



HISTOPATHOLOGICAL SPECTRUM OF ENDOMETRIAL LESIONS IN WOMEN PRESENTING WITH ABNORMAL UTERINE BLEEDING IN A TERTIARY CARE CENTRE.

Pathology

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ABSTRACT

Background: Abnormal uterine bleeding is one of the significant gynaecological complaints, often related to endometrial pathology. It is important to differentiate non neoplastic lesion from neoplastic lesions as well as early detection of precursor lesions and exclusion of malignancy. **Aim:** To study the histopathological spectrum of endometrial lesions in women presenting with AUB in our population. **Materials And Methods:** It was a retrospective hospital based study, conducted among 200 patients in the Department of Pathology, AMCH, Dibrugarh from 1st July, 2021 to 30th June 2022. The samples included were curettage, biopsy and resection specimen. **Results:** Most common cause of AUB in reproductive and Perimenopausal women were normal cyclical endometrium, and in cases of post-menopausal women it was atrophic endometrium and non-atypical hyperplasia in all the age groups. **Conclusion:** Patients with AUB shows a varying spectrum of endometrial pattern. Hence, It is important to evaluate endometrial pathology in all women presenting with AUB without a known cause.

KEYWORDS

Abnormal Uterine Bleeding, Histopathology, Endometrium

INTRODUCTION

Abnormal uterine bleeding (AUB) is defined as any alteration in the pattern or volume of menstrual blood flow. It refers to any non physiologic uterine bleeding. It affects a great majority of women and is one of the most common indication for performing endometrial biopsies and curettage. The underlying pathology may be functional or organic. The functional causes of AUB include normal cyclical endometrium, abnormal physiological changes of endometrium such as atrophic endometrium and disordered proliferative endometrium and organic lesions includes chronic endometritis, hyperplasia, polyp and carcinoma.

The prevalence of AUB increases with age, and its peak is just prior to menopause. Most of the cases are associated with anovulatory menstrual cycles, adolescent and perimenopausal women are particularly vulnerable. The present study was undertaken to evaluate the spectrum of endometrial pathology that may result in abnormal uterine bleeding in women of different age groups. Therefore it is important to differentiate non neoplastic lesion from neoplastic lesions and to rule out carcinoma or diagnose in an early treatable stage.

AIM:

To study the histo-pathological spectrum of endometrial lesions in women presenting with abnormal uterine bleeding in a tertiary care hospital.

OBJECTIVE:

To evaluate the spectrum of endometrial lesions in women presenting with AUB in different age groups.

MATERIALS AND METHODS

This study was a retrospective analysis of 200 cases of endometrial specimen in patients clinically diagnosed as suffering from abnormal uterine bleeding and was conducted over a period of one year from July 2021 to June 2022 in the department of Pathology, AMCH, Dibrugarh. The relevant clinical details were noted. Cases with pathology other than endometrium like leiomyoma, cervical, vaginal pathology and inadequate endometrial samples were excluded from the study.

Endometrial tissue were obtained from endometrial biopsy or curettings as well as hysterectomy specimens and fixed in 10% formalin. Gross examination was noted and representative samples were submitted, processing was done in automated tissue processor, 4-5 micron thick paraffin sections were embedded and stained with hematoxylin and eosin for microscopic examination. Ethical approval

was obtained from the committee of the Medical Ethics of the hospital. All patients provided their written informed consent in their study.

RESULTS

In our study, a total of 200 cases were analysed during the study period. The patient's age ranged from 19 years to 90 years. Maximum number of patients were in the age range 41-50 years (35.5%) with a mean age of 45.02 ± 10.24 years.

Table 1: Age distribution of patients presenting with AUB

AGE RANGE (YEARS)	NO. OF CASES	PERCENTAGE (%)
<20	01	0.5
21-30	13	6.5
31-40	61	30.5
41-50	71	35.5
51-60	47	23.5
61-70	04	02
71-80	02	01
81-90	01	0.5

A total of 75 patients (37.5%) presenting with AUB were in the reproductive age group followed by 71 patients (35.5%) in the perimenopausal age group and 54 patients (27%) in the post menopausal age group.

