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International Journal of Pharmaceutical and Clinical Research 2023; 15(6); 2416-2420

**Original Research Article** 

# Prevalence of Abnormal Uterine Bleeding in Young Females (less than 40 years) and its Risk Factors

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**Conflict of interest: Nil** 

### Abstract:

**Background:** Any divergence from the typical menstrual cycle that is abnormal in regularity, duration, volume, or frequency is referred to as abnormal uterine bleeding (AUB). In women who are below 40, abnormal uterine bleeding (AUB) is a prevalent issue now-days.

**Objective:** To estimate the prevalence of AUB its associated risk factors in the women age less than 40 years.

**Methods:** It was a retrospective record based hospital study done in Department of Gynaecology at GMC, Datia (M.P.). The data is collected from July 2022 to June 2023. Data was collected from the medical records, verbal telephonic consent was taken and confidentiality was maintained. The study was approved by Institutional Ethics Committee. The total number of patients attending the Gynaecology OPD during the study period was 12600. To know the prevalence, total AUB cases encountered OBG OPD during the study duration was considered. The total number of AUB cases during the study period was 2150 among them 230 were randomly selected to study the risk factors. SPSS was used for analysis. **Results:** The overall prevalence of AUB in our study was 17.03% (2150/12600). Maximum number of patients belonged to 35-39 years of age (55%). Hypertension was found to be most common Co-morbidity in 30% of patients followed by diabetes. Among the chief complaints Heavy Menstrual bleeding was the most common seen in 39% of patients followed by prolonged bleeding in 23%. Structural (polyp+adenomyosis+leiomyoma+malignancy) cause's accounts for 179 (79%) cases as per the PALM-COEIN classification, leiomyoma (AUB-L) was the most prevalent cause of AUB in the study seen in 39% of cases.

**Conclusion:** Clinicians should place special attention on identifying and treating coexisting risk factors At the OPD, a thorough history, paying particular attention to age and the type of bleeding pattern, along with a gynaecologic examination, aid in making the correct diagnosis. **Keywords:** Abnornal uterine bleeding (AUB), polyp, adenomyosis, menstrual irregularities, Hypertension.

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#### Introduction

In women who are below 40, abnormal uterine bleeding (AUB) is a prevalent issue [1]. AUB causes productivity loss and may require surgical procedures, such as a hysterectomy. More than one-third of the patients that arrive at the OPD have AUB [1]. In a country with a diverse healthcare system like India, managing such a widespread illness need for consistent clinical practice recommendations. By submitting patients to a histological examination, the primary goal of AUB care is to identify those who may be at risk of developing malignancy and to rule out endometrial cancer or underlying endometrial hyperplasia with atypia [1].

The PALM-COEIN acronym, which stands for Polyp, Adenomyosis, Leiomyoma, Malignancy, and Hyperplasia, Coagulopathy, Ovulatory dysfunction. Endometrial, Iatrogenic, and Not Yet Classified, has been recommended as a systematized nomenclature to replace the terms menorrhagia and menometrorrhagia for the description of abnormal menses. [1,2] The classification based on frequency, length, regularity, volume, and intermenstrual bleeding has been updated to include a standard menstrual pattern index [2,3]. About 17.9% of people in India are said to have AUB [4]. Prevalence varies by area and ranges from 10 to 30 percent, according to earlier studies [4]. Heavy menstrual bleeding (HMB) and AUB is not the same thing. Extreme menstrual blood loss that interferes with a woman's physical, mental, and social well-being is known as HMB. [1]. Women with AUB might choose between medicinal or surgical procedures for management. If cancer has been ruled out, the first course of treatment is medical control. Hysterectomy and myomectomy are two open and minimally invasive surgical procedures that fall under surgical management [5]. There are not many studies assessing the relationship between AUB and medical conditions in the women under 40 age group [4,5]. This study was conducted to find the association and prevalence of AUB in women less than 40 years and the risk factors associated with it.

# **Materials and Methods**

It was a retrospective record based hospital study done in Department of Gynaecology at GMC, Datia (M.P.). The data is collected from July 2022 to June 2023. Data was collected from the medical records, verbal telephonic consent was taken and confidentiality was maintained. The study was approved by Institutional Ethics Committee. The total number of patients attending the Gynaecology OPD during the study period was 12600. To know the prevalence, total AUB cases encountered OBG OPD during the study duration was considered. The total number of AUB cases during the study period was 2150 among them 230 were randomly selected to study the risk factors.

Inclusion criteria- The patients in the age group less than 40 years and attending OBG, OPD and admitted with complaints of AUB were included.

Exclusion criteria: Patients with pregnancy and pregnancy related conditions, peri and postmenopausal women, vaginal bleeding caused by vaginal and cervical causes were excluded.

### Methodology

The information was gathered retroactively from the hospital's computerized system and medical records. Age, parity, menstrual history (according to FIGO classification [1], obstetric history), medical [associated co-morbidities], and surgical history, laboratory test results (Complete Blood Count (CBC), Coagulation tests, Thyroid Stimulating Hormone (TSH), Prolactin, Random Blood Sugar (RBS)], imaging (transabdominal/transvaginal findings ultrasound), and endometrial biopsy results were all gathered from the patient. Using the use of a standardized proforma, the data was gathered. AUB prevalence was calculated by dividing the total number of AUB cases by the total number of patients who visited the Gynecology OPD. As per the PALM -COEIN classification system [2], the potential causes of AUB were established and then categorised accordingly.

