

Section

Pathology

Original

Article

Analysis of Endometrial Histopathology in Abnormal Uterine Bleeding: A Prospective Hospital Based Study

Surendra Kumar Dhruv

Associate Professor, Dept. of Pathology,
Govt. Medical College, Badaun, U.P

ABSTRACT

Background: Dysfunctional uterine bleeding (DUB) can be defined as abnormal bleeding from the vagina that is due to changes in hormone levels. Such type of bleeding is not caused by pregnancy or miscarriage, medical conditions like cancer or fibroids. Problems with the uterus or vagina from infection or other causes can be classified as ovulatory or anovulatory, depending on whether ovulation is occurring or not.

Methods: This study was examined with 300 cases presenting abnormal uterine bleeding.

The duration of study was over a period of 9 months. This study was conducted in Department of Pathology, Govt. Medical College, Badaun, U.P

Results: In our study Endometrium pathology of abnormal uterine bleeding were obtained in 150 cases. In the present study 51 cases were seen with reproductive age, 70 cases seen with Perimenopausal age & 29 cases were seen with Postmenopausal age.

Conclusions: This study suggested that, histopathologic study is mandatory in perimenopausal and postmenopausal bleeding cases. It helps to diagnose early atypical hyperplasia and endometrial carcinoma which have exceptional prognosis when detected early.

Keywords: Abnormal uterine bleeding, Endometrial pathology, Progesterone

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*Corresponding Author

Dr. Surendra Kumar Dhruv

Associate Professor, Dept. of Pathology,

Govt. Medical College, Badaun, U.P

Email: dhruvdrsk@gmail.com

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INTRODUCTION

Atypical genital tract bleeding is based in the uterus. It is usually found in the absence of organic pathology.¹ It is generally because of hormonal disturbances, reduced levels of progesterone, and increased levels of tissue plasminogen activator (TPA). Dysfunctional uterine bleeding (DUB) can be defined as abnormal bleeding from the vagina that is due to changes in hormone levels. Such type of bleeding is not caused by pregnancy or miscarriage, medical conditions like cancer or fibroids. Problems with the uterus or vagina from infection or other causes can be classified as ovulatory or

anovulatory, depending on whether ovulation is occurring or not.² Now a days, the term "dysfunctional uterine bleeding" is replaced by "abnormal uterine bleeding." It has been reported that abnormal uterine bleeding occurs in 10% of women who are ovulating, but their progesterone secretion is prolonged due to low level of estrogen. This causes irregular shedding of the uterine lining and break-through bleeding. Some evidence has related to ovulatory DUB with more fragile blood vessels in the uterus. It may suggest a

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possible endocrine dysfunction. It caused menorrhagia or metrorrhagia. Mid-cycle bleeding may show a transient estrogen decline, whereas late-cycle bleeding may indicate progesterone deficiency. Fibroids are the most common tumour found in women. Almost 70% of white women and 80% of black women will have developed at least one fibroid by the age of 50.³ Subfertility, miscarriage, preterm labour and obstruction of labour are associated with fibroids. Besides this, they may cause discomfort and pressure symptoms, typically urinary. Sometimes, they may cause compression of the renal tract and pelvic vasculature. It leads to impaired renal function and venous thromboembolism. On the other hand, many women with fibroids will be entirely asymptomatic.⁴ Though, mostly women present to gynecological services with AUB and anaemia. In women with uterine fibroids, life is often disrupted and fibroids remain a leading warning for hysterectomy.^{5,6} It is estimated that as a result of fibroids direct and indirect annual costs are \$4.1–9.4 billion and \$1.55–17.2 billion, respectively.⁷ Though, the mechanisms behind linking AUB and fibroids remain incompletely understood.

The present study was carried out to determine the pattern of endometrial histopathology in women of different age groups having AUB.

METHODS

Study Population:- This study was examined with 300 cases presenting abnormal uterine bleeding.

Study duration:-The duration of study was over a period of 9 months.

Study Area:-This study was conducted in Department of Pathology, Govt. Medical College, Badaun, U.P

Data collection:- In this study endometrial tissue was collected by biopsies of Dilatation and curettage or endometrial with hysterectomy specimens in some patients. Patients age ranged included from 19 to 73 years. Detailed clinical history - menstrual status including pattern, period, regularity were attained. The related findings of general and systemic examination were noted.

Data Analysis:- Data were analysed by using Microsoft excel.

