Journal Homepage: -www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI:10.21474/IJAR01/14202
DOI URL: http://dx.doi.org/10.21474/IJAR01/14202

RESEARCH ARTICLE

HISTOPATHOLOGICAL STUDY OF ENDOMETRIAL BIOPSIES IN ABNORMAL UTERINE BLEEDING

Dr. Farhana Zakaria[1], Dr. Taqiya Nuzhath[2] and Dr. Ayisha Begum[3]

1. Associate Professor, Department of Pathology, Srinivas Institute of Medical Sciences and Research Centre, Mangalore
2. Assistant Professor, Department of Pathology, Kanachur Institute of Medical Sciences, Mangalore
3. Assistant Professor, Department of Obstetrics and Gynecology, Kanachur Institute of Medical Sciences, Mangalore

Manuscript Info

Manuscript History
Received: 10 December 2021
Final Accepted: 13 January 2022
Published: February 2022

Key words:-
Abnormal Uterine Bleeding, Histopathology, Endometrial Hyperplasia,Endometrial Biopsies, Endometrial Carcinoma

Abstract

Introduction: Excessive and painful bleeding from uterus is a common cause for distress among menstruating women, perimenopausal as well as post-menopausal. There are innumerable causes for abnormal bleeding from uterus. We carried out a retrospective study to enumerate the causes of abnormal uterine bleeding.

Materials And Methods: Consecutive 200 slides of endometrial biopsies done for abnormal uterine bleeding were evaluated over a period of two years between June 2019 to May 2021. The slides were stained with haematoxylin and eosin stain. All the slides were evaluated, examined and reported by two experienced pathologists. The results were tabulated depending upon the age and diagnosis.

Results: Commonest age group noted for abnormal uterine bleeding was between 41-50yrs. Disordered proliferative phase was the commonest (16%) functional cause of abnormal bleeding and diagnosis. The most common organic cause of abnormal bleeding was simple endometrial hyperplasia without atypia (28%). Endometrial carcinoma was diagnosed in 2 cases above 50yrs.

Conclusion: Simple endometrial hyperplasiawas the most common cause of abnormal bleeding from uterus in our series. Atypical hyperplasia or endometrial carcinoma should be ruled out in post-menopausal age group.

Introduction:-

Abnormal uterine bleeding (AUB) is a distressing symptom seen in both young as well as elderly women. The mental agony associated with it is unbearable. Any abnormal excessive bleeding from uterus is thought of a symptom of malignancy until proved otherwise. Hence, it leads to anxiety and confusion among the patients and their near ones. But most of the time it is due to various benign causes like irregular ripening, irregular shedding, endometrial hyperplasia or atrophy.[1,2]

Corresponding Author:- Dr. Farhana Zakaria
Address:- Associate Professor, Department of Pathology, Srinivas Institute of Medical Sciences and Research Centre, Mangalore

Abnormal uterine bleeding is any form of uterine bleeding that is varying in amount, or timing and not related to menstrual bleeding.[3] Dysfunctional uterine bleeding (DUB) is defined as irregular bleeding from uterus not associated with malignancy, inflammation and pregnancy.[4] Even though the terms are sometimes used synonymously they are not same.

The endometrial biopsyis usually chosen to evaluate abnormal uterine bleeding as it is a simple procedure and has several advantages over other methods of diagnosis.Histopathological examination of endometrial biopsies is the standard of care diagnostic tool in the assessment and evaluation of abnormal uterine bleeding. It helps to come to a specific diagnosis to plan the management and treatment of AUB.[4] The samples are obtained easily and safely and has a high diagnostic accuracy. Examination and reporting of slides from endometrial biopsies and curettingis a challenging task for a practicing pathologist as they exhibit a variety of histopathological patterns from normal to abnormal cyclical changes, infections, ingestion of drugs, hormonal influence etc..[5]

Materials and Methods:-

This two-year prospective study was done in a tertiary care centre between June 2019 and May 2021, which included consecutive 200 cases of clinically diagnosed AUB. Patients with history of coagulation disorders, previously diagnosed gynaecological malignancy, pregnancy related complications, leiomyoma, cervical or vaginal pathology and autolysed specimens were excluded from the study.The biopsy specimenweretransported in 10% formalin, underwent routine histopathological processing and paraffin blocks were prepared. The paraffin blocks were sectioned and stained with Haematoxylin and Eosin stain.

The examination findings were broadly divided into functional causes and organic causes.In this study the functional causes of AUB considered were normal cyclical endometrium (secretory and proliferative phase), other changes like disordered endometrium and atrophic endometrium. Organic causesincluded were simple endometrial hyperplasia withatypia, simple endometrial hyperplasia without atypia, complex endometrial hyperplasia with atypia,complex endometrial hyperplasia without atypia, endometrial polyp, endometrial carcinoma and retained products of conception.

