

Spectrum of Endometrial Histopathology in Abnormal Uterine Bleeding

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DOI:10.21276/sjpm.2019.4.7.9

| Received: 24.02.2019 | Accepted: 04.03.2019 | Published: 30.07.2019

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Abstract

In OBG out-patient department abnormal uterine bleeding (AUB) is one of the commonest presenting symptoms. This condition is caused by a variety of systemic illnesses or it may be related to pregnancy, polyps, fibroids, adenomyosis, anovulation or neoplasia. Endometrial biopsy could be used as the first diagnostic step & it is effectively qualitative in AUB. This study was done for evaluation of spectrum of lesions of endometrium by histopathology and to find the cause of AUB, in different age groups.

Keywords: OBG out-patient, neoplasia, adenomyosis.

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INTRODUCTION

Menstrual problems account for much of the morbidity, affecting one in every five women during their life span. Particularly, AUB is one of the most universal debilitating menstrual problems.

Abnormal uterine bleeding(AUB) is defined as any departure from normal menstruation or from a normal menstrual cycle pattern [1]. Bleeding is considered abnormal when the pattern is irregular [2]. Functional causes like normal cyclical endometrium, abnormal physiological changes of endometrium (atrophic endometrium, weakly proliferative endometrium, disordered proliferative) & organic lesions like chronic endometritis, hyperplasia, polyp, carcinomas & pregnancy related complications.

Disorders of endometrial origin (disturbances of molecular mechanisms responsible for regulation of the volume of menstrual bleeding), Disorders of hypothalamic-pituitary-ovarian axis & Disorders of haemostasis (coagulopathy). These three together are called non-structural causes of abnormal uterine bleeding. Histopathological examination of endometrial biopsy is a major diagnostic tool in evaluation of abnormal uterine bleeding [3].

MATERIAL AND METHODS

This was a prospective study done on patients presenting with AUB from July 2017 to June 2018 in the department of Pathology in collaboration with the Department of Obstetrics & Gynaecology of Index Medical College Hospital & Research Centre, Indore. Patients were selected based on clinical details. The study material included a total number of 200 specimens. Patients among isolated endometrial causes of AUB were included for the study and those with leiomyoma, cervical, vaginal pathology & hemostatic disorders were excluded. All specimens were transported in 10% formalin to the pathology laboratory. The gross morphology was recorded with total submission of endometrial samples and representative bits were taken from the hysterectomy specimens.

Inclusion Criteria

Endometrial samples from patients of all ages presenting with AUB were studied. Cases were categorized into reproductive (<40yrs), perimenopausal (40-50yrs) and postmenopausal (>50yrs) age groups.

Exclusion Criteria

Specimens received as products of conception, inadequate specimens comprising mainly of blood clots and mucous were excluded.

Detailed clinical history and relevant investigations were done. Specimens were fixed in 10% formal saline and then processing was done. Tissue was processed and sections were stained by Harris's Haematoxylin and Eosin.

OBSERVATIONS AND RESULT

During the period of study, 200 endometrial Specimens (65 dilatation and curettage material and 135 hysterectomy specimens) were received in the Department of Pathology from patients with complaint of abnormal uterine bleeding. The age incidence of the patients presenting with abnormal uterine bleeding is shown in (Table-1). The majority 114 cases (57%)

belonged to the perimenopausal age group (40-50 years), followed by 68 cases (34%) in the reproductive age group (<40 years) and 18 cases (9%) in the postmenopausal age group (>50 years). Non secretory endometrium was seen in majority of cases (114), proliferative endometrium was reported in 20 cases (6.7%), Secretory type of endometrium was observed in 30 cases (10%). 50 cases (16.7%) showed hyperplastic changes in the endometrium, in which 34/50 cases (11.3%) showed simple hyperplasia with or without atypia and 16/50 cases of complex hyperplasia with or without atypia. Atrophic endometrium was seen in 34 cases (Table-2). Patients belonged to 40 - 50 years of age group showed menorrhagia was the most prominent presenting symptom in different type of bleeding pattern followed by metrorrhagia (Table-3). Other histopathological findings in hysterectomy specimens showed adenomyosis (59 cases) followed by leiomyoma (67 cases) (Table-4).

Table 1: Age Incidence

Age groups (years)	No. of cases	Percentage (%)
<40	68	34
40-50	114	57
>50	18	9
Total	200	100

Table-2: Endometrial histology in Reproductive, Perimenopausal, and Postmenopausal age groups

Endometrium Pattern	No. of cases	Reproductive age group (<40yrs)	Perimenopausal (40-50) yrs	Postmenopausal (>50yrs)
Proliferative	13	7(11.5%)	06 (5.4%)	00
Non secretory	77	25(36.5%)	49(43.1)	3 (18.9%)
Secretory	21	16(23%)	5(4.2%)	00 (2.7%)
Biphasic	9	4(6.3%)	05 (4.8%)	00
Atrophic endometrium	19	00	11(9.6%)	8(48.6%)
Pill endometrium	02	00	02 (1.8%)	00
Chronic endometritis	7	2 (2.1%)	03 (2.4%)	02 (13.5%)
Acute endometritis	04	1(1.0%)	02(1.2%)	01 (2.7%)
Endometrial polyp	12	5(7.3%)	7 (6.0%)	00
Simple hyperplasia without atypia	23	6(8.3%)	16 (14.4%)	01 (2.7%)
Simple hyperplasia with atypia	01	00	00	01(2.7%)
Complex hyperplasia without atypia	8	02 (3.1%)	05 (4.2%)	01 (2.7%)
Complex hyperplasia with atypia	03	0 (1.0%)	03 (2.4%)	00
Endometrial carcinoma	01	00	00 (0.6%)	01 (5.4%)
Total	200	68	114	18

