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Original Research Article

Cliniopathological profile in women with abnormal uterine bleeding

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ABSTRACT

Introduction: Abnormal uterine bleeding is a challenging gynecological problem caused by various endometrial pathologies and is a major clinical problem among women in peri and postmenopausal age groups. The problem is common worldwide but causes may vary from one region to another.
Aims and Objectives: The main objective was to evaluate pathological spectrum of different endometrial lesions in abnormal uterine bleeding and to correlate with clinical history and diagnosis.
Materials and Methods: The study was a prospective study done from August 2017 to July 2019. The specimens received from endometrial biopsy were included in the study. All the specimens were fixed in formalin and processed through paraffin wax embedding method. Sections were cut at 3-5 micrometer thickness and stained by Hematoxylin and Eosin (H&E) stain and were examined under light microscope.
Result: A total no. of 247 cases were studied. Out of these, 57 cases were of Proliferative endometrium, 33 cases of Secretory endometrium, 34 cases of simple hyperplasia without atypia, 11 cases of cystic glandular hyperplasia, 17 cases of complex hyperplasia with atypia, 09 cases of menstrual phase endometrium, 07 cases of irregular shedding, 06 cases of endometrial polyp and anovulatory cycle, 04 cases of endometritis, 03 cases each of simple hyperplasia with atypia, progesterone exposed endometrium and inadequate secretory phase, 02 cases each of complex hyperplasia without atypia, atrophic endometrium, products of conception and inadequate proliferative phase and 01 case each of stromal hyperplasia. 45 samples were inadequate. Maximum cases of abnormal uterine bleeding were seen between 31-40 years of age.
Interpretation and Conclusion: Abnormal uterine bleeding is one of the commonest condition for which patients seek advice in the gynecological outpatient department. Analysis of histopathology of endometrium in abnormal uterine bleeding helps in management of patients and to know the pathological incidence of structural causes in AUB prior to surgery.

1. Introduction

The endometrium is uniquely endowed throughout the female reproductive lifespan with a complex of periodic proliferation, differentiation, breakdown and regeneration.[1] Abnormal uterine bleeding (AUB) is a symptom and not a disease and it accounts for more than 70% of all gynecological consultations in the perimenopausal and postmenopausal age group.[2] AUB is defined as changes in frequency of menstruation, duration of flow or amount of blood loss.[3] It includes both dysfunctional uterine bleeding (DUB) and bleeding from structural causes like fibroids, polyps, endometrial carcinoma, and pregnancy complications.[4] It occurs in various forms such as menorrhagia, polymenorrhea, polymenorrhagia, metrorrhagia, and menometrorrhagia.[2] Endometrium is a hormonally sensitive, dynamic and responsive tissue which constantly and rhythmically undergoes changes in the active reproductive life.[5] Wide range of morphologic patterns resulting from both normal and abnormal changes offer a diagnostic challenge to practicing pathologists. Endometrial samplings by dilatation and curettage, endometrial biopsy, pipelle and hysterectomy specimens are chosen methods to evaluate AUB.

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2. Aims and Objectives

To find out the pathological spectrum of different endometrial lesions in Abnormal uterine bleeding and Correlation of different pathological findings with clinical history and examination.

3. Materials and Methods

Detailed clinical history and relevant diagnostic findings were collected from patients presenting with abnormal uterine bleeding during a period of two years, from August 2017 to July 2019. All specimens were transported in 10% formalin to the Department of Pathology, VIMS Bellary. The tissue bits were processed and paraffin blocks were prepared. Tissue sections (3-5 μ) were cut and stained with hematoxylin and eosin stain (H&E). A detailed histological study was carried out and the findings were noted and classified.

4. Results

The study material included a total number of 247 endometrial samples (endometrial curettage and biopsy). Age range in the study group was from 22 years to 70 years, thus including reproductive to postmenopausal age group with more number of cases seen to be clustered in reproductive age group (Table 1). Predominant histopathological pattern noted was proliferative endometrium (Figure 1) seen in 23.1% cases (Table 2).

