ORIGINAL RESEARCH PAPER
Volume - 12 | Issue - 07 | July - 2023 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

ABNORMAL UTERINE BLEEDING IN FEMALES AND ITS HISTOPATHOLOGICAL FINDINGS IN TERTIARY CENTRE

Pathology

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ABSTRACT

Background Abnormal uterine bleeding is any type of bleeding that does not fall within the normal ranges for amount, frequency, duration and cyclicity. It is the most important complaint in females visiting gynae OPDs. The aim of this study was to correlate histopathological findings in patients with abnormal uterine bleeding and their presenting clinical feature. **Methods:** A retrospective and prospective study was conducted from October 2021 to September 2022 which included 80 females who presented with abnormal uterine bleeding in gynae department and whose sample was sent for histopathology in Pathology department. Study population was patients with Abnormal uterine bleeding in 20-60 years age group. The AUB presentation in pregnant female, female with bleeding disorder, vaginal, cervical or ovarian causes is not included in this study. The histopathological evaluation of the endometrium was done from the sample of endometrial biopsy or hysterectomy specimen. The histopathological results were analyzed. **Results:** Out of 80 females with abnormal uterine bleeding. menorrhagia was the most common clinical complain. On histopathology in maximum cases secretory phase of endometrium was seen followed by hyperplasia. **Conclusion:** Women health is an important aspect so early detection of any premalignant or malignant lesion is necessity and cause identification with proper treatment of AUB is important.

KEYWORDS

Abnormal uterine bleeding (AUB), perimenopausal, histopathology

INTRODUCTION

AUB is a term used for Abnormal Uterine bleeding that does not fall within normal ranges for amount, frequency, duration and cyclicity[1].The most common presentations are menorrhagia, polymenorrhoea, metrorrhagia and intermenstrual bleeding[2]. Endometrial diseases are prevalent across all age groups and to great extent are a leading cause of increased maternal mortality and morbidity and among them AUB is the most common presentation[3,4].AUB during reproductive age can result from a broad spectrum of conditions ranging from physiological process to malignant lesions involving organic, systemic and hormonal responses. AUB is the most common complaint encountered in perimenopausal females and is the cause of nearly two third hysterectomies[5]. The underlying cause of AUB can be detected by histopathological variations of endometrium taking in account the age, phase of menstrual cycle and use of exogenous hormones. The histological characteristics of endometrium remains the gold standard for diagnosis of endometrial pathology[6].

In 2011 the Federation International de Gynecologic et d' obstetrique (FIGO) defined causes of AUB using acronym PALM-COEIN (Polyp, Adenomyosis, Leiomyoma, Malignancy(hyperplasia), Coagulopathy, Ovulatory disorder, endometrial, iatrogenic and Not Otherwise Classified to standardized etiologies)[7]. Chronic AUB was defined as bleeding from uterine corpus that is abnormal in volume, regularity and /or timing that has been present for the majority of the last 6 months. In large number of patients, AUB occurs without any systemic causes or any organic lesions of genital tract and for this term Dysfunctional Uterine Bleeding (DUB) is used[7,8].

Endometrial studies could be effectively used as the first step in AUB but its interpretation could be quiet challenging to the pathologist.

METHOD

A retrospective and prospective study was conducted from October 2021 to September 2022 which included 80 females who presented with abnormal uterine bleeding in gynae department and whose sample was sent for histopathology in Pathology. Study population was patients with Abnormal uterine bleeding in 20-60 years age group. Women with known coagulopathy, pregnancy, vaginal, cervical and ovarian causes were not included in the study. All patients included in the study were informed and written consent was taken. The cases of AUB which were either taken for endometrial biopsy or Dilatation and curettage or hysterectomy, were included in the study. Age, parity, clinical complaint of all cases were noted. All samples received for histopathology in 10% formalin were processed and paraffin embedded of which sections were made with microtome. Sections were stained with Hematoxylin and Eosin stain. Total of 80 cases were analyzed with respect to histopathological patterns of endometrium. The correlation between clinical feature and histopathology findings was done using statistical analysis.

OBJECTIVE

The study was done to evaluate the histopathology of endometrium for identifying the endometrial causes of AUB and to correlate clinical findings of AUB with histopathology report.

RESULTS

During the period of 1 year, 80 females with complaint of AUB were studied for histopathological findings of endometrium.

Table 1: Age Distribution Of Patients

Age Group (Years)	Number Of Patients	Percentage
21-30	08	10%
31-40	20	25%
41-50	42	52.5%
51-60	10	12.5%
TOTAL	80	100%

Patients included in the study had age from 27 years to 58 years and maximum number of females with AUB were seen in age group 41-50 years followed by 31-40 years. Out of 80 females, eight were postmenopausal.