Table-3: Distribution of Cases according to age and types of abnormal uterine bleeding

Types of bleeding	< 40 years	40-50 years	>50 years
Menorrhagia	76 (87.4%)	79 (75.7%)	00 (2.8%)
Metrorrhagia	05 (6.3%)	9 (8.3%)	-
Menometrorrhagia	03 (3.2%)	03(3.0%)	-
Polymenorrhagia	03 (3.2%)	8 (7.7%)	-
Potmenopausal bleeding	00	6 (5.3%)	8 (97.2%)
Total	87	105	8

Table-4: Other Histopathological findings in hysterectomy specimens in different age groups

Age Group	Leiomyoma	Adenomyosis
< 40 Years	18	19
40- 50 Years	36	43
> 50 years	5	5
Total	59	67

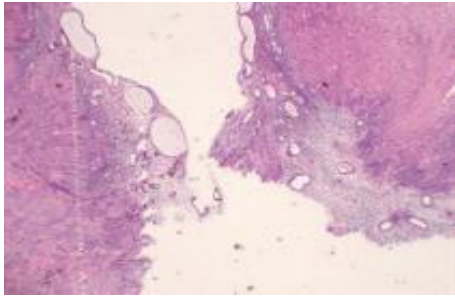


Fig-1: Atrophic endometritis. H&E (100x)

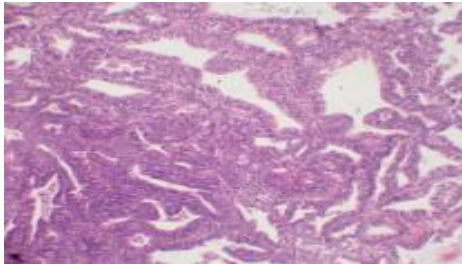


Fig-2: Complex hyperplasia without Atypia. H&E (400x)

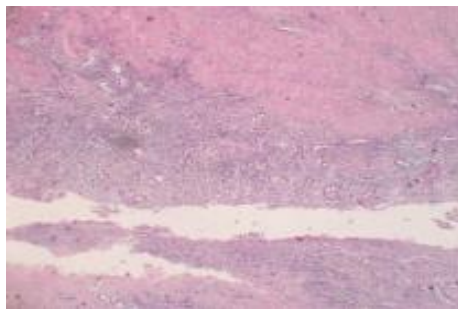


Fig-3: Chronic endometritis. H&E (100x)



Fig-4: Secretory endometrium. H&E (400x)

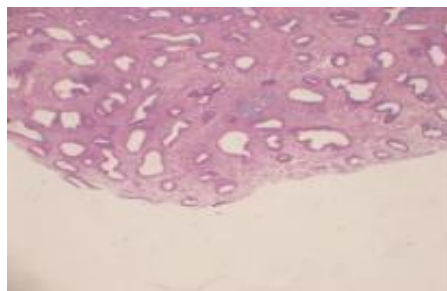


Fig-5: Proliferative endometrium. H&Ex125

DISCUSSION

Abnormal uterine bleeding is a usually encountered Gynaecological problem. It interferes considerably with the quality of life in otherwise healthy women with various distressing symptoms like menorrhagia, polymenorrhea and metrorrhagia.

Functional cause was the main reason of AUB in our study of which proliferative phase endometrial change (32 cases) followed by pregnancy related complications (29 cases) which come under the category of organic lesions, were the predominating histopathological finding. Proliferative finding endometrial change as a leading cause of AUB is comparable to studies by Anuradha Salvi *et al.*, (37.2%) and Agrawal *et al.*, Proliferative Endometrium was the commonest finding in Khare *et al.*, [4] (26.8%) & Saera *et al.*, [5] (34.6%) too though cases with pregnancy related complications were not taken into account in their studies. Again Vaidya *et al.*, [6] found secretory phase endometrial change (22.58%) as major cause of AUB in their study but pregnancy related complications were their exclusion criteria.

In reproductive age group, pregnancy related complications were the commonest finding bellow 30 years of age and in 31-40 years of age cyclical endometrial change was predominant finding which is comparable to the study by Doraiswami *et al.*, in 2011 [7].

CONCLUSION

AUB is the most familiar & distressing presenting complaint in women regardless of age. A Clinical history, detailed physical examination & the histopathological examination of a correctly timed endometrial biopsy and/or a hysterectomy specimen may disclose the underlying pathological condition. Therefore, Dilatation & Curettage must be performed without delay in all cases of AUB particularly in perimenopausal & postmenopausal bleeding to rule out malignancy. Histopathological examination of endometrial biopsy is a major diagnostic tool in the Evaluation of AUB & a specific diagnosis could help the physician to plan therapy for its successful treatment.

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