

Clinical Profile and Treatment Outcomes of Abnormal Uterine Bleeding in Perimenopausal Women: A Prospective Observational StudyReena¹, Anamika Ranjan², Sangeeta Sinha³¹Senior Resident, Department of Obs and Gynae, Patna Medical College and Hospital, Patna, Bihar, India²Senior Resident, Department of Obs and Gynae, Patna Medical College and Hospital, Patna, Bihar, India³Professor, Department of Obs and Gynae, Patna Medical College and Hospital, Patna, Bihar, India

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Abstract:**Background:** Abnormal uterine bleeding (AUB) is a common gynecological complaint among perimenopausal women and significantly affects quality of life, productivity, and psychological wellbeing. Etiology ranges from benign hormonal disturbances to structural pathology and premalignant lesions.**Objective:** To evaluate the clinical profile, etiological spectrum, and treatment outcomes of AUB in perimenopausal women.**Methods:** Over the course of a year, a prospective observational study was carried out at a tertiary care facility. One hundred perimenopausal women with AUB who were between the ages of 40 and 55 were included. A thorough clinical history, examination, blood testing, ultrasound, and, if necessary, endometrial sampling were carried out. Depending on the etiology, management may involve surgery or medication therapy. For six months, patients were monitored. Student's t-test and the chi-square test were employed in the statistical analysis.**Results:** The most frequent presentation was heavy menstrual bleeding (42%), which was followed by intermenstrual bleeding (18%). Ovulatory dysfunction accounted for 26% of the reasons, while leiomyoma (28%), adenomyosis (20%), and endometrial polyps (12%) were structural. 58% of patients underwent medical management, 18% underwent hysteroscopic procedures, and 24% underwent hysterectomy. At six months, 76% of the women had improved symptoms. Compared to medical therapy, surgical surgery demonstrated a greater degree of full symptom remission (91.7% vs. 69.0%, $p=0.014$). Heavy menstrual bleeding was substantially correlated with anemia ($p=0.008$).**Conclusion:** AUB in perimenopausal women has a diverse clinical and etiological profile. Individualized evaluation and etiology-based treatment achieve favorable outcomes, with surgery offering higher definitive resolution in selected patients.**Keywords:** Abnormal uterine bleeding (AUB), perimenopausal, gynecology, quality of life, intermenstrual bleeding.**DOI:** 10.25258/ijcpr.18.3.327

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Introduction

Among women in the perimenopausal age range, abnormal uterine bleeding (AUB) is one of the most common causes of gynecological consultations. Menstrual cycle irregularity, irregular ovulation, and varying ovarian hormonal activity are the hallmarks of perimenopause, the transitional stage that precedes menopause. Women frequently suffer changes in the frequency, volume, and pattern of their bleeding at this time. Persistent or severe bleeding necessitates comprehensive assessment since it may suggest structural, endocrine, or neoplastic illness, even though certain irregularities may be normal. Fatigue, anemia, pain, social shame, decreased productivity at work, and psychological

stress are all major ways that AUB negatively impacts quality of life. Due to social stigma, the normalizing of symptoms, and restricted access to healthcare, delayed consultation is typical in low- and middle-income nations. Because of this, a lot of women have advanced pathology or moderate to severe anemia [1].

AUB has a variety of reasons. A uniform framework is offered by the FIGO PALM-COEIN classification. Polyp, Adenomyosis, Leiomyoma, and Malignancy/Hyperplasia (PALM) are structural causes; coagulopathy, ovulatory dysfunction, endometrial diseases, iatrogenic causes, and Not yet

classified (COEIN) are non-structural causes. Anovulatory cycles brought on by diminishing ovarian reserve are typical in perimenopausal women, although fibroids, adenomyosis, endometrial polyps, and endometrial hyperplasia must also be taken into account [2].

A thorough menstrual history, hemodynamic stability assessment, pelvic examination, hemoglobin measurement, pregnancy exclusion where applicable, transvaginal ultrasound, and endometrial sampling in women at risk for hyperplasia or cancer are all part of the evaluation of AUB. Age, intensity of symptoms, preferred fertility, comorbidities, and diagnosed pathology all influence treatment. Iron therapy, tranexamic acid, hormonal therapy, levonorgestrel intrauterine devices, hysteroscopic polypectomy, myomectomy, endometrial ablation, and hysterectomy are among the options [3].