Out of 247 cases, only 200 cases were included in our table, after excluding non-diagnostic cases. Out of 200 cases, 126 cases were non neoplastic and 74 cases were pre- neoplastic/ neoplastic (Table 3). Under non neoplastic conditions, proliferative phase endometrium (57 cases) was most common finding and simple hyperplasia was documented as most common finding under pre neoplastic conditions (Figure 2).

Hyperplasia was observed in 67 cases (Table 4), simple hyperplasia was most common which includes cystic glandular hyperplasia and of 67 hyperplasia, 20 cases presented with atypia (Figure 3)

Table 1: Distribution of cases in different age categories

Category	No. of cases	Percentage
Reproductive	136	55.1
Perimenopausal	75	30.4
Postmenopausal	36	14.6
Total	247	100

5. Discussion

Endometrial sampling is an indispensable and an outstanding tool in the assessment of underlying pathology in patients with AUB. The main purpose of endometrial

Table 2: Analysis ofhistopathological findings in endometrial biopsy samples

S. No	Histological feature	No. of cases	Percentage
1	Proliferative phase	57	23.1
2	Secretory phase	33	13.4
3	Menstrual phase	9	3.6
4	Endometrial polyp	6	2.4
5	Progesterone exposed endometrium	3	1.2
6	Anovulatory Cycle	6	2.4
7	Irregular shedding	7	2.8
8	Inadequate secretory phase	3	1.2
9	Inadequate proliferative phase	2	0.8
10	Endometritis	4	1.6
11	Atrophic	2	0.8
12	Stromal hyperplasia	1	0.4
13	Cystic glandular hyperplasia	11	4.5
14	Simple hyperplasia	34	13.8
15	Simple hyperplasia with atypia	3	1.2
16	Complex hyperplasia	2	0.8
17	Complex hyperplasia with atypia	17	6.9
18	Products of conception	2	0.8
19	Inadequate	45	18.2
Total		247	100.0

Table 3: Distribution of Pre-neoplastic and Non neoplastic conditions

Non neoplastic conditions		Pre neoplastic conditions	
Proliferative phase	57	Simple hyperplasia	34
Secretory phase	33	Simple hyperplasia with atypia	3
Menstrual phase	9	Complex hyperplasia without atypia	2
Progesterone exposed endometrium	3	Complex hyperplasia with atypia	17
Anovulatory	6	Cystic glandular hyperplasia	11
Irregular shedding	7	Stromal hyperplasia	1
Inadequate secretory phase	3	Endometrial polyp	6
Inadequate proliferative phase	2		
Endometritis	4		
Atrophic	2		
Total	126	Total	74

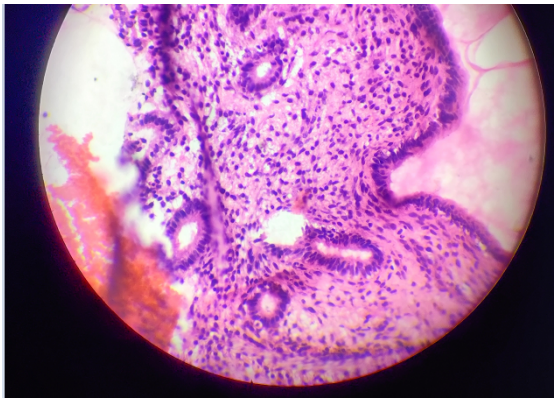

Fig. 1:

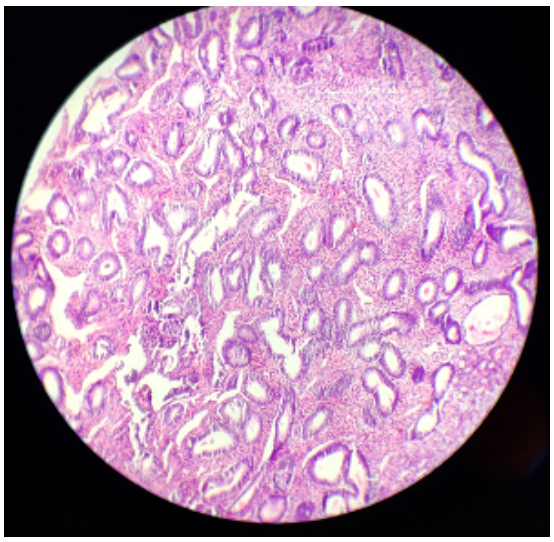

Fig. 2:

