

Endometrial pathology in abnormal uterine bleeding



Medical Science

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ABSTRACT

Abnormal uterine bleeding is the commonest symptom in the Gynaecology outpatient department in all age groups. Histopathological examination of the endometrial samples plays a vital role in the diagnosis of abnormal uterine bleeding. This study was carried out with an aim to determine the histopathological pattern of the endometrium in women presenting with abnormal uterine bleeding.

A retrospective histopathological analysis of 300 patients with abnormal uterine bleeding was done at Pathology department, Sheth L.G. General Hospital, AMC MET Medical College, Ahmedabad. The sampling was done during July 2013 to December 2014 at Department of Gynecology and Obstetrics. The age of patients ranged from 19 to 73 years. Maximum number of cases 141 (47%) were seen from perimenopausal age group where proliferative endometrium was predominant pattern (57.4%), followed by secretory phase in 12.8% of cases and endometrial hyperplasia in 9.2% cases. Atrophic endometrium in 38.6 % patients was the most frequent finding followed by proliferative pattern in 35.1%, and endometrial hyperplasia 8.8 % in postmenopausal age group. In reproductive age group normal secretory phase was seen in 39.2% of cases followed by proliferative endometrium in 27.4% cases. Endometrial carcinoma were diagnosed in 3 cases. We concluded that a thorough histopathological workup and clinical correlation is mandatory in cases of abnormal uterine bleeding especially above the age of 40 years to find out organic lesions.

Introduction :

Abnormal uterine bleeding (AUB) is a very common gynecologic condition affecting all age groups. AUB is defined as changes in frequency of menses, duration of flow or amount of blood flow. Dysfunctional uterine bleeding is diagnosis of exclusion when there is no underlying medical pathology(1). The ovarian activity declines during climacteric. Initially ovulation fails, corpus luteum does not form and progesterone is not secreted by ovary resulting in shortening of perimenopausal menstrual cycles that are often anovulatory and irregular(2). The risk of endometrial hyperplasia and carcinoma is increased in perimenopausal and postmenopausal women with AUB(3). Histopathological examination (HP) of endometrial samples is used for diagnosis of majority of lesions. Endometrial biopsy, curettage (4) and hysterectomy are important sampling methods.

Aims and objectives :

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

Materials and methods :

The retrospective analysis of 300 patients presenting with abnormal uterine bleeding was done by Department of Pathology, Sheth L.G. General Hospital, AMC MET Medical College,

Ahmedabad. The patients underwent sampling during July 2013 to December 2014 at Department of Gynecology and Obstetrics, Sheth L.G. General Hospital, AMC MET Medical College, Ahmedabad. The endometrial tissue was mostly collected by Dilatation and curettage or endometrial biopsies with hysterectomy specimens in some patients.

The age of the patients ranged from 19 to 73 years. Detailed clinical history - menstrual status including pattern, period, regularity were obtained. The relevant findings of general and systemic examination were noted.

RESULTS :

Endometrial pathology as a cause of AUB was observed in 300 patients. Patients with leiomyoma, adenomyosis and cervical pathology were excluded from the study. Evaluation of the endometrium revealed various patterns on HP. In 41 i.e. 13.7% cases organic lesions like chronic endometritis, endometrial polyp, endometrial hyperplasia, endometrial carcinoma and vesicular mole were found to be causes of AUB. In remaining majority 259 (86.3%) patients, functional causes were responsible for AUB.

Table – 1 Distribution of cases according to endometrial histopathology

S.No	Histopathology	No of patients	Reproductive age (18-40 yrs)	Perimenopausal Age (41-50 yrs)	Postmenopausal Age (> 51 yrs)
1	Proliferative	129	28	81	20
2	Secretory	60	40	18	2
3	Disordered Proliferative	22	1	17	4
4	Atrophic	26	0	4	22
5	Menstrual shedding	12	11	1	0
6	Endometrial hyperplasia	19	1	13	5
7	Products	10	9	1	0
8	V. mole	5	4	1	0
9	Chronic endometritis	5	2	2	1
10	Endometrial polyp	9	6	2	1
11	Endometrial carcinoma	3	0	1	2
	TOTAL	300 (100%)	102 (34%)	141 (47%)	57 (19%)

As is evident from Table – 1, in perimenopausal age group proliferative endometrium was predominant pattern in 57.4 %, followed by secretory in 12.7%, disordered proliferative in 12% cases and endometrial hyperplasia in 9.2% cases. Out of 13 cases of endometrial hyperplasia, 8 were of simple type, 3 of complex type without atypia and 2 of complex type with atypia.

