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Original Research Article

Histopathological Patterns in Abnormal Uterine Bleeding at a Tertiary Hospital

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Abstract

Background: Abnormal uterine bleeding (AUB) is related with patient's social,familial and personal life because of the considerable morbidity it causes. The aim of the study was to examine the histopathological patterns of endometrium in patients presenting with AUB as well as to find out its incidence in different age groups.

Materials and Methods: This is a retrospective study, conducted in the Department of Pathology, in a tertiary care teaching hospital, Udaipur from Jan. 2016 to Jan. 2018. The study includes cases of AUB with a probable endometrial cause.The study was done in the form of measures and percentages and showen as tables where found necessary.

Results: A total of 215 cases were studied.The age of the patients were from 18-72 years. Incidence of AUB was most common in the perimenopausal age group. Menorrhagia was the most common presenting complaint. Proliferative endometrium was the most common histopathological finding and was seen in 35.34% patients, followedby secretory endometrium in 18.60% patients, and disordered proliferative endometrium in 17.67% patients.Hyperplasia was seen in 16.73% cases. Malignancy was detected in 2.36% of cases and all were endometrial carcinoma.

Conclusions: Themain indication of endometrial biopsies is to rule out malignancy and endometrial hyperplasia in women over 35 years of age group. When no organic pathology was found,different physiological patterns like secretory phase,proliferative phase and other endometrial changes were observed. The most common endometrial pathology observed was proliferative phase endometrium.

Keywords: Abnormal Uterine Bleeding; Dilatation and Curettage; Endometrium.

Introduction

Most common tissue specimens received inthe pathology laboratory are endometrial biopsies and curretings. The surgical pathologist faces a unique challenge due to different aspects of these specimens.As the cyclical hormonal influences and pregnancy affects uterine growth, the endometrium undergoes different types of morphologic changes especially during the reproductive years. These morphologic changes are complicated by the biopsy induced artifacts.

Abnormal uterine bleeding is the most common cause for performing an endometrial biopsy. AUB is the term that refers to any nonphysiologic uterine bleeding. Causes of abnormal uterine bleeding differ according to the age and menstrual status of the patient so these two parameters are very important data for analysis of the causes of bleeding [1].

Anovulation, adenomyosis, polyps and fibroid are the important causes of AUB. Endometritis, hyperplasia, disordered proliferative endometrium, cyclic endometrium,

polyps and carcinoma are the endometrial causes of AUB [1]. Also important are endocrine disorders and pregnancy.

Menorrhagia, polymenorrhoea, metrorrhagia, and intermenstrual bleeding are the most common presentations. Dilatation and Curettage is important. safe and effectivediagnostic procedure in assessment of abnormal uterine bleeding [2].

For diagnosis of the etiology of AUB, histopathological examination of the endometrial biopsies and curettings is consideredthe genuine diagnostic test [1].

Materials and Methods

This is a retrospective study carried out in department of pathology of a tertiary hospital of American International Institute of Medical Sciences ,Udaipur. A total 215 patients operated for D&C for abnormal uterine bleeding from Jan 2016 to Jan 2018 ,were included in this study. The patients presenting with AUB were from 18 to 72 years. The histopathological findings of AUB were categorized into functional and organic causes. The functional causes of AUB included in this study were normal proliferative phase and secretory phase endometrium and other abnormal physiological changes in the endometrium (atrophic endometrium, weakly proliferative endometrium, disordered proliferative endometrium and pill endometrium). Hyperplasia, polyp and endometrial carcinoma, the intrauterine lesions included in this study were the organic causes. Patients with bleeding disorders, cervical or vaginal pathology, leiomyoma and pregnancywere excluded.

Medical Records Department provided clinical data related to age, abnormal bleeding patterns, menstrual history and gynaecological examination findings.The histopathology slides were collected from histopathology section of pathology department and were reviewed.

Patients were also categorized into the following agegroups: reproductive (18-40 years), perimenopausal (41-50 years) and postmenopausal (> 50 years). 10% formalin was used as fixative for fixation of endometrial specimens obtained by endometrial biopsy or curettage. The specimens were processed routinely and stained with Haematoxylin and Eosin (H&E) stain.

Results

A total of 215 endometrial biopsies and curettings from patients with abnormal uterine bleeding (AUB) were studied. The cause of AUB could be determined in only 203 out of 215 endometrial biopsies as 12 biopsy specimens were inadequate for evaluation.

Of the 203 cases, 158 (77.83%) were due to functional causes as no organic pathology was found, while the remaining 45 cases (28.47%) showed definite endometrial pathology (Table 1).

