The Research of Medical Science Review
ISSN: 3007-1208 & 3007-1216 Volume 3, Issue 7, 2025

FREQUENCY OF ENDOMETRIAL PATHOLOGY AMONG PERIMENOPAUSAL WOMEN PRESENTING WITH ABNORMAL UTERINE BLEEDING (AUB)

Fiza Inam[*1], Saba Khan[2], Nadira Agha[3], Soonh Memon[4], Sana Ibrahim[5]

[*1]*MBBS, FCPS Post Graduate Resident, Gynaecology and Obstetrics, JPMC, Karachi*
[2,4]*MBBS, FCPS, Gynaecology and Obstetrics,,JPMC, Karachi*
[*3,5] *MBBS, FCPS Post Graduate Resident, Gynaecology and Obstetrics, JPMC, Karachi*

DOI: https://doi.org/10.5281/zenodo.16743992

Keywords
Abnormal Uterine Bleeding, Perimenopausal Women, Endometrial Pathology, Histopathology, Menorrhagia

Article History
Received on 01 July 2025
Accepted on 15 July 2025
Published on 20 July 2025

Corresponding Author: *
Dr. Fizza Inam

Abstract

Objective: *to determine the frequency of endometrial pathology in perimenopausal women presenting with abnormal uterine bleeding (AUB).*

Study Design: *Descriptive cross-sectional study*

Study Setting: *Obstetrics and Gynecology Department, JPMC, Karachi.*

Study Duration: *Six months (from June to Nov, 2024)*

Methodology: *This cross-sectional study was conducted at the Department of Obstetrics and Gynecology, Jinnah Postgraduate Medical Centre (JPMC), Karachi. A total of 100 perimenopausal women aged 36-50 years presenting with AUB were included. Endometrial biopsies were performed, and histopathological patterns were analyzed. Data were assessed using SPSS version 21.0.*

Results: *The mean age of participants was 46.6 years, with 72.5% aged between 45-50 years. The most common histopathological finding was proliferative endometrium (36.97%), followed by simple hyperplasia without atypia (14.21%). One case of endometrial carcinoma (1.07%) was identified. Menorrhagia was the most prevalent symptom (40.8%), followed by metrorrhagia (15.9%) and menometrorrhagia (14.0%).*

Conclusion: *AUB is a common gynecological issue in perimenopausal women, with a range of histopathological findings. Routine endometrial assessment should be considered to identify precancerous conditions and enable timely treatment. Further large-scale studies are recommended to refine management strategies.*

INTRODUCTION

Abnormal uterine bleeding (AUB) is one of the most common and baffling conditions that affect adult women. Numerous illnesses, including those of the reproductive tract, those brought on by iatrogenic factors, and systemic illnesses, are among its causes (1). With a 1% lifetime risk and an incidence of 9 per 100 000 women worldwide is associated with endometrial cancer. Women over fifty make up the majority of instances. Postmenopausal bleeding (PMB) is the most typical presentation in cases of endometrial cancer. More than one-fifth of women have premenopausal abnormal uterine bleeding, which is prevalent and is thought to interfere with everyday living. (2).

The most prevalent gynecological issues globally are changes in uterine bleeding patterns, such as abnormal uterine bleeding (AUB) and amenorrhea. AUB is a catch-all name for all uterine bleeding problems, regardless of frequency, duration, or severity. This comprises dysfunctional uterine bleeding (DUB), polymenorrhagia, oligomenorrhoea, menorrhagia, metrorrhagia, and menometrorrhagia. Additionally, it covers any uterine bleeding that takes place in postmenopausal women one year or longer after the menses have completely stopped.

