

STUDY OF CLINICO HISTOPATHOLOGICAL CORRELATION OF ABNORMAL UTERINE BLEEDING IN A TERTIARY CARE HOSPITAL, NANDYALA

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Abstract

Purpose: Abnormal Uterine Bleeding is a common problem encountered by women of all age groups, responsible for around 20-30% visits to out-patient department in reproductive and perimenopausal age group. The International Federation of Gynaecology and Obstetrics working group on menstrual disorders has developed a classification system-PALM COEIN for causes of AUB in non-pregnant women of reproductive and perimenopausal age. Menorrhagia is cyclical bleeding at regular intervals which is excessive in amount(>80ml), or duration. Menorrhagia is thought to be associated with uterine fibroid, DUB, adenomyosis, pelvic infections, endometrial polyp, clotting defects. Polymenorrhagia, intermenstrual bleeding and metrorrhagia are common disorders at perimenopause, these are usually associated with proliferative phase of endometrium and if left untreated may lead to endometrial carcinoma(8-50%). Aim of the Study: To evaluate the correlation of histopathological findings with clinical signs and symptoms in patients presented with AUB in reproductive and perimenopausal age group. Objective: 1. To study the histopathological correlation of abnormal uterine bleeding with clinical symptoms. 2. to evaluate the need for hysterectomy and to rule out malignancy in women >45years with AUB. **Methods:** This is a retrospective cross sectional study conducted in the Department of Obstetrics and Gynaecology at Santhiram Medical College and general hospital, Nandyal from April 2022 to march 2023. 280 non pregnant reproductive and perimenopausal age women were included in the study. **Results:** Total of 280 cases were analyzed. Patients age ranged from 20-49 years. The most common presenting symptom was heavy menstrual bleeding (62%). Most of the patients (60%) were initially treated medically before undergoing hysterectomy. In few patients (14%) hysterectomy was done as first treatment as the bleeding was severe. Endometrial proliferative pattern was the most common histopathological finding and was seen in 64% patients. Atypical endometrial hyperplasia in 5% patients, secretory endometrium in 15% and atrophic endometrium were seen in 4% patients each and Cystic hyperplasia in 7% patients. After exclusion of organic pathology (according to FIGO classification: PALM) through histopathological findings, diagnosis of AUB due to Nonstructural pathology like ovulatory dysfunction, Endometrial pathology was confirmed in 45% of cases. **Conclusion:** As per the following study there is significant correlation between clinical findings and histopathological findings in patients presented with AUB. Histopathological examination of endometrium should be done generously in women presenting with AUB especially after the age of 45 to rule out malignant pathology.



INTRODUCTION

Abnormal uterine bleeding (AUB) is defined as any change in the frequency of menstruation, duration of flow or amount of blood loss.

AUB is a common condition affecting the women of reproductive and perimenopausal age group and may also have a significant effect on their physical, social, and emotional aspects directly affecting their quality of life. AUB is a common problem encountered by women of all age groups, responsible for around 20-30% visits to out-patient department in reproductive age group.

According to the International Federation of Gynaecology and Obstetrics (FIGO), acute AUB could be classified as “an episode of bleeding in a woman of reproductive age, who is not pregnant, that is of sufficient quantity to require immediate intervention to prevent further blood loss “ The International Federation of Gynaecology and Obstetrics working group on menstrual disorders has developed a classification system-PALM COEIN for causes of AUB in non-pregnant women of reproductive and perimenopausal age.

The classification system is divided into nine categories that are arranged according to the acronym PALM-COEIN: Polyp, Adenomyosis, Leiomyoma, Malignancy and hyperplasia, Coagulopathy, Ovulatory disorders, Endometrial, Iatrogenic, and Not Yet Classified. The most common clinical manifestations are menorrhagia, polymenorrhea, metrorrhagia, and inter-menstrual bleeding. The new terminologies approved by FIGO are: a) Heavy menstrual bleeding (HMB) should replace menorrhagia to describe excess of bleeding, b) Inter menstrual bleeding (IMB) that occurs between clearly defined cyclic and predictable menses should replace the term metrorrhagia, c) Heavy and prolonged bleeding (HPB) should replace menometrorrhagia and d) frequent menstrual bleeding should replace polymenorrhea.

The clinicopathological correlation was found good when the cases were classified under PALM-COEIN classification. The safe and effective technique was endometrial biopsy or Dilatation and Curettage (D and C) for evaluation of AUB and diagnosis of endometrial pathologies. Abnormal uterine bleeding is initially managed medically. A number of minimally invasive surgical alternatives for hysterectomy do exist now, such as endometrial ablation, thermal balloon therapy and uterine artery embolization. These are promising techniques but restricted availability and cost limit them from being used widely. Therefore, hysterectomy still remains the widely accepted and practiced treatment, in a developing country. Histological assessment remains the basis in the current practice in patients of AUB as it determines the diagnosis and guides the correct management plan.

