

The Study of Different Endometrial Pattern in Dysfunctional Uterine Bleeding of Women in Western Rajasthan

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Abstract

Background: Dysfunctional uterine bleeding is one of the most frequently encountered conditions in gynaecological practice world over and is defined as bleeding from the uterine corpus that is abnormal in volume, regularity and /or timing and has been present for majority of the past 6 months. This study was done to evaluate histology of endometrium for identifying the endometrial causes of DUB. **Material and Methods:** This was a retrospective study done at Dr S N Medical College, Jodhpur, Rajasthan on 250 patients who presented with DUB from June 2020– September 2022. The endometrial changes were observed by reviewing and studying the histological slides, prepared through routine processing channels which includes fixation, grossing, tissue processing, dehydration, paraffin embedding, cutting and H&E staining procedures. **Results:** The commonest endometrial pattern was proliferative pattern in 145(58.00%) cases. Followed by secretory pattern in 34(13.60%), disordered proliferative pattern 19(7.60%). Cystic Dilatation 11 (4.4%), Simple Endometrial Hyperplasia 9 (3.6%), Atrophic Changes 9(3.6%), Late Proliferative Pattern 8 (3.2%), Early Secretory Pattern 6(2.4%), Hyperplasia without atypia 5 (2%), Arias Stella reaction 3 (1.2%), Cystic Hyperplasia 1(0.4%). **Conclusion:** The incidence of proliferative pattern was significantly high in this study, suggesting an early presentation of these patients.

Keywords: Anovulation, Dysfunctional uterine bleeding, Endometrium.

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INTRODUCTION

Dysfunctional uterine bleeding (DUB) is uterine hemorrhage that occurs at irregular intervals in excessive or scant amount especially, when prolonged and when there is no easily assignable cause such as polyps and hyperplasia, neoplasm, blood dyscrasia, pregnancy or hormone administration. Polycystic ovarian diseases, stress, crash diet, and vigorous exercise can disrupt normal ovulatory function though scientific ideas are rapidly changing as to the underlying cause of DUB, but undoubtedly there is dysfunction in the hypothalamo-pituitary-ovarian axis [1]. It usually affects 5% of menstruating women [2]. Majority of the cases of DUB occurs in perimenopausal women or after menarche when the ovaries are in unstable responsive stage. Abnormal secretion of both estrogen and progesterone occurs in this group of women.

Anovulatory cycles are the most common cause of DUB of the women of reproductive age. DUB associated with ovulatory bleeding is poorly understood. However, disordered prostaglandin metabolism and increased lysosomal activity in the endometrial cells explain most cases of ovulatory DUB. In a large proportion of women, the basic disorder may be pituitary overproduction of Prolactin, which in excess suppresses progesterone production.

Iatrogenic etiologies include, use of hormone therapy, contraceptive injection, and devices; and medications including, tranquilizers, antidepressants, anticoagulants, and corticosteroids. Systemic diseases are another group to consider that includes, coagulation disorders (thrombocytopathies, von Willibrand's disease and leukaemia), hypo-thyroidism, systemic lupus erythematosus, and cirrhosis of liver.

MATERIALS AND METHODS

The study was of endometrium in 250 hysterectomies and curettage specimen. The study was carried out in the department of Anatomy from the Month June 2020 to September 2022 with the help of Department of Pathology and Gynaecology Dr S.N Medical college Jodhpur.

Detailed clinical information was obtained from the requisition forms and case sheets. The case records were retrieved from the record rooms of Umaid

Hospital and department of Pathology Dr S.N Medical College, Jodhpur.

The endometrial changes were observed by reviewing and studying the histological slides, prepared through routine processing channels which includes fixation, grossing, tissue processing, dehydration, paraffin embedding, cutting and H&E staining procedures.