The interpretation of endometrial sampling can occasionally be quite difficult for practicing pathologists (3,4), but it can be used effectively as the first diagnostic step in AUB. Perimenopausal refers to the interval between the last stages of menstruation, which typically occurs in the late 40s to early 50s (5). At least one episode of AUB is experienced by more than 90% of women, and at least three episodes are experienced by 78% of women throughout the menopausal transition. The International Federation of Gynaecology and Obstetrics (FIGO) created and updated its categorization of non-gestational causes of AUB in 2011 (6). Traditional diagnostic procedures for women with atypical uterine bleeding include hysteroscopy and a blind sample of endometrial tissue, however, these procedures are invasive, may have increased risk of morbidity, and are not always effective. The preferred diagnostic procedure for patients with abnormal uterine bleeding is transvaginal ultrasonography. (7).

According to several previous research publications, endometrial sampling should be done on women with AUB who are older than 35. However, the Society of Obstetricians and Gynecologists of Canada (SOGC) recommends that the procedure be carried out in cases where bleeding in younger women with endometrial cancer risk factors does not respond to medical therapy or in women over the age of 40 (5).

Endometrial sampling is advised by the American College of Obstetricians and Gynaecologists (ACOG) for women over 45 or younger women with certain risk factors, such as obesity, polycystic ovarian syndrome, inadequate medical care, or chronic bleeding (8). In underdeveloped nations like Pakistan, the prevalence of irregular uterine bleeding ranges from 5 to 15% (9). Numerous studies found its prevalence in their respective sample. It is also a typical complaint in Pakistan for pathological illnesses that are frequent in their respective age groups (10).

In a research carried out in Pakistan by Parveen A et al, (66%) of patients had endometrial pathology found. In terms of clinical characteristics, polymenorrhagia (35%), gestational bleeding (27%), menorrhagia (18%), and metrorrhagia (5%), respectively, were the most prevalent. In (66%) of instances, endometrial pathology was found. The frequency of endometrial malignancy was found (7%), chronic endometritis (10%) and polyps (10%) (10).

Another study conducted in Nepal in 2021 by Dhakhwa R et. al, in this study, the prevalence of benign findings was (96.9%). The commonest benign histopathology was such as hormonal imbalance (41.7%), chronic endometritis (5.2%), endometrial hyperplasia (6.2%) and endometrial polyp (4.1%) (11).

In our tertiary care setting, this study seeks to ascertain the prevalence of endometrial pathology in perimenopausal women who are presented with abnormal uterine bleeding and analyze the results of their endometrial biopsies. Regarding the endometrial pattern found in perimenopausal women in our demographic, there is currently a limited amount of information. The early detection and timely management will save the patients and minimize the morbidity, mortality, and socioeconomic burden on our healthcare system.

METHODOLOGY:

This descriptive cross-sectional study was conducted at the Department of Obstetrics and Gynecology, Jinnah Postgraduate Medical Centre (JPMC), Karachi, over six months following the approval of the synopsis by the College of Physicians and Surgeons Pakistan (CPSP). The study aimed to determine the frequency of endometrial pathology in perimenopausal women presenting with abnormal uterine bleeding (AUB).

A total of 100 perimenopausal women aged between 36-50 years were selected using a non-probability consecutive sampling technique. The sample size was determined based on the prevalence of endometrial polyp in perimenopausal women with AUB (4.1%), with a 95% confidence interval and a 4% margin of error. Women meeting the inclusion criteria were recruited from the outpatient department after providing informed consent.

The inclusion criteria comprised perimenopausal women experiencing AUB for at least three months, aged 36-50 years, with a normal BMI (<30 kg/m2). Women were excluded if they had cervical-vaginal pathology, systemic causes of AUB, ovarian tumors, pregnancy, genital tract malignancy, or if their AUB was due to hormonal or medication effects, thyroid disorders, coagulation disorders, or vascular malformations. Additionally, nulliparous women, those with diabetes mellitus or hypertension, and those with a family history of uterine, ovarian, breast, or colon cancer were excluded from the study.

A thorough clinical history was obtained, including details on age, parity, BMI, menstrual history, type and duration of abnormal bleeding, socioeconomic status, and relevant family history. A detailed physical examination, including abdominal and pelvic examinations, was conducted. Ultrasonography was performed to assess uterine size and endometrial thickness. Laboratory investigations included a full blood count, hemoglobin levels, and platelet count. Endometrial biopsies were obtained via dilation and curettage, and specimens were sent to the pathology department for histopathological analysis to determine the frequency of endometrial pathology. The data were recorded on a predesigned proforma.

