



## "STUDY OF ENDOMETRIAL PATHOLOGY IN ABNORMAL UTERINE BLEEDING"

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**ABSTRACT**

**CONTEXT** - Histopathological analysis of endometrial samples in various forms of abnormal uterine bleeding in adjunction with clinical history of patient to identify underlying cause of bleeding. This also helps in early diagnosis of premalignant and malignant lesions leading to their proper follow up and improved prognosis.

**AIMS** - Histopathological analysis of causes of abnormal uterine bleeding with their clinical correlation.

**SETTINGS AND DESIGN** - A prospective observational study

**MATERIAL AND METHODS** - This study was done in department of pathology, GSVM medical college, Kanpur. This was a prospective study from year 2017-2018. A total of 300 cases were studied. Specimen received were fixed in 10% formalin, processed and sections of 3-4 micron were prepared, stained with H and E. Histopathological examination was done.

**RESULTS** - It was observed that the highest number of patients were between 41-50 years of age. (44.33%). Menorrhagia is the most common symptom accounting for 135 (45%) patients followed by metrorrhagia accounting for 135 (45%) patients and hypomenorrhea is the least common complaint. It was observed that there were significantly higher number of patients with proliferative phase - 68 (22.67%) and in endometrial hyperplasia 35 (33.66%) patients. The least common cause were endometrial polyp, seen in 4 (1.33%) patients, gestational endometrium and gestational trophoblastic tumor accounted for 2 (0.67%) patients. In patients who presented with metrorrhagia, secretory phase endometrium was the most common histopathological finding accounting for 34.62% followed by proliferative phase. In cases of endometrial hyperplasia, 28 (80%) cases were simple cystic type, 5 (14.29%) cases were of simple endometrial hyperplasia with atypia and complex endometrial hyperplasia with atypia was found in 2(5.71%) cases. Among cases of endometrial hyperplasia, 28 (80%) cases were simple cystic type, 5 (14.29%) cases were of simple endometrial hyperplasia with atypia and complex endometrial hyperplasia with atypia was found in 2(5.71%) cases. Endometrial carcinoma is commonest complain in 51-60 years and >60 years age group.

**CONCLUSION** - Histopathological analysis of AUB causes helps in identifying the cause and early diagnosis of premalignant and malignant cases.

**KEYWORDS** : abnormal uterine bleeding, endometrial biopsy, menorrhagia, endometrial carcinoma

**INTRODUCTION**

Among the most common specimens in day-to-day surgical pathology practice are endometrial samplings. The most frequent indications for this procedure are (a) the workup of abnormal uterine bleeding; (b) cancer screening, particularly following medications such as tamoxifen that are associated with endometrial abnormalities, (c) evaluation of infertility; and (d) endometrial dating. Currently, when endometrial biopsy (EMB) is performed during infertility evaluation, it is directed toward the detection and removal of structural abnormalities (e.g., polyps, leiomyomas, atypical polypoid adenomyomas). Evaluation for luteal phase deficiency is uncommon. The minimal clinical information required for interpretation in most cases includes the patient's age, the date, characteristics of the last menstrual period, a statement about past or current administration of steroidal medication, and an account of the current chief complaint and physical findings and can help to assess the underlying pathology of abnormal uterine bleeding.

**MATERIALS AND METHODS**

1. This study was done in department of pathology, GSVM medical college, Kanpur. This was a prospective study from year 2017-2018. A total of 300 cases were studied.
2. Specimen received were fixed in 10% formalin, processed and sections of 3-4 micron were prepared, stained with H and E. Histopathological examination was done.

**DISCUSSION**

1. It was observed that the highest number of patients were between 41-50 years of age. (44.33%).

**AGE DISTRIBUTION PATTERN**

Age group	Number	Percentage(%)
<20	2	0.67
21-30	36	12
31-40	109	36.33
41-50	133	44.33
51-60	18	6
>60	2	0.67
Total	300	100

1. It present study it was observed that menorrhagia is the most common symptom accounting for 135 (45%) patients followed by metrorrhagia accounting for 135 (45%) patients and hypomenorrhea is the least common complaint.

**DISTRIBUTION OF BLEEDING PATTERN**

Bleeding pattern	Number	Percentage
Menorrhagia	135	45
Metrorrhagia	52	17.33
Menometrorrhagia	32	10.67
Post menopausal bleeding	29	9.66
Polymenorrhagia	23	7.67
Polymenorrhea	7	2.33
Oligomenorrhea	5	1.67
Hypomenorrhea	3	1
Continuous bleeding	14	4.67
Total	300	100

3. On histopathological examination it was observed that there were significantly higher number of patients with proliferative phase - 68 (22.67%) and in endometrial hyperplasia 35 (33.66%) patients. The least common cause

were endometrial polyp, seen in 4 (1.33%) patients, gestational endometrium and gestational trophoblastic tumor accounted for 2 (0.67%) patients each.

**Analysis Of Histopathological Findings**

Histopathological findings	Number	Percentage
Proliferative phase	83	27.67
Secretory phase	68	22.67
Menstruating phase	10	3.33
Endometrial hyperplasia	35	11.66
Disordered proliferative phase	20	6.67
RPOC	17	5.66
Irregular shedding	13	4.34
Atrophic endometrium	12	4
Endometrium	6	2
Endometrial polyp	4	1.33
Pill pattern	21	7
Endometrial carcinoma	7	2.33
Gestational Endometrium	2	0.67
Gestational trophoblastic tumor	2	0.67
TOTAL	300	100

4. In present study, it was observed that proliferative phase was the most common histopathological findings in patients who presented clinically with menorrhagia accounting for 34.07 % cases followed by secretory phase (21.48%) and endometrial hyperplasia (11.11%).

