Journal of Cardiovascular Disease Research

ISSN:0975 -3583,0976-2833 VOL 15, ISSUE 06, 2024

STUDY ON HISTOPATHOLOGICAL ANALYCIS AT ENDOMETRIUM PATTERN IN PERI-MENOPAUSE PATIENT WITH ABNORMAL UTERINE BLEEDING

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Received: 01/05/2023, Accepted: 05/06/2024, Published: 11/06/2024

ABSTRACT

Background: Abnormal uterine bleeding (AUB) is a very common gynaecological condition that affects women of all age groups. Majority of the cases are diagnosed by sampling the endometrium by procedure like dilatation & curettage and performed histopathology.

Objectives: The aim of the study was to evaluate the histopathological pattern of endometrium in perimenopausal women presenting with abnormal uterine bleeding

Methods: This was a prospective cross sectional study. A total of 150 perimenopausal women aged 40-48 years have been taken having considered appropriate within the inclusion criteria. Endometrial samples were obtained from D & C material collected in 10% formalin and sent for histopathological analysis. Histopathological endometrial patterns were recorded.

Results: Most of the patients were between 40-44 years of age (62.7%) and menorrhagia was the dominant clinical presentation (42%). Majority of the women was comes after 6-12 months of symptoms. Majority of them were multiparous (92%). The commonest pathology was endometrial hyperplasia in 42.7%, women with simple hyperplasia without atypia being the predominant pattern (34%). Proliferative endometrium was the second most common finding (20%). Other pathology identified was secretory endometrium (17.7%), atrophic endometrium (8%), endometritis (4%), endometrial polyp (3.3%) and endometrial carcinoma in 2.6% of cases.

Conclusion: Endometrial hyperplasia was the most common histopathological finding in AUB among perimenopausal women.Thus, it is important to use histopathological examination as a complementary diagnostic tool in classifying the structural causes of AUB.

ISSN:0975 -3583,0976-2833 VOL 15, ISSUE 06, 2024

Keywords: Abnormal uterine bleeding, Perimenopausal women, Menorrhagia, Endometrial hyperplasia

INTRODUCTION

The endometrium that lines the uterine cavity is one of the most dynamic tissues in the human body. Shedding of this endometrium results in the mechanism of normal menstruation [1].An estimated blood loss of 20-80ml with an average of 35 ml occurs during menstruation, any bleeding not fulfilling the condition of normal menstruation is termed as "abnormal uterine bleeding" [2]. AUB is defined as uterine bleeding that is abnormal in volume, cycle, and/or timing, and should be present in the majority for the last 6 months [3]. It is the commonest presenting symptom and major gynaecological problem affecting 20% of healthy perimenopausal women [4]. It amounts to approximately 35% of gynaecology OPD visits and 25% of gynaecological surgeries. It includes both organic and nonorganic causes of uterine bleeding. It can be caused by systemic diseases, endocrine disorders, pregnancy, drugs, fibroids, polyps, adenomyosis and endometrial causes.The prevalence of AUB varies in each country it is reported to occur in 9 to 14% women between menarche and menopause [5]. In India, the reported prevalence of AUB is around 17.9% [6]. At about 70% of premenopausal women presents with complaints of AUB in gynecology OPD [7]. Descriptive terms that traditionally have been used to characterize abnormal menstrual bleeding patterns include menorrhagia, metrorrhagia, polymenorrhea, and oligomenorrhea [8].AUB is due to several factors deranging homeostasis like hormonal imbalances, infections, structural lesions, and malignancy. Based on these possible underlying etiologies, the International Federation of Gynaecology and Obstetrics (FIGO) in 2011 devised a classification named PALM-COEIN for the etiology of AUB. PALM accounts for structural features like polyps, adenomyosis, leiomyoma, and malignancy. COEIN addresses non-structural causes like coagulation defects, ovulatory dysfunction, endometrial causes, iatrogenic causes, and non-classified ones [9]. In 1996, the World Health Organization defined perimenopause as "the period immediately prior to menopause (when the endocrinological, biological and clinical features of menopause begin) and the first year after menopause" [10]. More than 90% of women experience at least one episode of AUB, and 78% of them at least three episodes of AUB during their transition to menopause [11].The underlying disease can be detected by histological patterns of endometrium through biopsy or curettage which is a safe and effective diagnostic method in the evaluation of AUB considering the age, menstrual cycle phase and use of exogenous hormones. The importance of endometrial curettage done to obtain material for histopathological evaluation to aid in diagnosis and further management cannot be over emphasized especially in perimenopausal and post- menopausal age groups [12].