Women diagnosed with abnormal uterine bleeding were further managed in the gynecology ward according to clinical findings and histopathology reports. Medical or surgical interventions were provided as necessary.

All data were entered and analyzed using SPSS version 21.0. The Shapiro-Wilk test was applied to assess the normality of quantitative variables such as age, parity, BMI, and duration of AUB. If the data followed a normal distribution (P-value > 0.05), mean and standard deviation were calculated; otherwise, the median and interquartile range (IQR) were used. For qualitative variables such as menstrual history, type of abnormal bleeding (menorrhagia, metrorrhagia, polymenorrhagia, irregular bleeding, postmenopausal bleeding), socioeconomic status, and family history of malignancies, frequencies and percentages were computed. Effect modifiers were controlled through stratification concerning age, parity, BMI, duration of AUB, socioeconomic status, and family history of malignancies to minimize bias in the results.

RESULTS:

The majority of our sample (n=100) presented histological features in patients with AUB.

Table 1 displays the age distribution of the AUB. The majority of instances (72.5%) were found in people between the ages of 45 and 50, with 46.6 years as the mean age.

In our study, the uterus was large in 71 instances (64.5%) and normal size in 42 cases (42.5%).

Considering the length of the symptoms, 9 patients had symptoms for no more than three months, whereas 57 instances had symptoms lasting 3 to 6 months [56.7%], 29 cases had symptoms lasting 6

months to 1 year [25.2%], and 3 cases had symptoms lasting less than three months [3.5%].

Proliferative Endometrium (PE) was the most common histological pattern in 37 cases (36.97%). Simple Hyperplasia without atypia (SH), which has 14 cases (31.97%), is the second most frequent. Table 2 depicts all the various histopathological patterns.

As can be observed in the table, there are 6 cases of atrophic endometrium, 5 cases of disordered proliferative endometrium, 2 cases of endometrial polyps, and, 1 case of chronic endometritis, One instance of endometrial cancer [1.07%] was reported. There were 4 cases of Simple Hyperplasia with Atypia (4.29%) and 3 cases of Complex Hyperplasia with Atypia (3.33%).

Menorrhagia was the most common symptom, occurring in 63 cases (or 63.8%), and is linked to a proliferative, secretory, and hyperplastic endometrium. Although proliferative endometrium was more prevalent in cases of menometrorrhagia, which accounted for 13 cases [13.8%] of the 83 cases of metrorrhagia, which mostly had a secretory followed by a proliferative histological pattern, 6 instances of irregular menstruation (or 5.9%) involved endometrial polyps and endometritis. A total of 12 (11.9%) instances of polymenorrhoea and 12 (11.5%) cases of polymenorrhagia were reported. The endometrial polyp, secretory endometrium, and hyperplasia were all linked to these.

