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ENDOMETRIAL HISTOLOGY PATTERN IN PERIMENOPAUSAL AUB: AN INSTITUTIONAL EXPERIENCE

Pathology

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ABSTRACT

Abnormal uterine bleeding (AUB) is defined as the bleeding pattern that differs in the duration, amount and frequency of the flow of a normal menstrual cycle. It is one of the most common health problems encountered by women in perimenopausal age group. Histopathological analysis of endometrial biopsy from dilatation and curettage samples gives an accurate diagnosis of the cause of AUB. This study was conducted to correlate the histopathological spectrum of endometrium with the bleeding pattern in perimenopausal women presenting with AUB.

KEYWORDS

abnormal uterine bleeding, perimenopausal, endometrium, histology

INTRODUCTION:

Perimenopause is the phase, preceding the onset of menopause, usually around 40 years of age, during which the regular menstrual cycle of a woman changes to a pattern of irregular cycles.[1] Goldstein et al have described perimenopause to be a mirror image of adolescence, which is the coming on to the reproductive years, while perimenopause is the coming off from the reproductive years.[2] It is often marked by various physical signs such as hot flushes and menstrual irregularities.[2]

In some women, the most significant symptom is abnormal uterine bleeding (AUB) which must be carefully evaluated.

Abnormal uterine bleeding (AUB) is defined as the bleeding pattern that differs in frequency, duration and amount from a pattern observed during a normal menstrual cycle or after menopause.[3] Abnormal Uterine Bleeding (AUB) is an important symptom of both benign and serious gynaecological disease.[1]

The bleeding patterns in AUB include menorrhagia, polymenorrhoea, metrorrhagia, metro-menorrhagia and postmenopausal bleeding.[3] Histopathological examination of endometrial biopsies is considered as the gold standard for evaluation of AUB.[4,5]

This study was conducted to correlate the histopathological spectrum of endometrium with the bleeding pattern in perimenopausal women presenting with AUB.

MATERIAL & METHOD:

This observational prospective study was conducted in the department of Pathology, SMS medical College, Jaipur over a period of three years, from January 2016 to December 2018. All endometrial curettage samples from perimenopausal women, with the clinical diagnosis of AUB were included in this study. Endometrial biopsies received were fixed in 10% formalin and processed. The paraffin embedded tissues were sectioned at 5 µm, stained with haematoxylin and eosin stain and studied by light microscopy. The histopathological findings were correlated with the clinical details.

RESULT:

We evaluated endometrial biopsies from 940 perimenopausal women presenting with AUB, over a period of three years that is January 2016 to December 2018. Out of these, most of the patients were in the age group of 41 to 45 years.

Table 1: Age wise distribution of perimenopausal AUB cases

Age range (years)	No of patients	Percentage (%)
41-45	669	71.2
45-50	211	22.4
51-55	48	5.1
55-60	12	1.3
Total	940	100.0

The most common histopathology encountered in our study was proliferative phase (35%). Secretory phase, the second most common histology was seen in 25% cases, while atrophic endometrium was seen in 1.1% patients. There were 20.9% simple hyperplasia without atypia, 4.2% complex hyperplasias without atypia, 5.8% simple hyperplasias with atypia and 1.8% complex hyperplasias with atypia. 5.3% patients were diagnosed as disordered proliferation while 0.9% as endometrial carcinomas.

The most common symptom was menorrhagia (41.3% cases) followed by metrorrhagia (18.7%), polymenorrhoea (15.8%), menometrorrhagia (15.2%) and intermenstrual bleeding (9.0% cases).

Table 2: Endometrial microscopic pattern of perimenopausal AUB cases

Endometrial microscopic pattern	No of cases	Percentage (%)
Proliferative phase	329	35.0
Secretory phase	235	25.0
Atrophic	10	1.1
Disordered proliferation	50	5.3
Simple hyperplasia without atypia	197	20.9
Complex hyperplasia without atypia	39	4.2
Simple hyperplasia with atypia	55	5.8
Complex hyperplasia with atypia	17	1.8
Endometrial carcinoma	8	0.9
Total	940	100.0

On correlating the clinical presentation with the microscopic picture, the most common complaint that is menorrhagia, showed proliferative endometrium in 42.5% cases, followed by secretory endometrium in 33.3% cases. Of all cases of menorrhagia, the histological diagnosis of atrophic endometrium, disordered proliferation, hyperplasias and carcinoma were seen in 1%, 3.6%,19.3% and 0.3%, respectively.

Proliferative pattern (52.7% cases) was also the most common pattern in patients presenting with polymenorrhoea, while the most common histology encountered in metrorrhagia was secretory phase (36.9%cases). Menometrorrhagia and intermenstrual bleeding were most common symptom of endometrial hyperplasias (67.9% cases), both typical and atypical as well as endometrial carcinomas (2.8% cases).