Aims & objectives:The study was done to evaluate the histopathological findings of endometrium in perimenopausal age women presenting with abnormal uterine bleeding

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MATERIALS AND METHODS

This prospective study was carried out in the department of Obstetrics & Gynaecology in collaboration with the department of Pathology in a tertiary care hospital, central India.Women presenting with AUB in perimenopausal age group attending OBG OPD during the study period were enrolled in this study.

Inclusion criteria

- Women age group of 40-55 years
- Women presenting with AUB
- Women who provide consent for the study

Exclusion criteria

- Women with menopause
- Women with known pathology like fibroid, bleeding diathesis, cervical lesions, functional ovarian tumors, endocrine diseases like hypothyroidism, diabetes etc
- Pregnancy and its related complications presenting with AUB
- Women who not willing for the study

Detailed history like age, socio-economic status, menstrual patterns, amount, duration, pattern of bleeding and other associated gynecological problems were noted. Local, general and systemic examination of these patients was done.

CBC, RBS, Urine routine & microscopic examination was done to rule out medical condition. Women posted for Dilatation & curettage as day care procedure after proper counseling and consent. Endometrial samples were obtained from D&C material collected in 10% formalin and sent for histopathological analysis. Histopathological endometrial patterns reported were then recorded and studied

Statistical analysis: Data were entered in Microsoft Excel and statistical analysis was done using IBM SPSS Statistics, version 22. Variables were summarized using percentage and proportion. The chi-square test was performed to analyze the categorical variables. A p value below 0.05 was considered statistically significant.

RESULTS

A total of 150 perimenopausal women presenting abnormal uterine bleeding in our hospital were enrolled in analysed. In the participant demographic profile (Table 1), the average age was 44.62 years, with majority distribution in the 40-44 years age groups. Most participants were house wives in the middle socio economic class with normal BMI. Duration of compliant was 6-12 months in most of the cases. Majority of them was multiparous (92%).

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Table 1: Socio-demographic profile of study participants

Socio-demographic variables		Frequency (%)
Age groups	40-45	88 (58.67%)
	46-50	53 (35.33%)
	51-55	11 (7.33%)
	Mean Age: 44.62 years	
Occupation	House wife	124 (82.7%)
	Laborer	23 (15.3%)
	Employed	3(2%)
Socioeconomic status	Lower	51 (34%)
	Middle	68(45.3%)
	Upper	31 (20.7%)
BMI	Normal	98 (65.3%)
	Overweight	39 (26%)
	Obese	13 (8.7%)
Duration of symptoms (months)	1-6 months	22 (14.7%)
	6-12 months	108 (72%)
	12-34 months	16 (10.7%)
	> 24 months	4 (2.6%)
Parity	0	1 (0.7%)
	1	11 (7.3%)
	2	70 (46.7%)
	3	43 (28.7%)
	≥4	25 (16.6%)

Chief clinical presentation was menorrhagia (42%) followed by continuous menstrual bleeding (26%) and oligomenorrhea (12.7%) [Figure:1].

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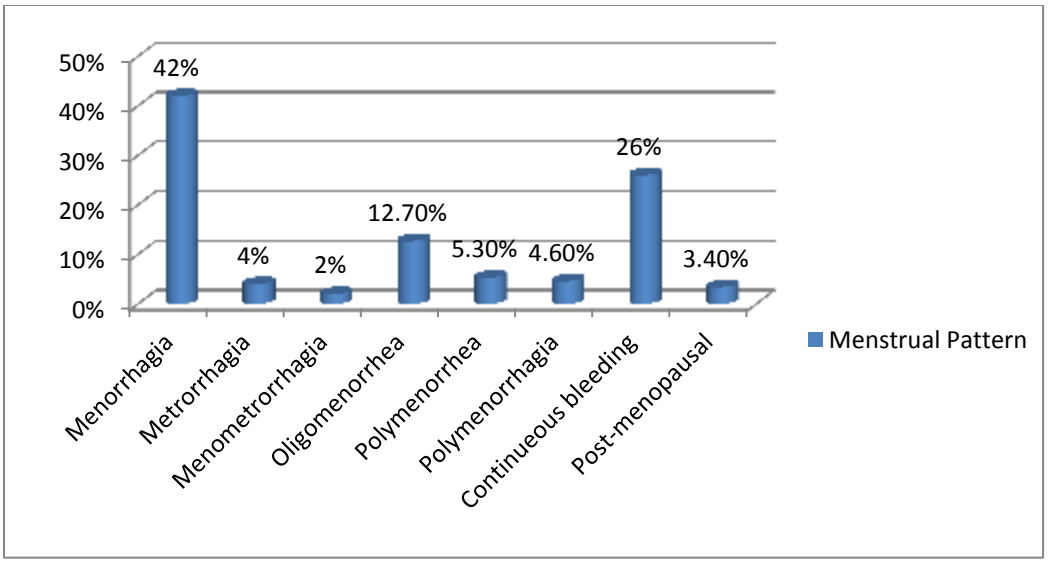