Because perimenopausal women are a distinct demographic on the verge of menopause, treatment frequently focuses on symptom control without needless surgical surgery. Nonetheless, definitive surgical treatment is beneficial for certain people. For the purpose of optimizing care pathways, it is crucial to comprehend local clinical patterns and treatment responses. In order to evaluate the clinical profile, etiological spectrum, and treatment effects of AUB in perimenopausal women visiting a tertiary care facility over a 12-month period, this prospective observational study was conducted. Our goal was to determine prevalent symptoms, related anemia, favored treatment approaches, and immediate results after therapy [4].

Methods

Study Design

Prospective observational study.

Study Duration: 12 months.

Setting: Department of Obstetrics and Gynecology, tertiary care teaching hospital.

Sample Size: 100 perimenopausal women.

Inclusion Criteria

- Age 40–55 years
- Presenting with abnormal uterine bleeding
- Willing for evaluation and follow-up

Exclusion Criteria

- Pregnancy-related bleeding
- Known coagulation disorder
- Cervical malignancy diagnosed previously
- Current anticoagulant therapy

Data Collection

- Menstrual history and bleeding pattern
- BMI and parity
- Hemoglobin level
- Pelvic ultrasonography
- Endometrial biopsy where indicated
- Final diagnosis and treatment modality

Outcome Assessment: Symptom improvement, recurrence, persistent bleeding, need for escalation of treatment after 6 months.

Statistical Analysis: $p < 0.05$ $p < 0.05$ $p < 0.05$

Chi-square test and Student's t-test were applied.

Results

Table 1: Baseline Clinical Profile

Variable	Value
Mean age (years)	46.8 ± 4.2
Multiparous women	72 (72%)
Mean BMI (kg/m ²)	27.4 ± 3.8
Hemoglobin (g/dL)	10.2 ± 1.8
Moderate/severe anemia	38 (38%)

Table 2: Presenting Symptoms and Anemia

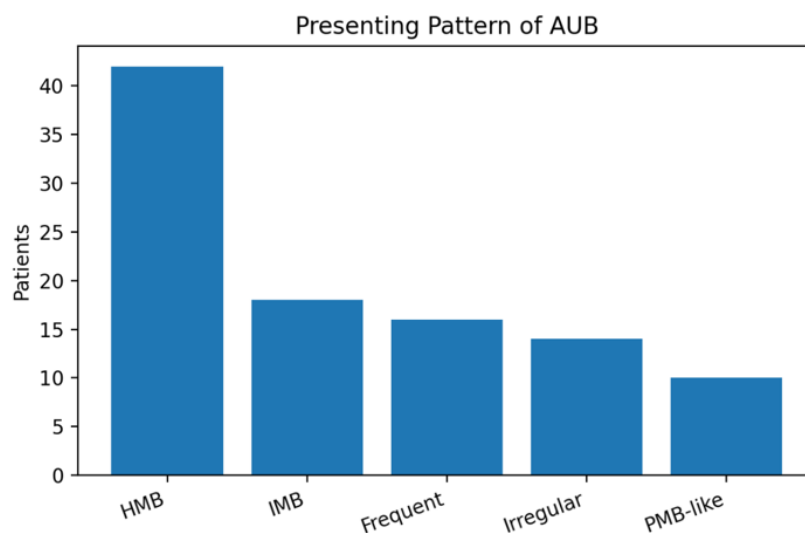
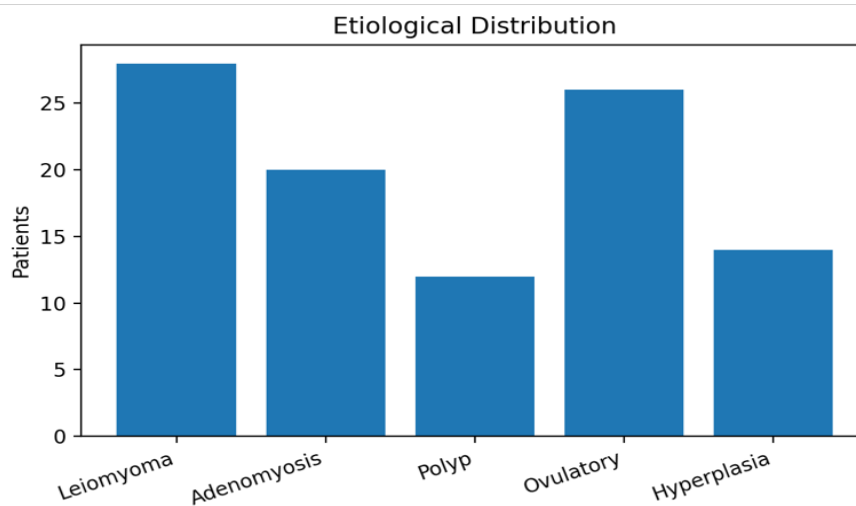
Bleeding Pattern	Patients	Anemia Present	p-value
Heavy menstrual bleeding	42	24	
Intermenstrual bleeding	18	5	
Frequent cycles	16	4	
Irregular bleeding	14	3	
PMB-like episodes	10	2	0.008

