

The Clinicopathological Correlation and Risk Factors of Abnormal Uterine Bleeding in Perimenopausal Women

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Abstract

Uterine bleeding is a normal physiological phenomenon and its occurrence in women varies considerably. Normal menstruation is shedding of secretory endometrium which occurs as uterine bleeding associated with ovulatory cycles, not exceeding a length of five days. Abnormal uterine bleeding (AUB) is bleeding from the uterus that is longer than usual or that occurs at an irregular time. Bleeding may be heavier or lighter than usual and occur often or randomly

Keywords: Bleeding, pelvic examination, MRI and CT

Introduction

Abnormal uterine bleeding (AUB) is a common and debilitating condition with high direct and indirect costs. AUB frequently co-exists with fibroids, but the relationship between the two remains incompletely understood and in many women the identification of fibroids may be incidental to a menstrual bleeding complaint. Classification system will facilitate accurate

diagnosis and inform treatment options. Office hysteroscopy and increasing sophisticated imaging will assist provision of robust evidence for the underlying cause. Increased availability of medical options has expanded the choice for women and many will no longer need to recourse to potentially complicated surgery. Treatment must remain individualised and encompass the impact of pressure symptoms, desire for retention of fertility and contraceptive needs, as well as address the management of AUB in order to achieve improved quality of life.

The variability of menstrual bleeding is broad and hence identification of pathology is a difficult condition. The etiology of abnormal uterine bleeding varies and hence the bleeding pattern. Sometimes bleeding pattern gives a diagnostic clue to the underlying etiology. The goal of management will depend upon the etiological diagnosis. The history, physical and pelvic examination help

determine the site and source of bleeding. Information from this will suggest on further investigations such as ultrasound and histopathology. Ultrasound gives information on the status of uterus and ovary.

Further investigations like MRI and CT can be done when needed and is helpful in case of suspicion of cancer. These also help in staging the disease. Further Hysteroscopic visualization of uterine cavity has also emerged as a newer diagnostic tool. 2 Abnormal uterine bleeding is the most common complaint in gynaecological outpatient department and is the most challenging problems presenting to the gynaecologist.

Any deviation in terms of cycle, duration of bleeding, amount of blood loss or combination of all is called abnormal uterine bleeding. It is almost encountered in a wide range of age spectrum from puberty to postmenopausal period. The perimenopausal period is the most common age of presentation. WHO defines perimenopause as the period 2- 8 years preceding menopause and 1 year after the final menopause. However, a better practical definition is the phase preceding the menopause generally occurring around 40-50 years of age. Follicular development at this time has been erratic with increased percentage of anovulatory cycles and variability in oestrogen levels.

Abnormal uterine bleeding can be caused by a wide variety of structural and functional causes. Common structural causes include fibroids, polyps, adenomyosis or neoplasia. The largest single group encompasses functional disturbances, referred to as dysfunctional uterine bleeding (DUB). DUB is defined as any excess bleeding of uterine origin which is not due to demonstrable organic cause, complications of pregnancy or systemic diseases.

Objectives

- To study the risk factors of abnormal uterine bleeding in perimenopausal women.
- To study the spectrum of histopathological changes of the endometrium in perimenopausal bleeding with abnormal uterine bleeding.

Methods

This study is a prospective observational study that will be carried out at a tertiary care hospital after obtaining approval from the institutional ethics committee and taking informed consent from the patients. Perimenopausal women with the complaint of abnormal uterine bleeding attending the gynecology OPD will be the study population. The patients who give consent will be interviewed and information will be filled in the structured case record sheet. A total of 50 patients were included in the study.

The case record form contains:

1. Demographic details like patient's registration number, name initials, age, gender.
2. History, examination findings and investigations.

Inclusion Criteria

1. Patients with age 40 years and above with abnormal uterine bleeding.

Exclusion criteria

1. Patients not willing to be a part of the study.
2. Postmenopausal women.
3. Patients with pregnancy and pregnancy related conditions.

Data was entered in Microsoft excel and data analysis was done using the latest SPSS version.