Table 2: Distribution Of Patients According To Parity

Parity	Number Of Patients	Percentage
Nullipara	05	6.25%
1	13	16.25%
2	48	60%
3	14	17.5%
TOTAL	80	100%

Parity of all patients were noted and it was seen that five females who were nulliparous had AUB and maximum cases of AUB were seen in para 2 females.

Table 3: Clinical Presentation (menstrual Complaint)

Clinical Complaint	Number Of Patients	Percentage
Menorrhagia	42	52.5%
Menometrorrhagia	16	20%

Polymenorrhoea	12	15%
Post coital bleeding	02	2.5%
Post menopausal bleeding	08	10%
TOTAL	80	100%

The menstrual complaint history was also taken from these patients. Menorrhagia was the most common in 52.5% followed by Menometrorrhagia (20%) and Polymenorrhoea (15%).

Table 4: Distribution Of Cases According To Histopathological Pattern

Histopathological Diagnosis	Number Of Patients	Percentage
Proliferative endometrium	06	7.5%
Secretory endometrium	26	32.5%
Irregular endometrium	07	8.75%
Luteal phase defect	03	3.75%
Atrophic endometrium	06	7.5%
Endometritis	02	2.5%
Leiomyoma	09	11.25%
Polyp	03	3.75%
Hyperplasia	14	17.5%
Endometrial carcinoma	03	3.75%
Inadequate	01	1.25%
TOTAL	80	100%

The most common histopathological pattern in AUB patient was Secretory Endometrium (32.5%) followed by hyperplasia (17.5%). In postmenopausal females most common histopathological finding was atrophic endometrium. Out of 80 cases, three cases were reported as Endometrial Carcinoma. Other findings on histopathology were Proliferative endometrium, Irregular endometrium, Endometritis, Leiomyoma and Polyp.

Table 5: Histopathological Correlation Of Aub Cases With Their Clinical Symptoms

Histopathological diagnosis	Menorrhagia	Menometrorrhagia	Polymenorrhoea	Post coital bleeding	Post Menopausal bleeding	Total cases
Proliferative endometrium	4	2	0	0	0	06
Secretory endometrium	15	5	6	0	0	26
Irregular endometrium	3	2	2	0	0	07
Luteal phase defect	2	1	0	0	0	03
Atrophic endometrium	0	0	0	1	5	06
Endometritis	0	1	0	0	1	02
Leiomyoma	6	2	1	0	0	09
Polyp	1	1	0	0	1	03
Hyperplasia	10	1	3	0	0	14
Endometrial carcinoma	0	1	0	1	1	03
Inadequate	1	0	0	0	0	01
TOTAL	42	16	12	02	08	80

The statistical analysis to seek association among histopathological correlation of AUB cases with their clinical symptoms, was drawn by Chi square test. As majority of the values were below 5, Fisher exact test was applied whose value was 0.312 (>0.05). Hence no significant statistical association could be deduced.

DISCUSSION

AUB accounts as the most common complaint of females presenting in gynae OPDs. Because of its broad spectrum of differential diagnosis, it has become more challenging. The endometrium is different in different phases of menstrual cycle so correlation of phase of cycle with the histopathology is very important. In this study histopathological patterns of endometrium were analyzed in patients with AUB. Endometrial biopsy or Dilatation and Curettage are safe and effective technique for evaluation of AUB and diagnosis of endometrial pathology like infection, Leiomyoma, Polyp, Hyperplasia and Cancer[9].

In our study, majority of women with AUB were between age group 41-50 years followed by 31-40 years. The most common age group involved was perimenopausal. The mean age of patients presented with AUB was 45 years in the study conducted by Valson[10]. Similar findings were seen in the study conducted by Shreshta[11] 41-45 years, Kumra et al[12] 31-50 years and Chapagain S[13] 40-44 years. In AUB, the most common complaint was Menorrhagia in our study which was accordance to the study conducted by Chaudhary[14] and Razzaq et al[15].

In this study we found Secretory endometrium in maximum cases on histopathology (31.2%) followed by hyperplasia (17.5%) which was in accordance to the study by Jetley et al[16] which 32.4% cases were in secretory phase. In the study by Chattrasal[17] endometrial hyperplasia was reported in 25.3% cases whereas in study by Khan[18] it was 12.5%. In our study atrophic endometrium was seen in 7.5% cases mostly in post menopausal females in accordance to study by Mirza et al[19] where it constituted 7% cases in post menopausal age group.

In this study 3.8% cases were diagnosed as endometrial carcinoma which was similar to the study by Saraswathi et al[20] conducted in patients with AUB.

CONCLUSION

Histopathological patterns in females with AUB are variable and histopathology is must to rule out local causes and help to determine mode of treatment. These ranges from normal physiological patterns to pathologies of different type. In our study secretory phase of endometrium was the most common followed by hyperplasia. Any premalignant condition and Endometrial carcinoma has to be ruled out especially in perimenopausal and postmenopausal females on histopathology. Early and accurate diagnosis of underlying cause of AUB is important to overall improvise women health.

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