Bleeding pattern was defined by following FIGO 2018 criteria [1].

1. Frequency-amenorrhoea for duration of 90 days, cycle length >38 days (infrequent) or <24 days (frequent).

2. Duration-normal duration is  $\leq 8$  days; prolonged duration > 8 days.

3. Regularity-normal or regular (shortest to longest variation  $\leq$ 7-9 days); irregular ( $\geq$ 8-10 days).

4. Volume-only patient determined-light, normal and heavy; heavy (HMB)-bleeding volume sufficient to interfere with the woman's quality of life.

5. Intermenstrual bleeding-bleeding between cyclically regular onset of menses, either random or cyclic.

### **Statistical Analysis**

The statistical analysis was performed using SPSS for windows version 22.0 software (Mac, and Linux). The findings were present in number and percentage analyzed by frequency, percent, and Chi-squared test. Chi-squared test was used to find the association among variables. The critical value of P indicating the probability of significant difference was taken as <0.05 for comparison.

### Results

Parameters	Number	%			
Age (in years)					
30-34	110	45			
35-39	120	55			
Types of co-morbidities					
Hypertension	88	30.2			
Thyroid disease	35	6.6			
Diabetes	42	14.2			
Presenting complaint					
Heavy menstrual bleeding	108	39.1			
Heavy and prolonged bleeding	51	23.1			
Intermenstrual bleeding	25	10.6			
Frequent bleeding	37	15.5			
Infrequent/Scanty bleeding	26	11.5			

### Table 1: Demographic details of Study participants

As per table the overall prevalence of AUB in our study was 17.03% (2150/12600). Maximum number of patients belonged to 35-39 years of age (55%). Hypertension was found to be most common Co-morbidity in 30% of patients followed by diabetes. Among the chief complaints Heavy Menstrual bleeding was the most common seen in 39% of patients followed by prolonged bleeding in 23%.

8					
<b>AUB</b> classification	Number	%			
AUB-P	32	13.3			
AUB-A	51	21.7			
AUB-L	88	39.10			
AUB-M	8	3.5			
AUB-C	3	1.3			
AUB-O	23	9.7			
AUB-E	20	8.8			
AUB-I	5	2.2			
Total	230	100			

#### Table 2: Distribution of AUB according to PLAM-COEIN classification

As per table 2 Structural (polyp+adenomyosis+leiomyoma+malignancy) cause's accounts for 179 (79%) cases as per the PALM-COEIN classification, leiomyoma (AUB-L) was the most prevalent cause of AUB in the study seen in 39% of cases. Next common cause of abnormal uterine bleeding was adenomyosis (AUB-A) followed by AUB-P

<b>AUB classification</b>	Hypertension	T2DM	Thyroid disorder	p-value
AUB-P	34	11	13	0.01*
AUB-A	21	9	6	0.01*
AUB-L	12	7	5	0.11
AUB-M	10	6	4	0.13
AUB-C	4	4	2	0.17
AUB-O	3	3	2	0.32
AUB-E	2	1	2	0.45
AUB-I	2	1	1	0.56
Total	88	42	35	

Table 3- Association of AUB with Co-Morbidities

As per table 3 AUB associations as PALM-COEIN classification with co-morbidities were seen, it was concluded that AUB (polyp and Adenomysosis) were significantly associated with hypertension, diabetes and thyroid disorders. Out of 230 study cases, 165 had co-morbidities.

# Discussion

Prevalence of AUB among the patients attending Gynaecology OPD during the period was 17.03%.In study their investigation, Kotagasti T discovered an AUB prevalence of 18.23%, which is comparable to the current study [6]. Between 9 and 14 percent of women in menarche and menopause have AUB [7]. AUB prevalence in India is estimated to be 17.9% [4]. AUB was found to be more prevalent in the 45-49 age groups (45.3%) than in the 40-44 year age group (40%) group. HMB was the most frequent complaint among the 39.1% of women in this study. In contrast to studies by Gouri SR et al., [8] and Goel P and Rathore SB, [9], where the most common was AUB-O but disorders were comparable to Qureshi FU and Yusuf AW, [10] and Ratnani R and Meena NA, [11], where the common cause of AUB was leiomyoma, the most common cause of AUB in the current study is leiomyoma.

According to earlier research, the prevalence of AUB-L ranges from 9 to 30% [12]. AUB-L prevalence increases with age, reaching 35.1% in the 40-49 age group compared to young adults (24.3%) in the 30-39 age group [13]. Adenomyosis prevalence varies depending on the population subgroup. Adenomyosis is more common in 20–25% of women using assisted reproductive technologies [13], in 20-80% of women with endometriosis [14], and in 20.9% of those getting an ultrasound in general [15]. The most frequent comorbidity linked to AUB in the current study was hypertension (30.8%), followed by diabetes and thyroid illness. Both hypertension and fibroid are extremely common conditions with severe long-term morbidity [14,15].

# Conclusion

Clinicians should place special attention on identifying and treating coexisting risk factors. The majority of instances of AUB-L were caused by structural factors, which were the most frequent causes of AUB. At the OPD, a thorough history, paying particular attention to age and the type of bleeding pattern, along with a gynaecologic examination, aid in making the correct diagnosis. This study acts as a pilot investigation to see whether there is a relationship between various AUB kinds and chronic health issues.

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