Figure 1: Distribution of various menstrual patterns among study women

62% women had bulky uterus and 38% have normal size uterus

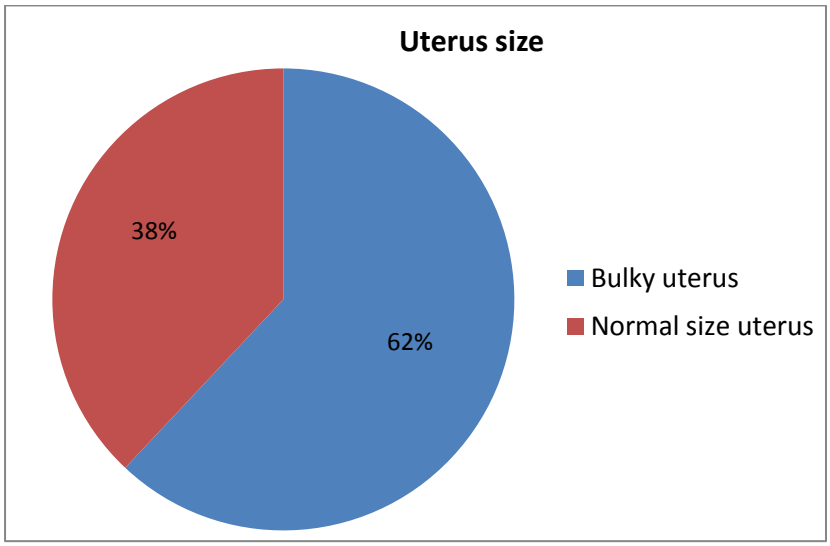

Figure 2: Distribution according to clinical assessment of uterine size

Among endometrial pattern on histopathological finding endometrial hyperplasia (42.7%) was the most common, followed by Proliferative endometrium (20%) and Secretory endometrium (14.7%). Among endometrial hyperplasia, hyperplasia without atypia was the commonest (34%).

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Table 3: Histopathological findings of endometrium patterns (N=150)

Endometrial pattern	Frequency	Percentage
Endometrial hyperplasia without atypia	51	(34%)
Endometrial hyperplasia with atypia	13	(8.7%)
Proliferative endometrium	30	(20%)
Secretory endometrium	22	(14.7%)
Atrophic endometrium	12	(8%)
Endometritis	6	(4%)
Endometrial polyps	5	(3.3%)
Endometrial carcinoma	4	(2.6%)
Unsatisfactory for evaluation	**7**	(4.7%)

DISCUSSION

Abnormal uterine bleeding is one of the commonly encountered complaints in gynaecologic practice. It can be due to varied causes such as functional, organic or pharmacological agents. The etiology also varies according to the age group as well. Endometrial sampling is a safe procedure that helps to evaluate the endometrium and bring out the diagnosis.

The incidence of AUB was found to be the highest among the perimenopausal age group, in our study most of the participants were 40-45 years age group, similar observation seen by many other researchers also: Shukla et al [13], Bolde et al [14] and Shah et al [15].The women in this age group were in their climacteric, and during this period, there is a decline in oestradiol levels and number of ovarian follicles resulting in anovulatory cycles.

In the present study majority of the women were house wife, lower-middle socio-economic class and normal weight, our results comparable with the Mishra J et al [16] and Sajitha K, et al [17]. Current study reported that most of the women were multiparous. Consistent results reported by Snehkiran**,** et al [18] and Lotha et al [19].

Present evaluation found about 62% women have bulky uterus in agreement with the Jain M et al [20].It appears in this study that the maximum women attended hospital for treatment after suffering for 6-12 months which was comparable to the study of Kathuria R, et al [21].In our study menorrhagia was the dominant menstrual problem which was similar to that reported by Vitale, S.G, et al [22] and Thapa S, et al [23].This was the most common presenting complaint in both reproductive and perimenopausal age groups.The next frequent complaint was metrorrhagia in current study, in accordance with the Sanjita, et al [24].