Depending upon the reproductive and menopausal status patients were categorized into the following age groups: Reproductive (18-40 years), perimenopausal (41-50 years) and post-menopausal (> 50 years).

Exclusion Criteria:

Patients with known causes of organic lesions involving the genital tract like fibroid uterus, adenomyosis, vaginal and cervical diseases were excluded from the study. Also, patients with systemic diseases like bleeding and coagulation disorders were excluded.

Adequacy of specimen criteria:

In slides or blocks where no endometrial tissue was seen or the preparation was poor and no conclusion was arrived at, then the specimen was termed as inadequate and was excluded from the study group.

Results:-

A total of 200 consecutive endometrial biopsies and curetting's from the patients with abnormal uterine bleeding were analysed. Out of the 200 cases, organic cause was the predominant finding seen in 56% of cases and the remaining 44% showedfunctional causes.

Patient's age ranged from 21-65 years [Table 1]. Majority of the patients were in the age group of 41-50years. Simple endometrial hyperplasia without atypia was the most common finding. It was seen in 56 cases (28%). This was followed by complex endometrial hyperplasia without atypia. It was seen in 38 cases (19%) [Table 2]. Complex endometrial hyperplasia with atypia was seen in only 2 of 200 patient slides analysed.

Among the functional causes, disordered proliferative endometrium was the most common finding noticed which wasseen in 32 cases (16%) [Table 3].

Table 1:- Age Distribution.

Age (in years)	No. of patients	Percentage (%)
21-30	26	13
31-40	44	22
41-50	114	57
51-60	8	4
>60	8	4
Total	200	100

Table 2:- Age distribution of different histopathological spectrum.

ENDOMETRIAL PATTERN	21-30	31-40	41-50	51-60	>60	TOTAL	PERCENTAGE
Proliferative Phase	8	10	2	0	0	20	10
Secretory Phase	6	6	6	0	0	18	9
Disordered Proliferative Phase	2	6	20	4	0	32	16
Atrophic Endometrium	0	0	0	0	2	2	1
Progesterone Induced Changes	0	2	12	2	0	16	8
Retained Products of Conception	2	2	0	0	0	4	2
Endometrial Polyp		4	6	0	0	10	5
Simple Endometrial Hyperplasia without Atypia	6	8	36	4	2	56	28
Complex Endometrial Hyperplasia Without Atypia	2	6	26	4	0	38	19
Complex Endometrial Hyperplasia with Atypia	0	0	0	0	2	2	1
Endometrial Carcinoma	0	0	0	1	1	2	1

Table 3:- Showing the various functional causes of AUB.

Endometrial Pattern	No. of Patients	Percentage
Proliferative Phase	20	10%
Secretory Phase	18	9%
Disordered Proliferative Phase	32	16%
Atrophic Endometrium	2	1%
Progesterone Induced Changes	16	8%

Table 4:- Showing various organic causes of AUB.

Endometrial Pattern	No. of Patients	Percentage
Retained Products of Conception	4	2%
Endometrial Polyp	10	5%
Simple Endometrial Hyperplasia without Atypia	56	28%
Complex Endometrial Hyperplasia Without Atypia	38	19%
Complex Endometrial Hyperplasia with Atypia	2	1%
Endometrial Carcinoma	2	1%

Discussion:-

The most common gynaecological problem encountered is abnormal uterine bleeding. In otherwise healthy women, it significantly alters the quality of life with various symptoms like dysmenorrhoea, menorrhagia, polymenorrhagia and metrorrhagia. Abnormal uterine bleeding includes bothbleeding from structural causesand dysfunctional uterine bleeding (DUB).[6]

Abnormal uterine bleeding is defined as any bleeding from uterus other than regular menstrual bleeding. AUB secondary to organic pathology is more common in young girls of pubertal age and perimenopausal women, though it can occur in reproductive women of all ages.[7]World Health Organization defines peri-menopause as two to eight years preceding menopause and one year after the final menstrual period.[8]

During pre-menopausal period there is reduction in number of ovarian follicles. As a result, when woman is nearing menopause, her cycles tend to become short and often become anovulatory intermittently. The fluctuations in estradiol level in body leads to abnormal patterns of uterine bleeding.

When there is withdrawal of estrogen and progesterone from the body normal menstrual bleeding occurs. Whenever there is anovulation, then there is no production of progesterone. As a result, there are no secretary changes seen in endometrium. Estrogen remains unopposed giving rise to persistent proliferative or hyperplastic endometrium.[9]

In our study 57% of the slides were from age group of 41-50 years, which formed the most common age group presenting with AUB [Table 1]. It was comparable to study conducted byBoldeet al.[10]

In our study, incidence of functional causes of AUB was 44% and incidence of organic causes were56%.