Perimenopausal age group was the most commonly affected age group (55.34%) followed by reproductive age group 34.88%(Table 2).

Out of 215 cases of abnormal uterine bleeding, proliferative endometrium was the most common (35.34%cases) followed by secretory endometrium (18.60%). Disordered proliferative endometrium (17.67%) and endometrial hyperplasia (17.73%) were the next common lesions. Endometrial carcinoma was present in 2.36% of cases (Table 3).

Out of the 158 functional cases of AUB, proliferative endometrium and secretory endometrium werethe most common patterns and were seen in 76 cases (48.10%) and 40(25.31%) cases, respectively. This was followed by 38(24.05%) cases of disordered proliferative endometrium.

Amongst the 45 organic lesions causing AUB, endometrial hyperplasia was the most common andseen in 36 (73.46%) cases.Hyperplasia without atypia was the most common type of hyperplasia and was observed in 28 (62.22%) patients. The other organic causes of AUB observed in this study include 5 (11.11%) cases of malignancy.

Table 1: Distribution of cases of AUB according to cause

Cause of AUB	Total	Percentage
Functional causes	158	77.83%
Organic causes	45	22.17%
Total	203	100%

Table 2: Age group of patients presenting with AUB

Age group (in years)	Total	Percentage
18 - 40 years (reproductive)	75	34.88
41- 50 years (perimenopausal)	119	55.34
> 50 years (postmenopausal)	21	9.78
Total	215	100

Table 3: Histopathological patterns according to age group

Histopathological pattern	Age group (yrs)			Total	%
	18-40	41-50	>50		
Proliferative phase	40	36	0	76	35.34
Secretory phase	25	15	0	40	18.60
Atrophic	0	0	4	4	1.86
Disordered proliferative	8	30	0	38	17.67
Endometrial polyp	0	2	2	4	1.86
Hyperplasia without atypia	0	26	9	35	16.27
Hyperplasia with atypia	0	0	1	1	0.46
Endometrial carcinoma	0	0	5	5	2.36
Inadequate for evaluation	2	10	0	12	5.58
Total	75	119	21	215	100

Discussion

In our study we received 215 curettage samples. All samples were processed but 12 samples showed only blood clots,so they were labelled inadequate.

In our study menorrhagia was the most common complaint (50.25%). Similar to this, Archana et al. [3] found menorrhagia in (43.85%) cases.

In our study, proliferative phase of endometrium was found in (35.34%) cases. Similar to this Jairajpuri et al. [4], Khare et al.[5], Abdullah et al.[6], found proliferative phase endometrial in (24.92%), (26.8%), (21.7%) cases respectively (Table 4).

The distribution of types of endometrial hyperplasia in our study is compared with other studies as shown in Table 5. Simple hyperplasia without atypia of endometrium was the most common type according to Pilli et al.[7] and Vakiani et al.[8].Our study also closely correlates with their study.

The incidence of endometrial carcinoma in the present study was 2.36%. Gerald et al.[9] and Khan et al.[10] observed similar findings accounting for 1.7% and 0.4% respectively (Table 6).

Khan et al. [10] found incidence of endometrial polyp 0.4%. With respect to this our findings were almost same (1.86%).

In conclusion, particularly in patients of premenopausal and postmenopausal bleeding histopathological examination of endometrium obtained by dilatation and curettage remains a a very important approach to an etiological diagnosis. As the patient's age increases ,the frequency of intrauterine diseases revealed by curettage increases. Generally the diagnostic yield is low in patients younger than 30 years.

However, endometrial dilation and curettage can be avery good approach in cases of abnormal uterine bleeding in women over 35 years, particularly if the presentation is with irregular vaginal bleeding.

Table 4: Comparision of incidence of proliferative phase endometrium with different studies

Name of the study	Incidence of proliferative phase
Jirajpuri et al.[4]	24.92%
Khare et al.[5]	26.8%
Abdullah et al.[6]	21.7%
Present study	35.34%

Table 5: Comparision of types of hyperplasia with different studies

Name of the study	Hyperplasia without atypia	Hyperplasia with atypia
Pilli et al.[7]	100%	0%
Vakiani et al.[8]	97.60%	2.40%
Present study	97.22%	2.78%

Table 6: Comparision of incidence of endometrial carcinoma with different studies

Name of the study	Incidence of endometrial carcinoma
Gerald et al.[9]	1.7%
Khan et al.[10]	0.4%
Present study	2.36%

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