show

that simple hyperplasia was more common than complex hyperplasia and incidence of atypical hyperplasia was very low [Table 3].

Table-3: Comparison of Endometrial Pattern

ENDOMETRIAL PATTERN	OUR STUDY		R.K.NARULA et al STUDY[9]		SANAULLAH et al STUDY[10]	
	No	%	No	%	No	%
Proliferative phase	159	39.75	83	37.77	31	31
Secretory phase	125	31.25	79	35.95	43	43
Hyperplasia	88	22	46	20.90	11	11
Atrophic	28	7	12	5.46	-	-
Others	-	-	-	-	15	15
Total	400	100	220	100	100	100

We also made an attempt to correlate the histological pattern of endometrium with the age of the patient. Proliferative phase was common in ≤ 30 years age group. Secretory phase was common in 21-30 years age group. An increase in incidence of endometrial hyperplasia was noted with advancing age. Hyperplasia was common in >40 years age group. Overall incidence of atypical hyperplasia was very low (4.5%) with atrophic endometrium seen in 7% of cases. Atrophic endometrium was common finding in >40 years age group as a cause of DUB [Table 4].

Table-4: Endometrial Pattern in Relation to Age

ENDOMETRIAL PATTERN	AGE(Years)									
	≤20 YEARS		21-30 YEARS		31-40 YEARS		41-50 YEARS		51-60 YEARS	
	No	%	No	%	No	%	No	%	No	%
Proliferative phase	2	100	32	50	80	41.66	44	35.48	1	05.55
Secretory Phase	-	-	26	40.63	70	36.45	28	22.58	1	05.55
Simple hyperplasia	-	-	4	6.25	30	15.65	22	17.74	4	22.22
Complex hyperplasia	-	-	-	-	6	3.12	16	12.91	2	11.11
Atypical hyperplasia	-	-	-	-	2	1.04	-	-	2	11.11
Atrophic	-	-	2	3.12	4	2.08	14	11.29	8	44.44
Total	2	100	64	100	192	100	124	100	18	100

We had total 18 patients in postmenopausal state (51-60 years), out of which 8 had atrophic endometrium and 8 had hyperplasia. In all parity groups, maximum number of patients showed proliferative pattern [Table5].

Table 5: Endometrial Pattern in Relation to Parity

ENDOMETRIAL PATTERN	PARITY					
	≤2		3-4		≤5	
	No	%	No	%	No	%
Proliferative phase	76	42.18	64	37.65	22	44
Secretory phase	68	37.74	50	20.41	10	20
Hyperplasia	28	15.64	46	27.06	14	28
Atrophic	8	04.44	10	05.88	4	08
Total	180	100	170	100	50	100

Conclusion

Histopathological examination of endometrial biopsy is a major diagnostic tool in evaluation of DUB and a specific diagnosis could help the physician to plan therapy for successful management of DUB. Significant number of endometrial samples revealed pathology rendering endometrial curettage an important procedure. It is important procedure for females in child bearing age, as DUB is the most common in this age group.

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