RESULTS

Table 1: Distribution of Total Number of Dysfunctional Uterine Bleeding Cases Based on Endometrial Pattern

Endometrial pattern	No. of patients	Percentage
Proliferative Pattern	145	58.00%
Secretory Pattern	34	13.60%
Disordered proliferativePattern	19	7.60%
Cystic Dilatation	11	4.40%
Simple Endometrial Hyperplasia	9	3.60%
Atrophic Changes	9	3.60%
Late Proliferative Pattern	8	3.20%
Early Secretory Pattern	6	2.40%
Hyperplasia without atypia	5	2.00%
Arias Stella reaction	3	1.20%
Cystic Hyperplasia	1	0.40%
Total	250	100.00

Above table number 1 revealed that among 250 cases, maximum number of cases 145 (58.00%) were found in proliferative pattern.

DISCUSSION

Dysfunctional uterine bleeding is one of the most frequently encountered conditions in gynaecological practice world over and is defined as bleeding from the uterine corpus that is abnormal in volume, regularity and /or timing and has been present

for majority of the past 6 months. When organic causes of AUB are ruled out then a diagnosis of dysfunctional uterine bleeding (DUB) is made. Thus DUB is a clinical term used to describe bleeding not attributable to any underlying organic pathologic condition, is a diagnosis of exclusion. DUB is generally ascribed to poorly understood derangement in the functional effects of hormones on the endometrium.

Table 2: Incidence of proliferative and secretory phase by various authors

Authors	Period of study	Total cases	Proliferative phase= n	Secretory phase= n
Abdullah and Bondagji <i>et al.</i> ,	1995-2008	2295	498(21.70%)	571 (24.90%)
Alpana Singh <i>et al.</i> ,	2014-2015	300	111(37%)	90 (30%)
Anam Khan <i>et al.</i> ,	2014-2015	300	83 (27.67%)	68 (22.67%)
M Roopmala <i>et al.</i> ,	2018-2019	174	54(31%)	50(28.7%)
Present study	2020-22	250	145(58%)	34(13.6%)

In present study proliferative phase were 145 (58%) and secretory phase were 34(13.6%) out of 250 cases which are comparable with Abdullah and

Bondagji *et al.*, [3]. Alpana Singh *et al.*, and Anam Khan *et al.*, [5], M Roopmala *et al.*, as in above table.

Table 2: Incidence of disordered proliferative phase by various authors

Authors	Period of study	Total cases	Disordered proliferative phase	
			No. of cases	Percentage
Abdullah and Bondagji <i>et al.</i> ,	1995-2008	2295	200	8.70
Talat Mirza <i>et al.</i> ,	2003-2010	1000	130	13
Doraiswami Saraswathi <i>et al.</i> ,	2005-2006	620	84	13.54
Anam Khan <i>et al.</i> ,	2014-2015	300	20	6.67
Parihar Mohit <i>et al.</i> ,	2015-2017	1500	178	11.87
Present study	2020-2022	250	19	7.60

Abdullah and Bondagji *et al.*, [3] found 200 out of 2295 cases, thus making incidence of 8.70%. Talat Mirza *et al.*, [4] found 130 out of 1000 cases comprising 13%, Doraiswami Saraswathi *et al.*, noted 84 out of 620 cases comprising 13.54% Anam Khan *et al.*, [5] found 20 out of 300 cases comprising 6.67% and Parihar Mohit *et al.*, noted 178 out of 1500 cases thus forming 11.87%.

Our findings were 19 out of 250 cases comprising 7.60% which is comparable with all the above mention studies.

CONCLUSION

DUB is a common gynecological problem in women of reproductive age group and 20% of women with DUB will seek medical consultation. Anovulation with unopposed estrogen activity as indicated by histological and histochemical analysis of the cases was the most common finding. Anovulatory DUB is commonly observed at both the extremes of reproductive age group and is because of immaturity of hypothalamo-pituitary-ovarian axis and changes associated with menopause. The associated stromal changes in the late proliferative phase are also implicated in the pathogenesis of DUB even though it needs further study in larger series. Secretory endometrium is a less common finding in the present

study. The mechanism of ovulatory DUB is less well-understood and hormonal imbalance seems to be the primary cause in the pathogenesis. The histological and histochemical studies of endometrium in DUB reveal the type of functional disturbances and definitely assist in the proper management of the patients.

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