Results

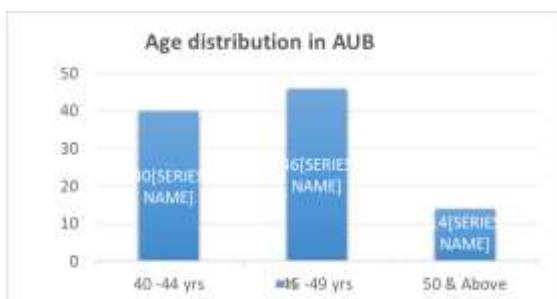
AUB is one of the common menstrual problems faced by women during their perimenopausal period, which is defined as the period of 3-10 years preceding menopause and one year after the final menses. Follicular

development during perimenopause is very unpredictable which leads to variable estrogen levels. This results in anovulatory cycles which causes irregular abnormal uterine bleeding.

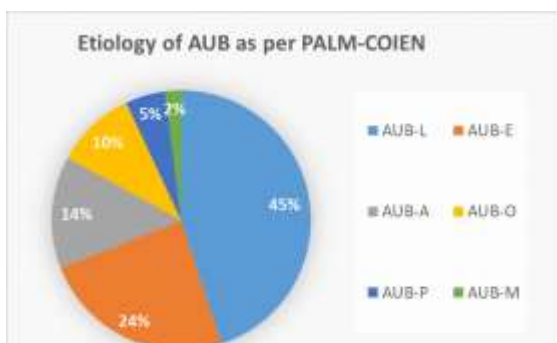
A total of 50 cases of AUB were included in the study as per the inclusion/exclusion criteria, from among the women attending the gynecology OPD in a tertiary care hospital.

The incidence of menstrual abnormalities increases with increasing age. In this study it was found that maximum patients were in the age group of 45-49years accounting for 46%, followed by 40% in the age of 40-44years and least above 50 years of age (14%).

Graph 1:

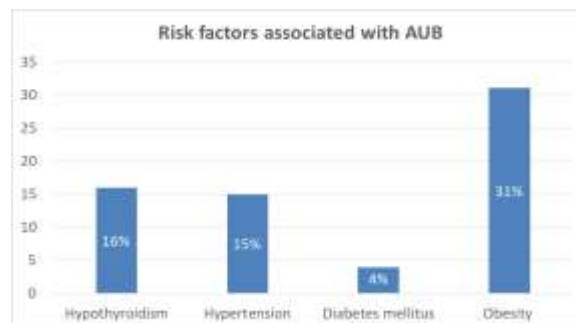


Graph 2:



AUB-L was found to be the most common cause accounting for 45% of the cases followed by AUB-E (24%), AUB-A (14%), AUB-O (10%), AUB-P (5%) and AUB-M (2%). Among the risk factors associated, obesity was seen in 31% cases, hypothyroidism was seen in 16% of the cases, hypertension in 15% of the cases and diabetes mellitus in 4% of the total cases studied.

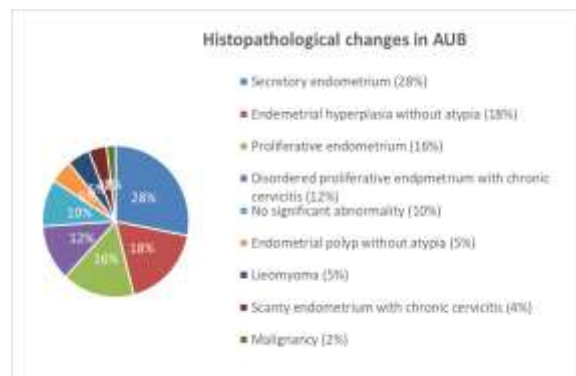
Graph 3:



HPR reports in the total AUB cases showed their clinicopathological correlation as follows:

- 28% of the total cases had secretory endometrium with chronic cervicitis
- 18% of the cases had endometrial hyperplasia without atypia
- 16% of the cases had proliferative endometrium with chronic cervicitis.
- 12% had disordered proliferative endometrium
- 10% had no significant abnormality in the endometrium
- 5% showed endometrial polyp without atypia
- 5% of the cases showed changes of leiomyoma
- 4% showed scanty endometrium with chronic cervicitis
- 2% cases showed changes of malignancy

Graph 4:



Aub and Thyroid Disorders

- 16% of the total AUB cases are associated with hypothyroidism of which 62.5% are in the 40-44yr

age group, 25% are in the 45-49yr age group and 12.5% are above 50yrs of age.