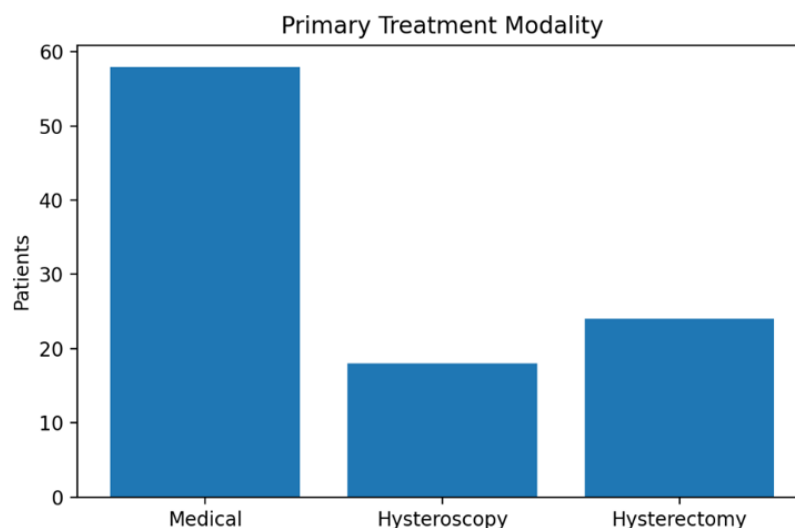
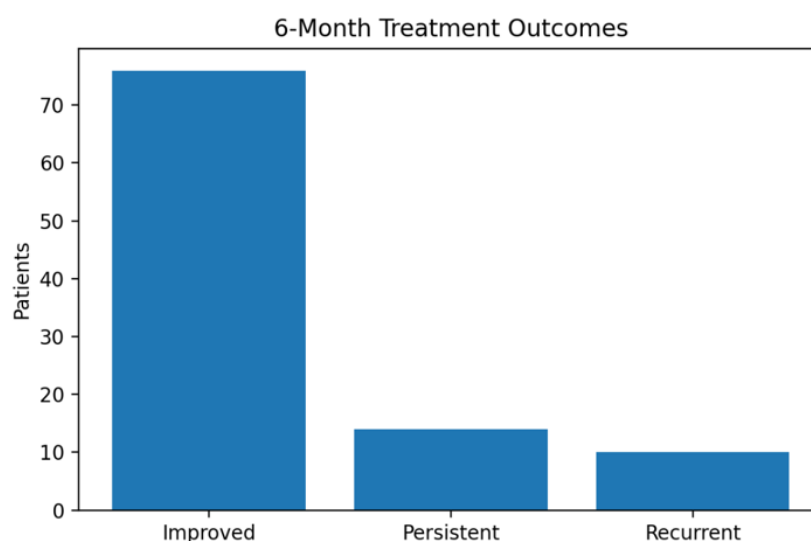
Table 3: Treatment Modalities and Outcomes

Treatment	Patients	Improved	Persistent/Recurrent	p-value
Medical therapy	58	40	18	
Hysteroscopic procedures	18	16	2	
Hysterectomy	24	24	0	0.014

Table 4: Etiology-wise Management

Etiology	Main Treatment	Patients	p-value
Leiomyoma	Surgery	28	
Adenomyosis	Medical/Surgery	20	
Endometrial polyp	Hysteroscopy	12	
Ovulatory dysfunction	Medical	26	
Hyperplasia	Directed therapy	14	0.001

**Figure 1: Presenting pattern of AUB****Figure 2: Etiological distribution**

**Figure 3: Primary treatment modality****Figure 4: 6-month treatment outcomes**

Discussion

Over the course of a year, this prospective observational study assessed the treatment results and clinical characteristics of irregular uterine bleeding in perimenopausal women. The results show that AUB in this age group is responsive to tailored treatment approaches, clinically varied, and often linked to anemia. The most frequent presentation was heavy menstrual bleeding, and the most common underlying causes were ovulatory failure and leiomyoma.