Histopathological examination of the endometrium showed various histological patterns in patients presenting with AUB. The most common histopathological diagnosis was found to be Proliferative endometrium and was seen in 55 cases (27.5%) followed by atrophic endometrium which was seen in 42 cases (21%). Non atypical hyperplasia and secretory endometrium were the next common patterns and both were seen in 38 patients constituting 19% of total cases. A total of 11 cases of Endometrial carcinoma was seen amongst which 6 cases (3%) were that of endometrioid carcinoma, 3 cases (1.5%) of serous carcinoma and 2 cases (1%) of clear cell carcinoma. Disordered proliferative endometrium was seen in 6 cases (3%), endometrial polyp in 4 cases (2%), atypical endometrial hyperplasia in 4 cases (2%) and endometritis in 2 patients (1%) presenting with AUB.

Table 2: Histopathological spectrum of endometrium in AUB

Histopathological Diagnosis	No. Of Cases	Percentage (%)
Atrophic Endometrium	42	21
Proliferative Endometrium	55	27.5
Non Atypical Hyperplasia	38	19

Secretory Endometrium	38	19
Endometrioid Carcinoma	06	03
Disordered Proliferative Endometrium	06	03
Endometrial Polyp	04	02
Atypical Hyperplasia	04	02
Serous Carcinoma	03	1.5
Clear Cell Carcinoma	02	01
Endometritis	02	01

Table 3: Age wise distribution of endometrial lesions in AUB

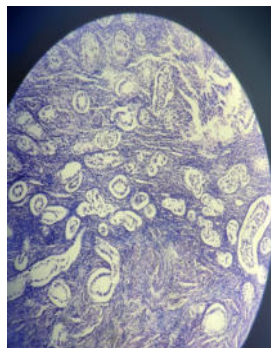
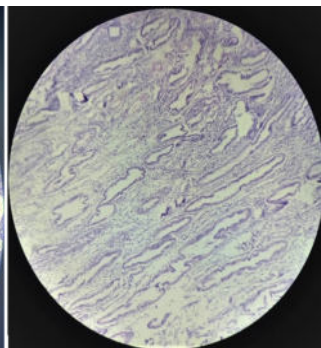
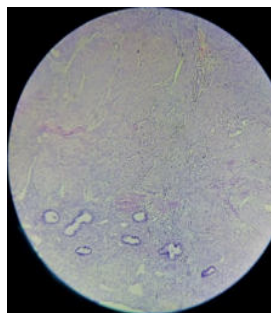
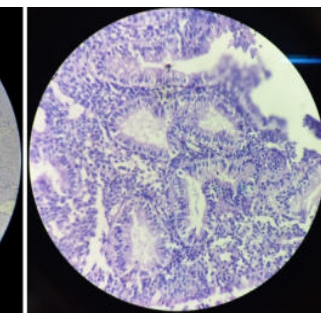
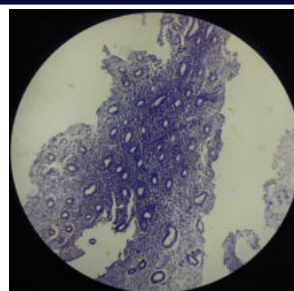
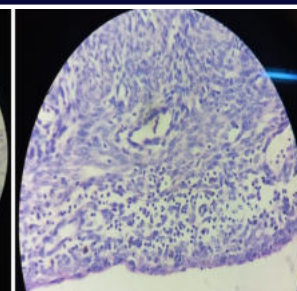
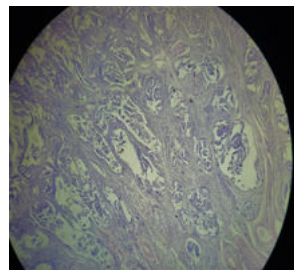
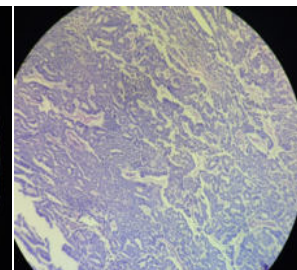
Age	Atrophic endometrium	Proliferative endometrium	Non atypical hyperplasia	Secretory endometrium	Endometrioid carcinoma	Disordered proliferative endometrium	Endometrial polyp	Atypical hyperplasia	Serous carcinoma	Clear cell Carcinoma	Endometritis
< 20	0	1	0	0	0	0	0	0	0	0	0
20-30	0	7	2	2	0	1	0	0	0	1	0
31-40	5	18	15	18	0	1	2	0	1	0	1
41-50	11	24	12	13	2	3	1	4	1	0	0
51-60	22	1	11	4	4	1	1	0	1	1	1
61-70	4	1	0	0	0	0	0	0	0	0	0
71-80	0	0	1	0	0	0	0	0	0	0	0
81-90	0	0	1	0	0	0	0	0	0	0	0