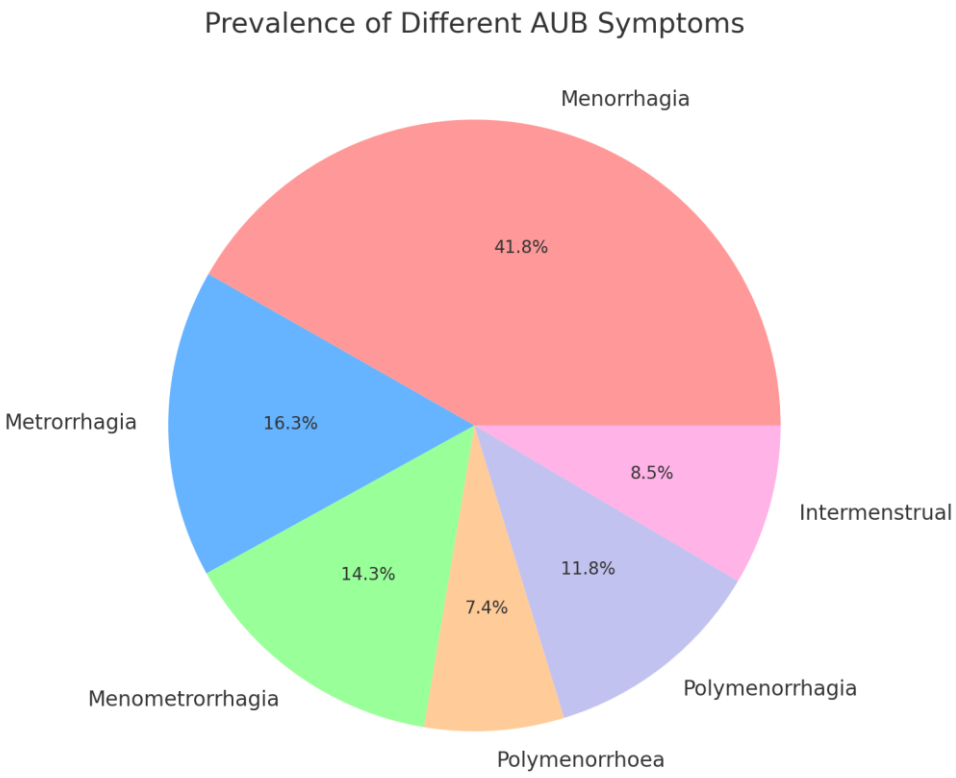

Figure 1 Prevleance of Differnet AUB symptoms

Histopathology of the participants

Menstrual History	No. of cases	Percentage
Menorrhagia	39	40.8
Metrorrhagia	16	15.9
Menometrorrhagia	14	14.0
Polymenorrhoea	7	7.20
Polymenorrhagia	11	11.5
Intermenstrual Bleeding	8	8.3
Total	100	100

DISCUSSION

Our research showed that women who did consume dates during the last trimester had a higher rate of spontaneous labor and a higher number of normal deliveries. These findings point to the possible advantages of dietary interventions in terms of labor

outcomes, implying that a late-pregnancy diet that includes dates may help to speed up the labor process.

Kordi et al. discovered that the intervention group had a far shorter average active phase duration of 329.00 minutes (SD: 249.00) than the control group, which averaged 547.80 minutes (SD: 392.10). The second stage of labour was shorter for the intervention group, lasting 33.60 minutes (SD: 13.70) against 42.10 minutes (SD: 17.10) for the control group. The third stage of labour averaged 5.10 minutes (SD: 2.50) in the intervention group and 6.80 minutes (SD: 7.00) in the control group. They found that consuming dates late in pregnancy reduced labour time and oxytocin use. The results of this study suggest that healthy women may benefit from eating dates in the final weeks of pregnancy to aid labour.(12).

Ahmed et al. found noticeable effects of rutab date fruit eating on labour phases. The study found that date fruit consumers had a mean first-stage labour duration of 210.14 minutes (SD: 177.13), compared to 224.43 minutes (SD: 157.25) for those who consumed both date fruits and water and 362.46 minutes (SD: 292.12) for the control group.(10)

Date fruit drinkers had a mean second-stage labour duration of 23.59 minutes (SD: 23.73), while those who coupled date fruits with water had 20.50 minutes (SD: 13.94). Control group time averaged 31.17 minutes (SD: 27.25). On the third stage of labour, date fruit consumers spent 5.45 minutes (SD: 4.50), date fruit consumers with water spent 5.50 minutes (SD: 3.10), and the control group spent 2.17 minutes (SD: 1.50). Despite these differences, date fruit users and non-consumers had similar cervical dilatation, rupture of membranes, uterine contractions, tocometric reports, and maternal progression variables.(13)

The significant difference in job type between intervention and control groups ($p < 0.05$) supports earlier research. A study by Al-Shahri found that dates may boost uterine contractions and reduce forced birth. Our study found that 19 control women and 3 date-consuming women needed induction. This suggests that dates may help natural labour begin. (15)