Over two-fifths of women experienced heavy menstrual bleeding, which was significantly linked to anemia [5]. Because persistent excessive menstrual blood loss frequently results in iron insufficiency, weariness, diminished job capability, and a lower quality of life, this is clinically expected.

Many women put up with their symptoms for extended periods of time before seeking medical attention, which delays diagnosis and deteriorates their hematologic status. Thus, timely iron replacement and routine hemoglobin testing are crucial aspects of managing AUB [6].

The most common structural cause in terms of etiology was leiomyoma, which was followed by endometrial polyps and adenomyosis. Fibroids can cause severe bleeding, pelvic pressure, or dysmenorrhea and are more common in late reproductive age. While polyps more frequently result in irregular or intermenstrual bleeding, adenomyosis frequently causes painful heavy periods and an enlarged, sore uterus. Ovulatory dysfunction, which reflected the hormonal swings and sporadic anovulation characteristic of the

perimenopausal transition, was a significant non-structural reason [7].

The study also emphasizes the value of a methodical approach to diagnosis. Selective endometrial sampling and imaging are frequently required to identify the reason; as clinical history alone is insufficient. Endometrial assessment is especially crucial to rule out hyperplasia or cancer in women who have long-term irregular bleeding, obesity, chronic anovulation, or age-related risk factors [8]. The need for caution is reinforced by the fact that a portion of our group had hyperplasia. The most popular initial treatment approach was medical therapy. This makes sense because a lot of women want to manage their symptoms without having surgery, particularly when the disease is benign or functional. Tranexamic acid, nonsteroidal anti-inflammatory medications, cyclic progestins, combination hormonal therapy, and intrauterine levonorgestrel systems are examples of options that can dramatically lessen bleeding [9].

However, individuals getting surgical management—especially those undergoing hysterectomy, which offered definitive treatment—had a higher rate of complete symptom relief. Positive results were also shown by hysteroscopic operations. Focal pathology can be treated with directed treatments like polypectomy or submucosal fibroid excision, which preserve the uterus and prevent extensive surgery. These minimally invasive methods are particularly helpful for women who want to save their uterus or who have comorbidities that raise the risk of surgery. It is important to interpret the much-improved results from surgery with caution. Women with identifiable structural pathology that could be definitively corrected were probably included in surgical groups. On the other hand, women who had medical treatment might have had diseases that are more likely to recur, such as diffuse adenomyosis, hormonal disruption, or inclinations against surgery. Therefore, appropriate patient selection is just as important to treatment outcome as method [10].

The results have applications for gynecologic services. PALM-COEIN principles, early anemia correction, suitable imaging, and tailored education about the advantages and disadvantages of medicinal versus surgical treatment should all be used in a methodical approach to perimenopausal AUB. Because patient priorities may include quick symptom relief, uterine preservation, avoiding anesthesia, or a permanent treatment, shared decision-making is essential. The single-center design, small sample size, and six-month follow-up may underestimate late recurrence following medical therapy, among other limitations. Detailed medication adherence and quality-of-life scores were not recorded. The study represents actual practice in a tertiary care setting in spite of these

drawbacks. Overall, the findings show that most perimenopausal women with AUB can experience significant symptom alleviation with careful evaluation and treatment tailored to the patient's preferences, severity, and cause [11].

Conclusion

This prospective observational study shows that perimenopausal women frequently experience abnormal uterine bleeding, which has a significant negative influence on their health and quality of life. The most common clinical manifestation was heavy menstrual bleeding, which was strongly linked to anemia, highlighting the significance of early detection and hematologic assessment. Ovulatory dysfunction continued to be a significant non-structural contribution, while structural reasons such leiomyoma, adenomyosis, and polyps were prevalent.

Over 75% of individuals showed overall clinical improvement after six months, indicating that the majority of women responded favorably to treatment. The most common first care approach was medical therapy, which is still suitable for many women with functional reasons or those who prefer not to have surgery.

However, in certain individuals with structural pathology or refractory symptoms, surgical management—including hysteroscopic procedures and hysterectomy—achieved greater percentages of full symptom relief. These results highlight the necessity of a customized strategy based on thorough assessment, imaging, endometrial evaluation, when necessary, symptom severity, and patient preferences. Essential components of care include anemia correction, counseling on available options, and routine follow-up. In conclusion, personalized, etiology-based treatment paths can effectively manage perimenopausal AUB in the majority of cases. While guaranteeing prompt treatment of serious pathology, early diagnosis and effective intervention may lower morbidity, enhance quality of life, and avoid needless extreme treatments.

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