The most common histological pattern observed in our study was endometrial hyperplasia and was seen in 40% of slides. Of which simple hyperplasia without atypia being the predominant pattern 28%. It was comparable to study of Vijay Sreedhar et al where they had 27.4%.[9] In the study by K. Sajithaet al, they found it to be higher at 56.4%. It might be as a result of a greater number of slides included in their study.[11] Endometrial hyperplasia isa known precursor of endometrial carcinoma, and hence the importance associated with it.[12] The chances of progression of endometrial hyperplasia to cancer is said to be around 5-10%.[13]

We observed endometrial polyps in 5% of cases [Table 4] which was much less than 9.3% seen by Vijay Sreedhar et al and 8.2% in Chhatrasal et al, but higher than Gupta et al and Kafle N et al who had seen it in 2.41%.[9,14,15,16]

Endometrial carcinoma occurs can a result of excess estrogenic stimulation. The most common endometrial cancer is of endometroid type. We noted two cases of endometrial carcinoma, one in 51-60 and other in >60 years age group. Kafle N et al observed endometrial carcinoma in 2.41% where as we observed it in only 1%. Bindroo et alfound endometrial carcinoma in 5.9% and it was 9% in Vijay Sreedhar et al.[6,9]

Conclusion:-

We found that a greater number of cases of abnormal uterine bleeding is seen in the perimenopausal age group (41-50 years). Most of the cases are due to endometrial hyperplasia. Simple endometrial hyperplasia without atypia is the most common type of endometrial hyperplasia. A detailed clinical and diagnostic study is required in patients with abnormal uterine bleeding for proper management. Though endometrial carcinoma is rare in our study, it should be suspected in post-menopausal age group.

References:-

1. Sutherland AM. Functional uterine haemorrhage: a critical review of the literature since 1938. Glasgow Med J 1949; 30:1-28.
2. Kistner R. Gynecology, principles and practice. Chicago, ii.Year book 1964:238.
3. Albers J et al.: "Abnormal Uterine bleeding" American Family Physician. 2004; 69(8): 1915-26
4. Parmar J, Desai D. Study of endometrial pathology in abnormal uterine bleeding. Int J Reprod Contracept ObstetGynecolPathol 2013;2 (2):182-185.
5. Samson S-L, Donna G. who needs an endometrial biopsy? Can Fam Physician 2002; 48:885-887.
6. Bindroo S, Garg M, Kaur T. Histopathological spectrum of endometrium in abnormal uterine bleeding. Int J Reprod Contracept ObstetGynecol 2018; 7:3633-7.
7. Dangal, G. A study of endometrium of patients with abnormal uterine bleeding at Chitwan valley. *Kathmandu University Med J, 2000; 1*, 110-12.
8. Goldstein SR. Menorrhagia and abnormal bleeding before the menopause. Best Pract Res Clin ObstetGynaecol. 2004;18(1):59-69.
9. Vijay Sreedhar V *et al*.; Study of Histopathological Pattern of Endometrium in Abnormal Uterine Bleeding- A Study of 150 Cases Saudi J. Pathol. Microbiol.2017; 2(4):137-142
10. Bolde SA, Pudale SS, Pandit GA, Matkari PP. Histopathological study of endometrium in cases of abnormal uterine bleeding. Int J Res Med Sci. 2017; 2(4):1378-81.
11. Sajitha K, Padma SK, Shetty KJ, Prasad KHL, Permi HS, Hegde P. Study of histopathological patterns of endometrium inabnormal uterine bleeding. Chris Med J Health Res. 2014; 1:76-81
12. Doraiswami, S., Johnson, T., Rao, S., Rajkumar, A., Vijayraghavan, J., &Panicker, V. K. Study of Endometrial Pathology in abnormal uterine bleeding. *J ObstetGynaecol India, 2011; 61(4)*, 426- 30.
13. Lata G, Sharma S, Kaur SP, Gulia SP. Histo-pathological pattern of endometrial biopsy in females with abnormal uterine bleeding: a retrospective study in tertiary care hospital of Haryana. Int J Reprod Contracept ObstetGynecol 2020; 9:4068-73.
14. Chhatrasal C, Shelgaonkar G, Kulkarni CV, Ghanghoria S, Yadav A, Aggarwal P. Evaluation of endometrial histopathological patterns in abnormal uterine bleeding: A study of 1545 cases. Int J Med Sci Public Health 2017;6(8):1240-1243.
15. Gupta A, Paitiri K, Gupta A, Gupta R, Khare P. Histopathological patterns in endometrial biopsy associated with abnormal uterine bleeding. Asian Pac J Health Sci. 2018; 5:31–6
16. Kafle N, ShaukinSh, Kafle SU, Singh M, Parajuli S. Histopathological Pattern of Endometrial Biopsies in Patients with Abnormal Uterine Bleeding Attending Birat Medical College Teaching Hospital. BJHS 2019; 5(2)12: 1035-1039.