Our study found that the intervention group had a significantly shorter active phase of labor (350.80 ± 47.985 minutes) than the control group (364.15 ± 50.205 minutes). This finding is congruent with studies conducted by Alireza Bagherzadeh et al. in 2020, who discovered that women who ingested dates during childbirth had shorter activity periods. (16) The shorter labor period is especially essential because lengthier labor can pose greater issues for the mother and child, including a higher risk of interventions like cesarean sections. (17)

According to research conducted by Sagi-Dain et al. in 2021, dates may promote effective contractions, potentially leading to a more efficient second stage of labor. The two groups also differed considerably in the second stage of labor, with the date group having a mean difference of -3.67 minutes. All of these findings support the idea that pregnant women who want a more comfortable birth can benefit from incorporating dates into their diet. (18)

Although one study indicates that eating dates in the latter stages of pregnancy improves the chances of a successful childbirth, other studies take a more cautious approach to the effectiveness of dietary interventions during this crucial time. (19) According to a study by Nasiri et al. in 2019, there is no significant difference between women who ingested dates and those who did not in terms of labor time or delivery outcomes. Although dates are nutrient-dense, the authors contended that their effect on labor may be insignificant when taking into account the many variables that affect delivery, such as maternal health in general, genetics, and prenatal care. (20)

Opposing the results of our study, individual dietary demands and responses should also be taken into account. Changes in diet may not have the same effect on all women, and benefits seen in one group may not apply to another. Individual characteristics, including food choices and pre-existing health issues, might have a major impact on labor outcomes. (21) According to a study by Marshell NE et al. This emphasizes the need for tailored nutritional advice during pregnancy as opposed to a general strategy based on a few numbers of dietary modifications.(22) A systematic review conducted in 2020 by Lassi ZS et al. brought attention to the dearth of large-scale, multicenter trials that looked at how dates affected labor outcomes. They stressed that although small studies can suggest advantages, the results should be evaluated cautiously because of methodological variations and possible biases(23)

A study conducted by Kinshella et al found there is no significant difference in labor duration or delivery method by consumption of dates he emphasized the need for personalized dietary plans. (24) Another study by Karmakar et al. found that inducing labor in postdated nulliparous women led to lower rates of cesarean delivery and fewer maternal and perinatal complications compared to expectant management. (25)

CONCLUSION

Abnormal uterine bleeding is a common concern among perimenopausal women, significantly affecting health and quality of life. This study found that excessive menstrual bleeding peaks between ages 45 and 50. Dilatation and curettage should be considered for diagnosing endometrial disease, as histopathological evaluation reveals various abnormalities linked to heavy and frequent bleeding. Gynecologists should closely monitor these patterns to ensure timely diagnosis and treatment. While hysterectomy remains a prevalent intervention in Pakistan, early evaluation and alternative treatments should be encouraged to reduce the need for invasive procedures and minimize morbidity.

REFERENCE:

1. Ayesha S, Anwar ul Haque. Types and Frequencies of Pathologies in Endometrial Curettings of Abnormal Uterine Bleeding. Ingt J Pathol. 2005;3(2):65–70.
2. Pennant ME, Mehta R, Moody P, Hackett G, Prentice A, Sharp SJ, Lakshman R. Premenopausal abnormal uterine bleeding and risk of endometrial cancer. BJOG 2017;124:404–411.
3. Manga SM, Ye Y, Szychowski JM, Nulah KL, Ngalla C, Kincaid K. Pathology findings among women with alterations in uterine bleeding patterns in cameroon. Gynecol Oncol Reports. 2021;37:100821.
4. Saraswathi D, Thanka J, Shalinee R, Aarthi R, Jaya V, Kumar PV. Study of Endometrial Pathology in Abnormal Uterine Bleeding. J Obstet Gynecol India. 2011;61(4):426-30. 5. Kumari P, Gaikwad HS, Nath B. Endometrial Cut Off Thickness as Predictor of Endometrial Pathology in Perimenopausal Women with Abnormal Uterine Bleeding: A Cross-Sectional Study. Obstet Gynecol Int. 2022;:1–6.
6. Vital, SG, Watrowski R, Barra FD, Alterio MN, Carugno J, Sathyapalan T et al. Abnormal Uterine Bleeding in PerimenopausalWomen: The Role of Hysteroscopy and Its Impact on Quality of Life and Sexuality. Diagnostics. 2022;12:1176.