In the present study, we aimed to classify the samples according to PALM-COEIN classification and also try to establish a clinicopathological correlation in a tertiary care hospital, Nandyal.

METHODOLOGY

Study Setting: Department of Obstetrics and Gynaecology, santhiram medical college, Nandyal.

Study Period: 10 months study period. Study was conducted from April 2022 to march 2023

Study Population: Non pregnant females of age 20 to 49 years suffering from Abnormal Uterine Bleeding

Sampling Method

This is a retrospective study conducted at the department of OBG in association with pathology department. Information was collected regarding age, parity, clinical features, menstrual history and pre-op diagnosis and indications for D and C. Histopathology reports of the same patients were collected from department of pathology and their diagnosis was noted.

Method of Data Collection

A total of 280 cases were analysed. The study includes all women with AUB in the age group of 20-49 years attending gynaecology OPD at Santhiram medical college and general hospital, Nandyal. Data was recorded on proforma, including demographic characteristics, history and clinical features. Detailed general physical and gynecological examination findings including cervix (position, erosion, any polyp, hypertrophy, growth, etc.), uterus (size, shape, position, consistency, mobility, and any mass), and adnexa (any mass, tenderness, and mobility) were observed. After arriving at a clinical diagnosis, wherever indicated, ultrasound or other tests like endometrial biopsy were done to aid the diagnosis. The histopathologic findings were analysed so as to find out the proportion of various causes of AUB in accordance to the classification system PALM-COEIN proposed by FIGO.

Inclusion Criteria

1. All females from reproductive to perimenopausal age group who presented to gynaecology OPD with abnormal uterine bleeding.

Exclusion Criteria

1. An established case of pregnancy.
2. Female with obvious cervical cause of vaginal bleeding.
3. Women with bleeding due to pregnancy related causes like abortion, gestational trophoblastic diseases, ectopic and others were excluded.

RESULT

Most of the patients in the study presented are with AUB (O) followed by AUB(L).

Results are described in table forms shown below:

Table 1: Distribution of AUB cases based on clinical Diagnosis (n = 280).

Type of AUB	n (280)	%
AUB (L)	70	25%
AUB(O)	145	52%
AUB(A)	65	23%

Table 1 shows most of the patients presented with ovulatory causes of AUB

Table 2: Distribution of cases of AUB according to parity (n = 280).

Parity(n)	Percentage
1	2%
2	20%
3	22%
4	26%
>5	30%

Table 2 shows that most of the patients are multiparous or grand multiparous.



Figure 1: Distribution of cases of AUB according to parity (n = 280).

Pie chart of figure 1 shows that, most of the patients are multiparous or grand multiparous

Table 3: Distribution of cases of AUB based on Bleeding patterns (n = 280)

Types of Bleeding	N	%
Heavy menstrual bleeding (Menorrhagia)	174	62%
Frequent menstrual bleeding (Polymenorrhagia)	50	18%
Inter menstrual bleeding (Metrorrhagia)	34	12%
Heavy and prolonged bleeding (Menometrorrhagia)	22	08%

Most of the patients in the study presented with heavy menstrual bleeding followed by intermenstrual bleeding.

Table 4: Ultrasonogram finding of the study population (n = 280).

Ultrasonogram findings		No. of patients	% of patients
Uterus	Bulky	168	60%
	Lieomyoma	70	25%
	Adenomyosis	42	15%
Endometrium	Normal	94	%
	Increased thickness	4	%
Ovary	Normal	202	72%
	Cystic	78	28%

Most of the patients USG reports showed bulky uterus, normal ovary morphology and normal endometrial thickness.

Table 5: Distribution of AUB cases based on histopathological findings(n=280)

Endometrial pattern	N	%
Proliferative phase	179	64%
Secretory phase	42	15%
Atrophic endometrium	11	4%
Mixed endometrium	6	2%
Cystic hyperplasia	20	7%
Atypical hyperplasia	14	5%
Adenomatous hyperplasia	8	3%

In this study most of the cases histopathological report shows that most of the endometrial findings are in proliferative phase.