Histopathological examination of the endometrial biopsies and curetting revealed various patterns ranging from physiological to pathological lesions of the endometrium.In this study the most common the histopathological findings were endometrial hyperplasia. Studies done by

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Ghani et al [25] and Khare et al [26] have reported almost similar findings.Among endometrial hyperplasia, simple hyperplasia without atypia was predominant which was similar to the study of Doraiswami S et al [27].Endometrial hyperplasia is commonly seen in perimenopausal age group due to failure of ovulation. Persistent unriped follicles expose the endometrium to excessive and prolonged estrogenic action. In contrast to our results some studies commonly observed that cyclical endometrium (proliferative/secretory) pattern was the most common histopathological findings among AUB patients, consistent to the Anitha S et al [28] and Alshdaifat EH, et al [29]. This may be due to the hormonal imbalance in this group leading to intermittent anovulatory cycles.In our study, proliferative endometrium was the second most common histopathological finding which was comparable to Khare et al [26]and Talukdar B et al [30].Present study found endometrial carcinoma was the very rare in histopathology of AUB patients, our results concordance with the Baral R, et al [31].

CONCLUSION

Abnormal uterine bleeding is a common diagnosis in perimenopausal women and the commonest presentation was menorrhagia. Histopathological examination of the endometrium showed a wide spectrum of pathological changes ranging from normal endometrium to malignancy. Endometrial hyperplasia was the most common histopathological pattern of endometrium in this study. This emphasises the need histopathological evaluation of endometrium is especially recommended in women of over the age of forty years presenting with AUB, to rule out preneoplastic lesions and malignancies.

REFERENCES

1. Ara S and Roohi M. Abnormal uterine bleeding: Histopathological diagnosis by conventional dilatation and curettage. Prof Med J. 2011; 18: 587-91.
2. Barel R, Pudasini S. Histopathological pattern of endometrial samples in AUB. J Path Nepal. 2011; 1:13-6.
3. Sinha K, Gurung P, Sinha HH, Bhadani PP. Study on abnormal uterine bleeding among adult women in a tertiary care hospital in Bihar, India. Int J ReprodContraceptObstet Gynecol. 2018; 7:3136-40.
4. Sanam M, Majid MM. Comparison the diagnostic value of dilatation and curettage versus endometrial biopsy by pipelle-a clinical trial. Asian Pac J Cancer Prevent. 2015; 16(12):4971-5.
5. Fraser IS, Langham S, Uhl-Hochgraeber K. Healthrelated quality of life and economic burden of abnormal uterine bleeding. Expert Rev Obstet Gynecol. 2009; 4:179-89.
6. Sharma A, Dogra Y. Trends of AUB in tertiary centre of Shimla hills. J Midlife Health. 2013; 4:67-8.
7. Pillai SS. Sonographic and histopathological correlation and evaluation of endometrium in premenopausal women with abnormal uterine bleeding. Int J ReprodContraceptObstet Gynecol. 2014; 3:113-7.