**Study Of Histopathological Finding In Relation To Clinical Presentation With Menorrhagia**

Histopathological pattern	Number	Percentage
Proliferative phase	46	34.07
Secretory phase	29	21.48
Endometrial hyperplasia	15	11.11
Disordered proliferative phase	8	5.94
RPOC	14	10.37
Menstruating phase	6	4.44
Pill pattern	5	3.70
Atrophic endometrium	5	3.70
Irregular shedding	3	2.23
Endometrial polyp	1	0.74
Endometrial carcinoma	1	0.74
Gestational Endometrium	1	0.74
Gestational trophoblastic tumor	1	0.74
TOTAL	136	100

5. Out of 52 patients who presented with metrorrhagia, secretory phase endometrium was the most common histopathological finding accounting for 34.62% followed by proliferative phase.

**Study Of Histopathological Findings In Relation To The Clinical Presentation With Metrorrhagia**

Histopathological pattern	Number	Percentage
Proliferative phase	14	26.92
Secretory phase	18	34.62
Disordered proliferative phase	5	9.62
Endometrial hyperplasia	4	7.69
Pill pattern	4	7.69
Menstruating phase	2	3.85
Atrophic endometrium	3	5.77
Irregular shedding	1	1.92
Chronic endometritis	1	1.92
Total	52	100

6. On categorisation of endometrial hyperplasia, 28 (80%) cases were simple cystic type, 5 (14.29%) cases were of simple endometrial hyperplasia with atypia and complex endometrial hyperplasia with atypia was found in 2(5.71%) cases.

**The Frequency Of Different Histological Types Of Hyperplasia**

Types of endometrial hyperplasia	Number	Percentage
Simple(cystic)	28	80
Simple with atypia	5	14.29
Complex with atypia	2	5.71
Total	35	100

7. The table shows an age specific comparative analysis of endometrial hyperplasia which revealed that simple hyperplasia was commonest in 41-50 years and 31- 40 years age group.

**Type Of Endometrial Hyperplasia According To Age Group**

Type of endometrial hyperplasia	<20 yrs	21-30yrs	31-40yrs	41-50yrs	51-60yrs	>60 yrs	Total
Simple (cystic)	-	-	11	14	3	-	28
Simple with atypia	-	-	1	3	1	-	5
Complex with atypia	-	-	1	1	-	-	2
Total	-	-	13	18	4	-	35

8. It was observed that there were significantly higher number of cases with endometrial carcinoma accounting for 77.78% and 22.22% gestational trophoblastic tumor, among malignant tumors that caused bleeding.

**The Frequency Of Malignant Tumors**

Malignant tumor	Number	Percentage
Endometrial carcinoma	7	77.78
Gestational Trophoblastic tumor	2	22.22
Total	9	100

9. An age specific comparative analysis of malignant tumors revealed that endometrial carcinoma was commonest complain in 51-60 years and > 60 years age group.

**Malignant Tumors In Patients With Aub According To Age Group**

Malignant tumor	<20yrs	21-30yrs	31-40yrs	41-50yrs	51-60yrs	>60 yrs	Total
Endometrial carcinoma	-	1	-	-	4	2	7
Gestational trophoblastic tumor	-	1	1	-	-	-	2
Total	-	2	1	-	4	2	9

**CONCLUSIONS**

We may conclude that after menarche, abnormal uterine bleeding can occur in any age group. The highest incidence of AUB was seen in 21-40 years age group (52%) in the present study which is similar to the findings of Sutherland (58.5%) and Mehrotra VG et al (71.3%) (1).

The most common symptom of AUB as per our study was menorrhagia (45%). This is similar to studies of Nayak et al, 1996 (49.1%) (2)and Moghal et al, 1997 (3) found it to be 41%. Also, Ara and Roohi (4) reported it to be 49.06% in 2001 and Zeeba et al (5) reported 41% cases of menorrhagia in 2003.

The most common age group with excessive bleeding was found to be 41-50 years in our study (43%), accounting for 129 cases. This finding was similar to findings of Muzaffar et al (6)(48%) and Yusuf et al (7)(38.06%).

Proliferative phase was the most common histopathological finding as per our study (27.67%), followed by secretory phase (22.67%). This is in concordance with the findings of Bhatta et al (8) - 26.23% for proliferative phase and 16.39% for secretory phase.

In 21-40 years age group the most common histopathological findings are of proliferative phase (25.50%) which is similar to the findings of Muzaffar et al(6) (25.8%).

Endometrial carcinoma in our study was most common in the age group of 51-60 years and more than 60 years. This is similar to findings of Yusuf et al (7) and Escoffery et al (9).

In our study, hyperplasia was seen in 11.66% cases which is in line with the findings of Dangal et al (10) (10.7%) and Abdullah et al (11) (9.1%).

Simple hyperplasia without atypia was most common. This was similar to studies of Muzaffar et al (6), Pilli et al (12) and Vakiani et al (13).

In our study higher age group was associated more with endometrial carcinoma (2.33%) cases which is similar to findings of Sarwar et al (14) (2%).

Anovulatory cases in our study were 25-35% in the age group of 21-30 years, 11.77% in 31-40 years and 67.7% in the age group of 41-50 years. Jairajpuri et al (15) showed similar findings.

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