Normal cyclical endometrium (proliferative and secretory phases) was most common (83 cases, 41.5 %) amongst the reproductive and perimenopausal women followed by non atypical endometrial hyperplasia (29 cases, 14.5%).

Atrophic endometrium (22 cases, 11%) followed by non atypical hyperplasia (11 cases, 5.5%) accounted for most cases of AUB in post menopausal women.

Disordered proliferative endometrium and atypical endometrial hyperplasia accounted for 3 (1.5%) and 4 (2%) cases respectively, in women between 41-50 years. Endometrial polyp accounted for 4 cases (2%) presenting with AUB and was more common in 31-40 years of age group.

Malignancy as a cause of AUB was found to be uncommon. There were 11 cases of carcinoma out of which 6 cases were Endometrioid carcinoma, 3 cases were Serous carcinoma and 2 cases were Clear cell carcinoma. The carcinoma cases were most commonly seen in 51-60 years of age group.

**Fig 1.** Proliferative endometrium (low power)**Fig 2.** Secretory endometrium (low power)**Fig 3.** Atrophic endometrium (low power, 10x)**Fig 4.** Non atypical endometrium (high power, 40x)**Fig 5.** Endometrial polyp (low power, 10X)**Fig. 6.** Endometritis (high power 40X)**Fig. 7.** Endometrioid carcinoma (low power, 10X)**Fig. 8.** Serous Carcinoma (low power, 10x)

DISCUSSION

Endometrial assessment was performed to diagnose malignancy or premalignant conditions and to evaluate the hormonal influences of the endometrium. The occurrence of menstrual disorders increases significantly with advancing age. The commonest age group presenting with excessive bleeding in our study was 40-49 years (49.2%). Similar results were obtained in the study by Saraswathi D et al.³ with 33.5% of women between 41-50 years of age. In most of the studies the cases of AUB were more in women more than 40 years of age.

The most likely etiology of AUB relates to the patient's age as to whether the patient is premenopausal, perimenopausal or postmenopausal.⁴ In many instances AUB was due to the occurrence of an anovulatory cycle in perimenopausal period.⁵ In most of the similar studies, more than 50% of women presenting with AUB were greater than 40 years of age. Endometrium is a dynamic, hormonally sensitive and responsive tissue which constantly and rhythmically undergoes changes in the active reproductive life.⁶ In most of the cases of AUB there was no specific organic cause as was evident by various studies. In our study 66.1% of patients did not show any specific pathology for AUB. In other studies it was found that majority of cases lacked a well defined organic cause. In our studies we found that cyclic endometrium was the most common finding which was similar to the previous studies. Proliferative or secretory varied according to the time of biopsy or hysterectomy.