Table 6 Distribution of cases of AUB under PALM COEIN classification

	N	%
POLYP	21	7.5%
ADENOMYOSIS	19	6.78%
LEIOMYOMA	24	8.57%
MALIGNANCY	9	3.21%
COAGULOPATHY	15	5.3%
OVARIAN ABNORMALITIES	110	39.2%
ENDOMETRIAL ABNORMALITIES	43	15.3%
IATROGENIC	8	2.8%
NOT YET CLASSIFIED	31	11.07%

Table 6 shows PALM COEIN classification of patients with AUB. It shows most of them are classified under ovulatory dysfunction followed by endometrial abnormalities

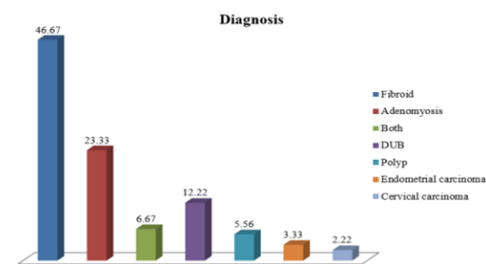


Figure 2

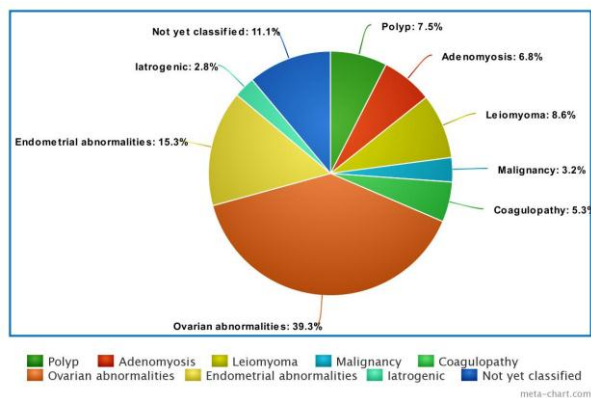


Figure 3: showing distribution of cases of AUB according to PALM-COEIN classification

DISCUSSION

Abnormal Uterine Bleeding (AUB) is a common problem among women AUB can be caused by a wide variety of disorders. Because of its broad range of differential diagnosis, diagnosis of AUB is quite challenging, despite detailed history, various blood

test and thorough pelvic examination often involving ultrasonography, the cause of bleeding established in only 50-60% of cases.

Abnormal uterine bleeding due to ovulatory dysfunction is a diagnosis of exclusion. Menstrual blood loss can be affected by parity. Multiparous women having higher blood loss than nulliparous. In our study 36% were in grandmultiparous women. Study done by Prasannalakshmi and Krishnaveni showed that most of the patients were in grand multiparous group.^[1] In the present study similar findings were found.

AUB patients may come with various types of menstrual disorders

(eg. heavy menstrual bleeding, frequent menstrual bleeding, intermenstrual bleeding). But most common type is functional polymenorrhea and polymenorrhagia (frequent menstrual bleeding). According to Jeffcoates, 50% patients of AUB present with functional polymenorrhea and polymenorrhagia (frequent menstrual bleeding). In the study by Kohinoor Begum, 78% had heavy menstrual bleeding, 12.5% had polymenorrhea and polymenorrhagia (frequent menstrual bleeding) and 8.75% had continuous bleeding.^[5] In the study by Banerjee, 54% had heavy menstrual bleeding, 30% had polymenorrhea (frequent menstrual bleeding) and 14% had continuous bleeding.^[6] In our study similar findings were seen where 62% had menorrhagia (heavy menstrual bleeding).

In the study by Sadikchha and Ganesh proliferative endometrium (37.7%) was most common histopathological findings as in most of the study followed by secretory endometrium (31.2%), hyperplastic endometrium (15.6%), atrophic endometrium (5.2%), endometritis (3.9%), endometrial carcinoma (3.3%), complex endometrial hyperplasia without atypia (2.6%) and simple endometrial hyperplasia without atypia

(1.3%).^[9] In this study the results were as similar to most of the studies.

In a study done by Goel P *et al.*^[10] ovulatory dysfunction was found to be the most common cause of AUB (28.3%) followed by leiomyoma (22.7%). In the study done by Qureshi and Yusuf [11] in 2013, leiomyoma was a most common category (25%) followed by ovulatory dysfunction (24%). In the study for Ratnani R *et al.*^[12] in Sep'17, leiomyoma (35%) was the most common cause of AUB, followed by malignancy and hyperplasia, adenomyosis and ovulatory dysfunction.. In present study, the most common finding was AUB O(52%), followed by endometrial abnormalities .

The incidence of non-neoplastic conditions outnumbered neoplastic conditions. Among non-neoplastic lesions, majority were of proliferative endometrium indicating estrogen imbalance concurring with observations done by Dangal, Samaletal which is also similar to this present study.

CONCLUSION

According to Clinicopathological correlation of different components of PALMCOEIN classification AUB-O along with AUB-E categories of the COEIN discloses significantly more cases. Incidence of AUB cases are significantly more in multiparous compared to primiparous women.

As per the study there is significant good correlation between clinical findings and histopathological findings in patients presented with AUB. In this study ovulatory dysfunction stands as the most common cause of AUB in both clinical & histopathological findings.

Histopathological examination of endometrium should be done generously in women presenting with AUB especially after the age of 45 to rule out malignant pathology

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