7. Wynants L, Verbakel JY, Valentin L, Cock BD, Pascual MA, Leone FP, et al. The Risk of Endometrial Malignancy and Other Endometrial Pathology in Women with Abnormal Uterine Bleeding: An Ultrasound-Based Model Development Study by the IETA Group. Gynecol Obstet Invest. 2022;87:54-61.
8. Sattanakho P, Kleebkaow P, Sangkomkumhang U, Booranabunyat S, Buppasiri P. Rate of Significant Endometrial Pathology in Women at Low Risk for Endometrial Hyperplasia or Cancer Presenting with Abnormal Uterine Bleeding. Pragmatic Observational Res. 2020:11:13–18.
9. Mariam A, Hashmi AA, Malik B, Saroona H, Naveen F, Edhi MM. Clinical pattern and spectrum of endometrial pathologies in patients with abnormal uterine bleeding in Pakistan: need to adopt a more conservative approach to treatment. BMC Women's Health. 2014;14:132.
10. Parveen A, Khan MM, Sharif N, Khattak EG. Evaluation of abnormal uterine bleeding on endometrial biopsies. Isra Med J. 2011;3(3):84-88.
11. Dhakhwa R, Rashmi B, Shah J, Archana S, Pradhan S. Benign histopathologic findings of endometrium among perimenopausal women presenting with abnormal uterine bleeding: a descriptive cross-sectional study. J Nepal Med Assoc. 2021;59(243):1141-5
12. Neelgund S, P B H. ABNORMAL UTERINE BLEEDING IN PERIMENOPAUSE. Journal of Evolution of Medical and Dental Sciences. 2016 Jun 27;5(51):3337–41.
13. U. S, V. TB, T. S. Abnormal uterine bleeding in perimenopausal age group women: a study on clinicopathological evaluation and management. International Journal of Reproduction, Contraception, Obstetrics and Gynecology. 2017 Dec 25;7(1):192.
14. Dhakhwa R, Bhattarai R, Shah J, Shakya A, Pradhan S. Benign Histopathologic Findings of Endometrium among Perimenopausal Women presenting with Abnormal Uterine Bleeding: A Descriptive Cross-sectional Study. Journal of Nepal Medical Association. 2021 Nov 15;59(243):1141–5.
15. Shaheen U, Majeed S, Khan YN, Adnan HA, Khalid M, Shaheen H. Morphologic patterns of endometrium in biopsy/curetting specimen of patients with abnormal uterine bleeding. Pakistan Journal of Physiology [Internet]. 2020 Mar 31 [cited 2023 Mar 1];16(1):24–7. Available from: https://pjp.pps.org.pk/index.php/PJP/article/view/1219
16. Vijayaraghavan A, Jadhav C, Pradeep B, Bindu H, Kumaran S. A Histopathological Study of Endometrial Biopsy Samples in Abnormal Uterine Bleeding. Cureus. 2022 Nov 8;
17. Song D, Feng X, Zhang Q, Xia E, Xiao Y, Xie W, et al. Prevalence and confounders of chronic endometritis in premenopausal women with abnormal bleeding or reproductive failure. Reproductive BioMedicine Online. 2018 Jan;36(1):78–83.
18. Kotagasti T. Prevalence of different menstrual irregularities in women with abnormal uterine bleeding(aub) - an observational study -. International journal of current research and review [Internet]. 2015 [cited 2023

19. Talukdar B, Mahela S. Abnormal uterine bleeding in perimenopausal women: Correlation with sonographic findings and histopathological examination of hysterectomy specimens. Journal of Mid-life Health. 2016;7(2):73.