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# STUDY OF ENDOMETRIAL BIOPSIES IN ABNORMAL UTERINE BLEEDING AT A TERTIARY CARE HOSPITAL

Pathology

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## ABSTRACT

**BACKGROUND:** Abnormal Uterine Bleeding (AUB) is the most common presenting complaint in gynecology OPD and Endometrial biopsy could be effectively used as a first diagnostic step in this after ruling out medical causes. This study was done to evaluate histopathology of endometrium for identifying the endometrial causes of AUB, to study different endometrial lesions and to correlate endometrial pathology with respect to the age.

**METHODS:** This was a retrospective study of total 96 cases of endometrial biopsies over the period of 6 months from Jan –June 2019 received at Histopathology Department at Shri Kashibai Navale Medical college and Hospital, Narhe, Pune.

**RESULTS:** Out of 96 cases, majority of cases showed normal cyclical pattern followed by endometrial hyperplasia without atypia.

**CONCLUSION:** Endometrial biopsy plays an important role in the diagnosis and management of AUB.

## KEYWORDS

Abnormal Uterine Bleeding (aub), Endometrial Biopsy.

## INTRODUCTION

Abnormal uterine bleeding (AUB) is the commonest presenting symptom in gynaecology OPD.It includes both organic and non organic causes of uterine bleeding. Endometrial sampling could be effectively used as the first diagnostic step in AUB after ruling out medical causes.The reported prevalence of AUB in India is around 17.9%.[1] AUB is defined as change in frequency of menstruation, duration of flow or amount of blood loss. The mean duration of menstruation is 4.7 days and average blood loss per cycle is 35ml.[2] It includes both organic and non-organic causes of uterine bleeding. Endometrial biopsy or curettage is a safe and effective diagnostic modality in evaluation of abnormal uterine bleeding after ruling out medical causes.[3]The underlying disease can be detected by histological patterns of endometrium considering the age, menstrual cycle phase and use of any exogenous hormones.

A new nomenclature system known by the acronym PALM-COEIN (Polyp; Adenomyosis; Leiomyoma; Malignancy and Hyperplasia; Coagulopathy; Ovulatory Disorders; Endometrial factors; Iatrogenic; and Not classified) was introduced in 2011 by the International Federation of Gynecology and Obstetrics (FIGO) to standardize the terminologies of AUB. The PALM-COEIN system is etio-pathogenesis based, with PALM describing structural causes and COEIN denoting non-structural causes of AUB. Hence, FIGO nomenclature system will allow for standardization and uniformity while conducting future studies and can rectify the problem of inconsistency in AUB management.[4]

This study was done to evaluate histopathology of endometrium for identifying the endometrial causes of AUB, to study different endometrial lesions and to correlate endometrial pathology with respect to the age.

## MATERIAL AND METHODS

This was a retrospective study done on patients presenting with AUB from Jan 2019 to June 2019 in the Department of Pathology of Shrimati Kashibai Navale Medical College and Hospital, Narhe, Pune. Patients were selected based on clinical details. The study material included a total number of 96 cases of endometrial curettage and biopsy. Patients with isolated causes of AUB were included for the study and those with leiomyoma, cervical, vaginal pathology and haemostatic disorders were excluded. All specimens were transported to histopathology laboratory in 10% formalin. The gross morphology was recorded with total submission of endometrial samples. The tissue bits were processed in semiautomatic tissue processor and paraffin blocks were prepared. Tissue sections (4-6µ) were cut and stained with haematoxylin and eosin (H&E). Microscopic examination was done by two pathologists, individually to reduce observer bias.

## RESULTS

Isolated endometrial pathology as a cause of AUB was studied in 96 patients.The age of the patient is categorised into seven groups (Table 1). Age of the patients ranged from 19years to 80 years. AUB was commonly seen in age group of 41-50years (37.5%). The predominant histopathological pattern noted was normal cyclic pattern of endometrium (49%) followed by hormonal imbalance (13.5%), endometrial hyperplasia without atypia (9.3%), disordered proliferative pattern( 6.25 %). Endometrial Hyperplasia with atypia and gestational changes were seen in 3(3.1%) patients each. Endometrial polyp was seen in 3(3.1% ) patients. There was a one case of tuberculous endometritis. Remaining patients were in others group which included inadequate sampling or blood clot (10.4%). The key feature that distinguished disordered proliferative endometrial pattern from hyperplasia was the presence of maintained gland to stroma ratio. Cases of hyperplasia without atypia (9.3%) showed crowded glands, stratified glandular epithelium, scanty intervening stroma apart from increased gland to stroma ratio. Nuclear enlargement, rounding of nuclei, coarse chromatin and nucleoli were the grounds on which cytological atypia in hyperplastic endometrium (3.1%) was given. The endometrial hyperplasia without atypia was seen in 77.75% of patients in the age group of 41-50, followed by hormonal imbalance, disordered proliferative pattern and normal cyclical pattern.