Disordered proliferative endometrium was common in the perimenopausal age group and the same was found in present study (60%) and study by Vaidya S et al.⁷ in which 51.8% patients with disordered proliferative endometrium were in perimenopausal age group. Postmenopausal bleeding mostly associated with an atrophic endometrium. Endometrial atrophy occurs as a consequence of prolonged absence of any endogenous or exogenous estrogenic stimulation. The thin atrophic endometrium is frequently susceptible to minor injury and can be responsible for postmenopausal bleeding even in the absence of an identifiable lesion. Superficial large, dilated venules which are situated under a thin endometrium, may rupture to cause excessive uterine bleeding.⁸ The incidence of atrophic endometrium was higher in our study (13.3%) than in other studies, including More S et al.⁹ Vaidya S et al.⁷ and Bhatta S et al.¹⁰ in which the incidence was 2.0%, 4.7% and 7.4% respectively. The difference was probably due to a greater percentage of perimenopausal and postmenopausal women in our study compared to the other three studies.

CONCLUSION:

Patients with AUB showed a varying spectrum of endometrial pattern, ranging from cyclic endometrium to carcinomas with respect to the

age. In our present study most common pattern was normal cyclical endometrium (proliferative and secretory) in women of reproductive and perimenopausal cases and atrophic endometrium in postmenopausal women presenting with AUB. And malignancy as a cause of AUB was found to be uncommon. Hence, management strategy should be individualized as in most cases restrictive approach is necessary in order to avoid unnecessary hysterectomy. And, therefore it is important to evaluate for endometrial pathology in all women presenting with AUB without a known cause.

REFERENCES-

1. Singh, N., & Sonawane, S. (2017). Spectrum of endometrial pathology in abnormal uterine bleeding. *Int J Health Sci Res*, 7(9), 28-34.
2. Panwar, D., & Anand, A. Histopathological Study of Endometrium in Dysfunctional Uterine Bleeding.
3. Doraiswami, S., Johnson, T., Rao, S., Rajkumar, A., Vijayaraghavan, J., & Panicker, V. K. (2011). Study of endometrial pathology in abnormal uterine bleeding. *The journal of Obstetrics and Gynecology of India*, 61, 426-430.
4. Dallenbach-Hellweg, G., & Dallenbach-Hellweg, G. (1981). The histopathology of the endometrium (pp. 89-256). Springer Berlin Heidelberg.
5. Crum, C. P. (2004). The female genital tract, Ovaries. In Robbins and Cotran Pathologic Basis of Disease (pp. 1092-1104). Elsevier Saunders, Philadelphia.
6. Shah, R., Dayal, A., Kothari, S., Patel, S., & Dalal, B. (2014). Histopathological interpretation of endometrium in abnormal uterine bleeding.
7. Vaidya, S., Lakhey, M., Vaidya, S., Sharma, P. K., Hirachand, S., Lama, S., & Kc, S. (2013). Histopathological pattern of abnormal uterine bleeding in endometrial biopsies. *Nepal Med Coll J*, 15(1), 74-77.
8. Archer, D. F., McIntyre-Seltman, K., Wilborn Jr, W. W., Dowling, E. A., Cone, F., Creasy, G. W., & Kafrissen, M. E. (1991). Endometrial morphology in asymptomatic postmenopausal women. *American journal of obstetrics and gynecology*, 165(2), 317-322.
9. More, S., Khairkar, P. S., Sawake, G., Sawake, N., Pandey, M., & Pandey, A. (2016). Histomorphological spectrum of lesions in endometrial biopsy in patients presenting with abnormal uterine bleeding—A study of 202 cases. *J Cont Med Dent*, 4(2), 74-8.
10. Bhatta, S., & Sinha, A. K. (2012). Histopathological study of endometrium in abnormal uterine bleeding. *Journal of pathology of Nepal*, 2(4), 297-300.