ISSN:0975 -3583,0976-2833 VOL 15, ISSUE 06, 2024

8. Fraser IS, Critchley HO, Munro MG, Broder M. A process designed to lead to international agreement on terminologies and definitions used to describe abnormalities of menstrual bleeding. Writing Group for this Menstrual Agreement Process [published erratum appears in FertilSteril. FertilSteril 2007; 87:466-76.
9. Maybin JA, Critchley HO: Menstrual physiology: implications for endometrial pathology and beyond. Hum Reprod Update. 2015, 21:748-61. 10.1093/humupd/dmv038
10. World Health Organization. Research on the Menopause in the 1990s: Report of a WHO Scientific Group; WHO Scientific Group on Research on the Menopause in the 1990s, Ed.; WHO Technical Report Series; World Health Organization: Geneva, Switzerland, 1996; ISBN 978-92-4-120866-6.
11. Paramsothy, P.; Harlow, S.D.; Greendale, G.A.; Gold, E.B.; Crawford, S.L.; Elliott, M.R.; Lisabeth, L.D.; Randolph, J.F. Bleeding patterns during the menopausal transition in the multi-ethnic Study of Women's Health Across the Nation (SWAN): A prospective cohort study. BJOG Int. J. Obstet. Gynaecol. 2014, 121, 1564–1573.
12. Simridhi B, Monika G, Tajinder K. Histopathological spectrum of endometrium in abnormal uterine bleeding. Intl J Reprod Contra Obstet Gynecol. 2018; 7(9):3633-7.
13. Shukla M, Fonseca MN, Kharat D, Tekale P.A study to correlate histopathological findings in patients with abnormal uterine bleeding. Int J ReprodContraceptObstet Gynecol 2017; 6:654.
14. Bolde SA, Pudale SS, PanditGA, Matkari PP. Histopathologicalstudy of endometrium in cases of abnormal uterine bleeding. Int J Res Med Sci2014; 2:1378‑81.
15. Shah RJ, DayalA, Kothari SL, Patel SM, Dalal B. Histopathological interpretation of endometrium in abnormal uterine bleeding. IntJ Med Sci Public Health 2014;3:452‑6.
16. Mishra J, Nigam N, Rathod I. Study of histopathology of endometrium in perimenopausal women with abnormal uterine bleeding. Int J ReprodContraceptObstet Gynecol 2023; 12:2750-5.
17. Sajitha K, Padma SK, Shetty KJ, Kishan Prasad HL, Permi HS, Hegde P. Study of histopathological patterns of endometrium in abnormal uterine bleeding. CHRISHED J Health Res 2014;1:76-81
18. Snehkiran, Kavya A, Tiwary B, Sinha A, Parwina P. Clinicopathological observation of Abnormal uterine bleeding in peri-menopausal age female. Int J ClinObstetGynaecol. 2019; 3(1):136-8.
19. Lotha L, Borah A. Clinico-pathological evaluation of abnormal uterine bleeding in perimenopausal women, Int J ReprodContraceptObstetGynaecol 2016;5(9):3072-4
20. Jain M, Gorania N. Abnormal uterine bleeding: a study of menstrual patterns and histopathological patterns in perimenopausal females. Int J ReprodContraceptObstet Gynecol 2015; 4:109-12.
21. Kathuria R, Bhatnagar B. Correlation between D&C, USG and hysteroscopy findings in diagnosing a cause for abnormal uterine bleeding. Indian Journal of clinical practice. 2014; 25(5):466-70.

ISSN:0975 -3583,0976-2833 VOL 15, ISSUE 06, 2024

22. Vitale, S.G.; Watrowski, R.; Barra, F.; D'Alterio, M.N.; Carugno, J.; Sathyapalan, T.; Kahramanoglu, I.; Reyes-Muñoz, E.; Lin, L.-T.; Urman, B.; et al. Abnormal Uterine Bleeding in Perimenopausal Women: The Role of Hysteroscopy and Its Impact on Quality of Life and Sexuality. Diagnostics 2022, 12, 1176. https://doi.org/10.3390/ diagnostics12051176
23. Thapa S, Acharya I. Endometrial Histopathology in Abnormal Uterine Bleeding: A Retrospective Analysis. MJSBH. 2021; 20(1):1-5.
24. Sanjita, Khanam I. Study of histopathological findings of endometrial biopsy in women with abnormal uterine bleeding. Int J ReprodContraceptObstet Gynecol 2023; 12:1435-7.
25. Ghani NA, Abdulrazak AA, Abdullah EM. Abnormal Uterine Bleeding: a Histopathological Study. Diyala Journal of Medicine. 2013;4(1):56-60
26. Khare A. Morphological spectrum of endometrium in patients presenting with dysfunctional uterine bleeding. Peoples's Journal of scientific research. 2012; 5(2):13-6.
27. Doraiswami S, Johnson T, Rao S, Rajkumar A, Vijayaraghavan J, Panicker VK. Study of endometrial pathology in abnormal uterine bleeding. J of Obstet&Gynae of India. 2011; 61(4):426-30.
28. Anitha S, Pooja G, Sowmya D. Study of histopathological patterns of endometrium in abnormal uterine bleeding. Int J ReprodContraceptObstet Gynecol 2021; 10:1401-5.
29. Alshdaifat EH, AlHorani SS, Al-Sous MM, Al-Horani AS, Sahawneh FE, Sindiani AM. Histopathological pattern of endometrial biopsies in patients with abnormal uterine bleeding in a tertiary referral hospital in Jordan. Ann Saudi Med 2022; 42(3): 204-213. DOI: 10.5144/0256-4947.2022.204
30. Talukdar B, Goswami RR, Mahela S, Ahmed NI. Histopathological pattern of endometrium in abnormal uterine bleeding of perimenopausal women. Int J ReprodContraceptObstet Gynecol 2016; 5:1162-6.
31. Baral R, Pudasaini S, Histopathological pattern of endometrial samples in abnormal uterine bleeding, journal of pathology of Nepal, (2011) Vol. 1, 13-16.