**TABLE 1: Age wise distribution of cases.**

| Age group | Number | Percentage |
|---|---|---|
| 10-20 | 1 | 1.04 |
| 21-30 | 09 | 9.3 |
| 31-40 | 24 | 25 |
| 41-50 | 36 | 37.5 |
| 51-60 | 19 | 19.79 |
| 61-70 | 04 | 4.1 |
| 71-80 | 03 | 3.1 |

**TABLE 2: Distribution of cases of AUB with isolated endometrial lesions according to age group.**

| Histopathological Diagnosis | Age group (yrs) | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | <20 | 21-30 | 31-40 | 41-50 | 51-60 | 61-70 | 71-80 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Proliferative phase** | 0 | 4(13.7%) | 9(31%) | 1(3.4%) | 12(41.3%) | 2(6.8%) | 1(3.4%) | 29 |
| **Secretory phase** | 0 | 3(15.7%) | 6(31.5%) | 9(47.3%) | 1(5.2%) | 0 | 0 | 19 |
| **Disordered proferative endometrium** | 0 | 0 | 2(33.3%) | 4(66.7%) | 0 | | | 6 |
| **Endometrial Hyperplasia without atypia** | 0 | 0 | 1(11.1%) | 7(77.75%) | 1(11.1%) | 0 | 0 | 9 |
| **Endometrial Hyperplasia with atypia** | 0 | 0 | 0 | 1(33.3%) | 0 | 1(33.3%) | 1(33.3%) | 3 |
| **Gestation related** | 1(33.3%) | 1(33.3%) | 1(33.3%) | | | | | 3 |
| **Hormonal Imbalance** | | 1(7.6%) | 2(15.3%) | 9(69.2%) | 1(7.6%) | | | 13 |
| **TB** | | | 1(100%) | | | | | 1 |
| **Endometrial polyp** | | | 1(33.3%) | 1(33.3%) | 1(33.3%) | | | 3 |
| **0thers(blood clot,inadequate biopsy)** | | | 1(10%) | 4(40%) | 3(30%) | 1(10%) | 1(10%) | 10 |
| **Total** | 1 | 9 | 24 | 36 | 19 | 4 | 3 | 96 |

## DISCUSSION

Abnormal uterine bleeding is a broad term that describes irregularities in the menstrual cycle involving frequency, regularity, duration and volume of flow outside of pregnancy. A normal menstrual cycle has a frequency of 24-38 days, last 7-9 days with 5-80 ml of blood loss. Variations in any of these 4 parameters constitute AUB.[5] Routine non-invasive investigations for AUB were carried out which included CBC, platelet count, LFT, PT, APTT to rule out bleeding and coagulation disorder. In a woman of reproductive age group, serum and urine HCG was evaluated to rule out pregnancy. As thyroid is the commonest endocrinological cause encountered, TFT was done. On ruling out these, D and C was done as a diagnostic as well as therapeutic procedure. The sensitivity of endometrial biopsy for detection of endometrial abnormalities has been reported to be as high as 96%[6,7].

Our study significantly revealed that occurrence of menstrual disorders increases with advancing age. The commonest group presenting with excessive bleeding in this study was 41-50 years. A similar evidence was reported by Yusuf et al. and Muzaffar et al.[8,9] in their study of endometrium. Our study like other studies showed that proliferative lesions like endometrial hyperplasia without atypia, disordered proliferative pattern, endometrial polyp occur more commonly in the age group 41-50 years[9].The reason for this may be due to the fact that these patients are in climacteric period. As women approach menopause, cycles shorten and often become intermittently anovulatory due to decline in the number of ovarian follicles and estradiol level.[10]