- Among the AUB patients with hypothyroidism, 56.25% have AUB-L, 25% have AUB-E and 18.75% have AUB-A.
- 50% of these cases had secretory endometrium with chronic cervicitis, 12.5% had proliferative endometrium with chronic cervicitis, 12.5% had endometrial hyperplasia without atypia, 12.5% showed submucosal leiomyoma and the remaining 12.5% showed scanty endometrium with chronic cervicitis.
- Hypothyroidism was found to have a significant association with secretory type of endometrium (at $p<0.05$)

Aub and Hypertension

- Hypertension was seen in 15% of the AUB cases. Among these 46.67% were between 45-49yrs of age, 33.33% were above 50yrs age and 20% cases were between 40-44yrs.
- 46.67% of these cases had AUB-L, 33.33% cases had AUB-E and remaining 20% cases had AUB-A.
- Among these 33.33% of the cases had secretory endometrium with chronic cervicitis, 26.67% of the cases had proliferative endometrium with chronic cervicitis, another 26.67/5 cases had disordered proliferative endometrium and 13.33% of the cases had endometrial hyperplasia without atypia.

Aub And Diabetes Mellitus

- 4% of the cases of AUB were found to be associated with diabetes mellitus, 50% of these were between 45-49yrs, 25% were between 40-44yrs and 25% were above 50yrs of age.
- Among these, 50% of the cases had AUB-E, 25% had AUB-L and 25% had AUB-O.

- 50% of these cases had secretory endometrium with chronic cervicitis while 25% had disordered proliferative endometrium with chronic cervicitis and another 25% had normal endometrium.
- Secretory endometrium was found to be statistically significant in AUB patients with diabetes mellitus (at $p<0.05$).

Discussion

AUB is one of the most common menstrual problems faced by women especially in the perimenopausal period. The perimenopausal period is defined as the period of 3-10 years preceding menopause and one year after the final menses stop.

In this study AUB was found more commonly between 45-49yrs (46%) age group, closely followed by 40-44yrs (40%) age group. The most common cause of AUB in this study was found to be AUB-L (leiomyoma) accounting for 45% of the cases, followed by AUB-E (endometrial causes) with a 24% prevalence, and AUB-A (adenomyosis) with a 14% prevalence, AUB-O (10%) due to ovarian causes and AUB-P (5%) caused due to polyps. Among the risk factors, obesity was seen in 31% cases, hypothyroidism was seen in 16% of the cases, hypertension in 15% of the cases and diabetes mellitus in 4% of the AUB cases. Secretory endometrium with chronic cervicitis was the most common histopathological finding seen in 28% of the cases, followed by endometrial hyperplasia without atypia (18%), proliferative endometrium with chronic cervicitis (16%) and disordered proliferative endometrium (12%). Secretory type of endometrium was found to be significantly associated with hypothyroidism and diabetes mellitus. Whereas endometrial hyperplasia without atypia was significantly associated with AUB-E. Perimenopausal women with AUB having hypothyroidism were more commonly seen in the 40-

44yrs age group, commonly associated with AUB-L and had secretory type of endometrium in majority of the cases. Patients having associated hypertension were mainly above 50yrs of age (46.67%) having AUB-L as the most common cause (46.67%) and secretory endometrium as the most common type of endometrium. Diabetes mellitus was seen only in 4% of the cases, mainly above 45yrs of age (75%), associated more commonly with AUB-E (50%) and secretory type of endometrium (75%). Significant association was found between thyroid disease and AUB-O and AUB-E which explains the hormonal imbalance and causes of AUB.

Conclusion

Abnormal uterine bleeding is the most common menstrual complaint in women and its incidence increases with increasing age and parity. AUB is most commonly seen in perimenopausal women, especially between 45-49yrs age group. Leiomyoma was found to be the most common cause of AUB whereas obesity, hypothyroidism and hypertension were more commonly associated risk factors of AUB than diabetes mellitus. Secretory endometrium is the most common type of endometrium associated with abnormal uterine bleeding. Hence emphasis should be given to taking a detailed history and doing thorough clinical examination of the patients presenting with abnormal uterine bleeding, to identify the cause and risk factors associated in order to enable us to provide the adequate necessary treatment for this commonest gynecological complaint.

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