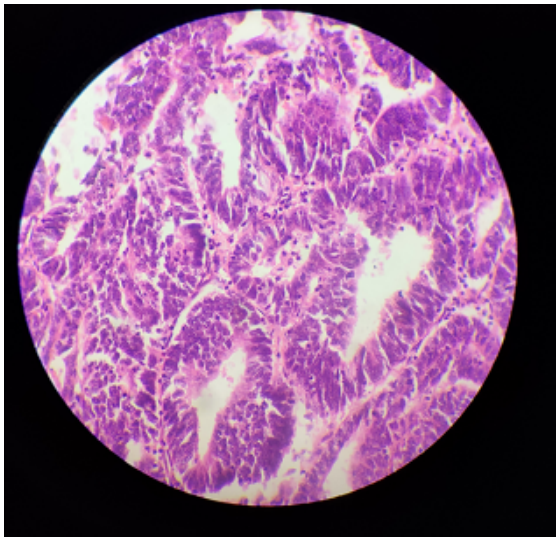

Fig. 3:

Table 4: Types of Hyperplasia

S. No	Type of Hyperplasia	No. of cases	Percentage (%)
1	Simple hyperplasia	34	50.75
2	Simple hyperplasia with atypia	3	4.48
3	Complex hyperplasia without atypia	2	2.98
4	Complex hyperplasia with atypia	17	25.38
5	Cystic glandular hyperplasia	11	16.41
Total		67	100

Table 5: Comparative study of incidence of endometrial hyperplasia in AUB

Authors	Year	Percentage of cases of hyperplasia in endometrial samples
Mehrotra[6]	1972	19.4%
Saraswathi Doraiswami[7]	2011	6.1%
Bolde SA et al[8]	2014	19.40%
Gorla P et al[9]	2016	10.37%
Present study	2019	27.12%

sampling is early detection of endometrial hyperplasia and carcinoma.[2]

The age distribution of AUB in our study revealed that most of the cases were seen in 31-40 years of age group which is in concordance with study done by Mitali Mahapatra et al[10] and Hetal et al.[11] The number of cases of AUB in the age group of >50 years (14.6%) which is almost similar to the data mentioned by Smita S. Pudale et al.[8] (14.3%) and Bindroo S et al.[12] (13.2%)

Proliferative phase (23.1%) was most common histopathologic pattern, similar observations were made by Sadia Khan et al[13] (46.6%), Mitali Mahapatra et al[10] (45.70%), Hetal Rajendra Patel et al[11] (47.69%) but with a higher incidence.

Incidence of endometrial polyp was seen in 2.4% of cases in our study which is comparable with that of Shruti Singh et al[14] (4.8%) and Rehana Khan et al[15] (3.33%). Atrophic endometrium in the present study comprised of 0.80% cases of AUB while its incidence was higher in study done by Bhatta S et al[3] (7.38%)and Jairajpuri ZS et al[5] (1.10%).

Endometrial hyperplasia was observed in 27.12% of cases. Present study shows a higher incidence of hyperplasia when compared with the studies (Table 5).[6,7,9,12] In the present study it was noted that hyperplasia without atypia were more common in cases <40 years of age while hyperplasia with atypia were most commonly seen in cases >40 years of age.

6. Conclusion

Malignancy in particular is common in patients over 40 years of age. Hence the histopathological study of endometrium in abnormal uterine bleeding in women above the age of 40 years plays an important role in diagnosing various histological patterns and aetiopathological factors. A comparative clinicopathological study will help in arriving at the cause and correct diagnosis, proper management of cases.

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8. Conflict of Interest

The authors declare that they have no conflict of interest.

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