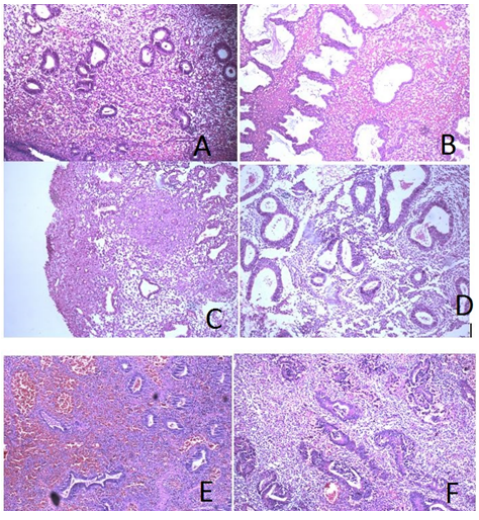
More number of cases in this study showed normal cyclic patterns of proliferative and secretory phases. Bleeding in the proliferative phase may be due to anovulatory cycles and bleeding in secretory phase is due to ovulatory dysfunctional uterine bleeding. Few of the cases showed disordered proliferative endometrium which denotes endometrial appearance is hyperplastic but without an increase in endometrial volume.[11] In this the endometrial glands showed architectural atypia without cytological atypia and the process was focal. The cases of hormonal imbalance must be due to improper hormonal treatment taken by these patients. Tuberculous endometritis was seen in one patient who presented with AUB. This condition needs to be diagnosed because with specific treatment, endometrium starts functioning normally. Higher incidence of endometrial hyperplasia in our study group may be due to sedentary lifestyle, and presence of risk factors like obesity, diabetes etc. Hyperplasias were more common in the 41-50yr age group similar to the studies done by Kurman et al.[12] Identification of endometrial hyperplasia is important as they are thought to be the precursors of endometrial carcinoma. This is supported by the studies done by Lacey et al, and Chambian and Taylor, who found that the risk of progression into carcinoma was more in case of atypical hyperplasia.[13,14.]

## CONCLUSION

Endometrial causes of AUB are age related pathology. Histopa thological examination of endometrium is very important to evaluate AUB. Accurate analysis of endometrial sampling is the key to effective therapy.

## LEGENDS

A-Proliferative Endometrium.
B-Secretory Endometrium.
C-Endometrial Polyp.
D-Disordered Proliferative Endometrium.
E-Endometial Hyperplasia without Atypia.
F-Endometrial Hyperplasia with Atypia.




## REFERENCES

1. Bhatta S, Sinha AK. Histopathological study of endometrium in abnormal uterine bleeding. J Pathol Nepal. 2012;2(4):297-300.
2. Saraswathi D, Thanka J, Shalinee R, Aarthi R, Jaya V, Kumar PV. Study of Endometrial Pathology in Abnormal Uterine Bleeding. J ObstetrGynecol India. 2011 July; 61(4):426-30.
3. Sajitha K, Padma SK, Shetty KJ, Prasad KHL, Permi HS, Hegde P. Study of histopathological patterns of endometrium in abnormal uterine bleeding. CHRISMED J Health Res. 2014;1(2):76-81.
4. Sharma A, Dogra Y. Trends of AUB in tertiary centre of Shimla hills. J Midlife Health. 2013;4(1):67-8.
5. Fraser IS, Critchley HO, Munro MG, Broder M. Can we achieve international agreement on terminologies and definitions used to describe abnormalities of menstrual bleeding? Hum Reprod. 2007 Mar;22(3):635-43.
6. Albers JR, Hull SK, Wesley RM. Abnormal uterine bleeding. Am Fam Physician. 2004 Apr 15;69(8):1915-26.
7. Litta P, Merlin F, Saccardi C, Pozzan C, Sacco G, Fracas M, et al. Role of hysteroscopy with endometrial biopsy to rule out endometrial cancer in postmenopausal women with abnormal uterine bleeding. Maturitas. 2005 Feb 14;50(2):117-23.
8. Yusuf NW,NadeemR,Yusuf A W,etal.Dysfunctional Uterine Bleeding.A retrospective clinicopathological study over 2 years .Pak J OsbstetGynaecol 1996:9:27-30
9. MuzaffarM,Akhtar KAK ,Yasmin S et al.Menstrual irregularities with excess blood loss:aclinicopathologiccorrelation.J Pak Med Asso .2005:55:486-9
10. DoraiswamiS,Johnson T et al .Study of Endometrial Pathology in Abnormal Uterine Bleeding. The Journal of Obstretics and Gynaecology of India(July-August2011)61(4):426-430.
11. Steven SG.Problems in the differential diagnosis of endometrialhyperplasia and carcinoma.Mod.Pathol.2000:13:309-27
12. Kurman RJ, Kaminski PF, Norris HJ. The behavior of endometrial hyperplasia. A long-term study of untreated hyperplasia in 170 patients. Cancer 1985 Jul 15;56(2):403-12.
13. Lacey JV, Ioffe OB, Ronnett BM, Rush BB, Richesson DA, Chatterjee N, et al. Endometrial carcinoma risk among women diagnosed with endometrial hyperplasia: the 34-year experience in a large health plan. Br J Cancer. 2008 Jan 15;98(1):45-53.
14. Chamlian DL, Taylor HB. Endometrial hyperplasia in young women. Obstet Gynecol. 1970 Nov;36(5):659-66. 19