Table 3: Correlation of histopathological spectrum of endometr ium with clinical symptoms

Endometrial histology	Menorrhagia (41.3%)	Metrorrhagia (18.7%)	Menometrorrhagia (15.2%)	Polymorphous (15.8%)	Intermenstrual bleeding (9%)	Total (100%)
Proliferative phase	165 (42.5%)	59 (33.5%)	11 (7.7%)	78 (52.7%)	16 (18.8%)	329
Secretory phase	129 (33.3%)	65 (36.9%)	21 (14.7%)	13 (8.8%)	7 (8.2%)	235
Atrophic	4 (1.0%)	2 (1.1%)	1 (0.7%)	2 (1.4%)	1 (1.2%)	10
Disordered proliferation	14 (3.6%)	16 (9.1%)	9 (6.3%)	7 (4.7%)	4 (4.7%)	50
Simple hyperplasia without atypia	59 (15.2%)	27 (15.3%)	40 (28.0%)	27 (18.2%)	44 (51.8%)	197
Complex hyperplasia without atypia	11 (2.8%)	3 (1.7%)	13 (9.1%)	9 (6.1%)	3 (3.5%)	39
Simple hyperplasia with atypia	3 (0.8%)	2 (1.2%)	32 (22.4%)	11 (7.4%)	7 (8.2%)	55
Complex hyperplasia with atypia	2 (0.5%)	1 (0.6%)	12 (8.4%)	1 (0.7%)	1 (1.2%)	17
Endometrial carcinoma	1 (0.3%)	1 (0.6%)	4 (2.8%)	-	2 (2.4%)	8
Total	388 (100%)	176 (100%)	143 (100%)	148 (100%)	85 (100%)	940

DISCUSSION:

Abnormal uterine bleeding (AUB) is defined as the bleeding pattern that differs in frequency, duration and amount from a pattern observed during a normal menstrual cycle or after menopause. [3] Abnormal Uterine Bleeding (AUB) is an important symptom of both benign and serious gynaecological disease.[1]

In the current study majority of the women (71.2%) were in the age group of 41 to 45 years which was similar to the study done by Desai et al [1], Padhya et al [3], Yilmaz et al [6] and Sreelakshmi et al [7]. However, Cornitescu et al [8] found a higher incidence in the age group of 45 to 50 years.

The most common bleeding pattern observed in our study was menorrhagia, in 41.3% women. This was also observed by other authors [1,4,6,7]. Only one study done by Cornitescu et al [8] has stated more cases of menometrorrhagia as compared to menorrhagia.

On histological evaluation proliferative endometrium was the most common finding seen in 35% cases, followed by secretory endometrium in 25% cases. Similar finding was obtained in studies done by Tiwari et al [4], Yilmaz et al [6], Sreelakshmi et al [7], Chitra et al [9] and Sudhamani et al [10]. however, Desai et al [1] had slightly more incidence of simple hyperplasia without atypia as compared to secretory endometrium, while Padhya et al [3] observed maximum number of cases of simple hyperplasia without atypia. Also, Gon et al [11] had more cases with secretory endometrium rather than proliferative phase.

In the present study an attempt was made to correlate the bleeding pattern with the histopathological spectrum of endometrium. In our patients presenting with menorrhagia, the endometrium showed proliferative pattern followed by secretory pattern. Similar histology was observed by Yilmaz et al [6] and Sreelakshmi et al [7]. but Gon et al [11] found secretory phase to be commoner in menorrhagic women. Most of the Women in our study who had polymenorrhoea, also had a proliferative endometrium, in concordance to Yilmaz et al [6]. However, Sreelakshmi et al [7] had more cases of secretory endometrium presenting as polymenorrhoea. In present study, most metrorrhagia patients had secretory pattern of endometrium on histology, as also stated by Yilmaz et al [6] and Gon et al [11]. Menometrorrhagia was observed by us mostly in patients of endometrial hyperplasias and carcinomas. However, Yilmaz et al [6] have found Proliferative phase while Sreelakshmi et al [7] and Gon et al [11] have found secretory phase as the most common histology in their studies, in women having menometrorrhagia. We had a histological diagnosis of hyperplasias and carcinomas in most women with intermenstrual bleeding, similar to Yilmaz et al [6]. This is in contrast to Sreelakshmi et al [7], who found secretory phase to be the most common endometrial histology in intermenstrual bleeding.

CONCLUSION:

Abnormal uterine bleeding is one of the commonest causes for women to seek medical help in perimenopausal age and has a significant effect on their health and quality of life. Histopathological study of the endometrium, the gold standard, reveals a wide variety of abnormalities, evaluation of which will help us to plan for successful management. A comprehensive clinicopathological study leads to a correct diagnosis. Thus, it is important that the clinicians pay attention to these abnormal bleeding patterns and do not delay the microscopic evaluation of endometrium.

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