RESULTS

In our study Endometrium pathology of abnormal uterine bleeding were obtained in 150 cases. In the present study 51 cases were seen with reproductive age, 70 cases seen with Perimenopausal age & 29 cases were seen with Postmenopausal age. In this study proliferative phase 41.4% most frequent findings followed by Secretory (18.7%), Atrophic (8.7%), Disordered Proliferative (7.4%), Endometrial Hyperplasia (6%), Menstrual shedding (4%), Products (3.4%), Endometrial polyp (2.7%), Chronic endometritis (2%), Endometrial carcinoma (1.4%), V. mole (1.4%).

Table 1: Distribution of cases according to age group

Age group	No. of cases	
18-40	Reproductive age	51
41-50	Perimenopausal age	70
>50	Postmenopausal age	29
Total		150

Table 2: Distribution of adolescent girls according to duration of menstruation

Histopathology	No. of cases	Percentage
Proliferative	62	41.4%
Secretory	28	18.7%
Disordered Proliferative	11	7.4%
Atrophic	13	8.7%
Menstrual shedding	6	4%
Endometrial Hyperplasia	9	6%
Products	5	3.4%
V. mole	2	1.4%
Chronic endometritis	3	2%
Endometrial polyp	4	2.7%
Endometrial carcinoma	2	1.4%
Total	150	100%

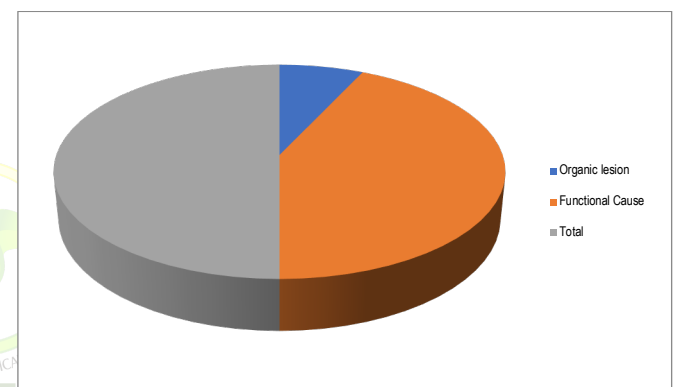


Chart 1 :- This chart showing causes of ABU

DISCUSSION

AUB consist of both dysfunctional uterine bleeding (DUB) and bleeding from structural causes such as hyperplasia, carcinoma, leiomyoma, pregnancy complications etc. DUB can be defined as AUB without a demonstrable organic cause.⁸ Mostly it is due to ovulatory cycles. It is diagnosed after exclusion of medications or structural causes. AUB can evident as heavy, prolonged or acyclic flow at menopausal transition or as spotting or minimal bleeding at postmenopausal period. It requires detailed evaluation as it may be clinical manifestation of endometrial carcinoma. WHO classified uterine corpus tumors as simple or complex.⁹ This classification is based on the absence or presence of architectural abnormalities like glandular complexities and crowding.

This study consisted of 150 specimens of endometrium. They were evaluated to find age, clinical and histopathological features. Results showed that the incidence of AUB was more in perimenopausal age group than postmenopausal age group. This could be due to earlier evaluation and management of these patients.¹⁰ 129 cases of this study belonged to functional causes. The proliferative in 41.4% and secretory in 18.7% were the two most common patterns. 21 cases belonged to organic causes; endometrial hyperplasia in 19 cases (6.3%) was the most common pathology. In the present study the age group of majorities of

patients was between 41-50 yrs (46.7%). It was observed in the study that in the Perimenopausal age group, proliferative endometrium was found in 53.3% of cases. These results were higher than 21.2 % reported by Khare et al,¹¹ 35.09 % by Damle et al¹² and 29.16 % by Bhatt S et al.¹³ In postmenopausal age group 35 % cases revealed proliferative endometrium. The reason behind bleeding in proliferative phase may be due to anovulatory cycle in such cases. It shows rise of estrogen to high levels, then followed by sudden fall in estrogen due to feedback inhibition of pituitary or of FSH secretion resulting in bleeding. In 12.7 % cases, secretory endometrium was observed in perimenopausal age group. In contrast, Damle RP observed 7.95 % cases which was lower than our study.¹ In 39.2% cases, secretory endometrium was seen in reproductive age group. This could be due to ovulatory dysfunctional uterine bleeding. The findings of this study showed that the perimenopausal cases revealed 6 % incidence of endometrial hyperplasia. Khare et al found 36.2% cases^[11] and 23 % by Dangal GA.¹⁴ These results are much higher than our results. Dorai swami¹⁵ observed 68% incidence of endometrial hyperplasia in 40-49 yrs age group. 8.7 % cases of hyperplasia were seen with or without atypia in postmenopausal age group. Due to failure of ovulation, endo hyperplasia is commonly seen in perimenopausal women. In 8.7 % cases, atrophic endometrium was seen as most common pattern in postmenopausal age group. It is due to absence of estrogenic stimulation leading to thin atrophic endometrium susceptible to minor injury. In a study by Lidor et al the atrophic endometrium was most common cause of postmenopausal bleeding in 45 % cases¹⁶ whereas Gredmark et al¹⁷ found in 50 % of cases.