Atrophic endometrium in 38.6% cases was the most frequent finding followed by proliferative phase 35%, endometrial hyperplasia 8.7% in postmenopausal age group. In 3.5% cases endometrial carcinoma was diagnosed in postmenopausal age group. Of 5 cases of hyperplasia, 3 were of complex type with atypia and 2 were of complex type without atypia.

In the reproductive age group, 39.2% patients showed secretory phase, followed by proliferative endometrium in 27.4% cases. In this age group, one case was of simple endometrial hyperplasia was diagnosed.

Discussion :

AUB includes both dysfunctional uterine bleeding (DUB) and bleeding from structural causes like polyp, hyperplasia, carcinoma, leiomyoma, pregnancy complications etc.

DUB is defined as AUB without a demonstrable organic cause (5). In most cases it is due to anovulatory cycles and is diagnosed after exclusion of medications or structural, iatrogenic, psychologic and systemic causes by various diagnostic techniques.

AUB can manifest as heavy, prolonged or acyclic flow at menopausal transition or as spotting or minimal bleeding at postmenopausal period and it needs thorough evaluation as it may be clinical manifestation of endometrial carcinoma.

According to WHO classification of uterine corpus tumours (6), the endometrial hyperplasia are classified as simple or complex. It is based on the absence or presence of architectural abnormalities like glandular complexities and crowding, and further designated as atypical if there is nuclear atypia.

In the present study, 300 specimens of endometrium (biopsy/ curettage/hysterectomy) were evaluated to find age, clinical and histopathological features. The incidence of AUB was more in perimenopausal age group than postmenopausal age group. This may be due to earlier evaluation and management of these patients (10).

In the present study 259 cases (86.3%) were of functional causes, proliferative in 43% and secretory in 20% were the two most common patterns. Among the 41 i.e. 13.66% cases with organic causes, endometrial hyperplasia in 19 cases (6.3%) was the most common pathology.

In our study majority of patients were between 41-50 yrs (47%) age group. The major disorders increase with advancing age.

In present study, among the perimenopausal age group, proliferative endometrium was observed in 57.4 % , (81/141) of cases which was higher than 21.2 % reported by Khare et al (4), 35.09 % by Damle et al (7) and 29.16 % by Bhatt S et al (8). In postmenopausal age group 35 % cases showed proliferative endometrium. Bleeding in proliferative phase may be due to anovulatory cycle in such cases, which shows progressive 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.

Secretory endometrium was observed in 12.7 % cases in perimenopausal age group being somewhat higher to 7.95 % in study by Damle RP (7). In reproductive age group in 39.2% cases secretory endometrium was seen. Bleeding in secretory phase is due to ovulatory dysfunctional uterine bleeding. This ovulatory bleeding is explained by the inability of corpus luteum to synthesize adequate amounts of progesterone, although it remains active throughout the entire period of 12-14 days. The exact etiology of ovulatory bleeding can be further correlated by daily serum progesterone assay.

The perimenopausal cases showed 9.2 % incidence of endometrial hyperplasia, which was much lower than 36.2% by Khare et al (4) and 23 % by Dangal GA (9). Doraiswami (10) observed 68% incidence of endometrial hyperplasia in 40-49 yrs age group. In postmenopausal age group 8.7 % cases of hyperplasia were seen with or without atypia. Endo hyperplasia is commonly seen in perimenopausal women due to failure of ovulation. Persistent unripe follicles expose the endometrium to excessive and prolonged estrogenic action.

Atrophic endometrium 38.6 % cases was seen as most common pattern in postmenopausal age group due to absence of estrogenic stimulation leading to thin atrophic endometrium susceptible to minor injury. The atrophic endometrium was most common cause of postmenopausal bleeding in 45 % cases in study by Lidor et al (11) and 50 % in Gredmark et al (12) study.

Conclusion :

The histopathologic study of endometrium in AUB above age of 40 yrs plays an important role in diagnosis of various histopathologic patterns and etiopathogenetic factors. Hence HP exam is mandatory in perimenopausal and postmenopausal bleeding cases. It gives bright avenues not only to find out cases with organic lesions like endometrial hyperplasia, polyp, as also helps to search early atypical hyperplasia and endometrial carcinoma which have excellent prognosis when detected early.

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