CONCLUSION

Our study concluded that menstrual disorders were present in most of the adolescent girls. Dysmenorrhea was the most common disorder among adolescent girls. This study concludes that in AUB, the histopathologic study of endometrium plays an important role in diagnosis of various

histopathologic patterns and etiopathogenetic factors above the age of 40 years.

Therefore, histopathologic study is mandatory in perimenopausal and postmenopausal bleeding cases. It helps to diagnose early atypical hyperplasia and endometrial carcinoma which have exceptional prognosis when detected early.

REFERENCES

1. Bravender T, Emans SJ (June 1999). "Menstrual disorders. Dysfunctional uterine bleeding". *Pediatr. Clin. North Am.* 46 (3): 545–53, viii. PMID 10384806.
2. "Dysfunctional Uterine Bleeding". Retrieved 2010-01-23.
3. Baird D.D., Dunson D.B., Hill M.C. High cumulative incidence of uterine leiomyoma in black and white women: ultrasound evidence. *Am J Obstet Gynecol.* 2003;188:100–107. [PubMed] [Google Scholar]
4. Brahma P.K., Martel K.M., Christman G.M. Future directions in myoma research. *Obstet Gynecol Clin North Am.* 2006;33:199–224. xiii. [PubMed] [Google Scholar]
5. Merrill R.M. Hysterectomy surveillance in the United States, 1997 through 2005. *Med Sci Monit.* 2008;14:CR24–31. [PubMed] [Google Scholar]
6. Stewart E.A. Uterine fibroids. *Lancet.* 2001;357:293–298. [PubMed] [Google Scholar]
7. Cardozo E.R., Clark A.D., Banks N.K. The estimated annual cost of uterine leiomyomata in the United States. *Am J Obstet Gynecol.* 2012;206:211.e1–211.e9. [PMC free article] [PubMed] [Google Scholar]
8. Brandon JB, AmyEH, Nicholas CL, Harold EF, Edward EW: *The John Hopkin's manual of Gynecology | andObstetrics 2002 2nd edition.* Philadelphia, p 405-11 |
9. Kurman R.J., CarcangiuM.,Herrington C.S., Young R.H. WHO Classification of tumours of female | reproductive organs, 2014 WHO Press
10. 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):426-430.
11. Khare A, Bansal R, Sharma P, ElhenceN :Morphological spectrum of endometrium in patients | presenting with Dysfunctional uterine bleeding. *People's Journal of Scientific Research,* 2012;5:13-16.
12. Damle RP, Dravid NV, Suryawanshi KH, Gadre AS,Bagale PS, Ahire N; Clinicopathological spectrum | of endometrial changes in perimenopausal& menopausal uterine bleeding. *J of clinical and diagnostic | research,* 2013;7(12);2774-2776. |
13. Bhatta S, Sinha AK; Histopathological study of endometrium in abnormal uterine bleeding. *J of | Pathology Nepal,* 2012;2(4):297-300.
14. Dangal G.A. : Study of endometrium in patients with abnormal uterine bleeding at Chitwan valley. | *Kathmandu University Medical Journal,* 2003;1(2):110-112. |
15. 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):426-430. |
16. Lidor A, Ismajovich B, Confino E, David MP et al.; Histopathological findings in 226 women with | perimenopausal uterine bleeding. *ActaObsteGynecolScand,* 1986;65(1): 41-43. |
17. Gredmark T, Kvint S, Havel G, Mattsson LA; Histopathological findings in women with post | menopausal bleeding. *Br J ObstetGynecol,* 1995; 102(2); 133-136. |