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Original Research Article

To Analyze Different Histopathological Patterns of Endometrium in AUB

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Abstract

Aim: To analyze different histopathological patterns of endometrium in AUB and observe the incidence of various pathologies in different age groups.

Material & Methods: This one-year prospective study was done in the Department of Pathology, Darbhanga Medical College, Laheriasarai, Darbhanga, Bihar, India. which included 100 cases of clinically diagnosed AUB.

Results: The present study has been conducted on 100 specimens of the endometrium (endometrial curetting's/biopsy and hysterectomy specimens) received in the Pathology Department. Maximum 41% were of proloferative endometrium followed by hyperplastic and Secretory endometrium 17cases.

Conclusions: Our study revealed the highest incidence of AUB in the perimenopausal age group (41-50 years). Hence a thorough histopathological workup and clinical correlation are mandatory in cases of abnormal uterine bleeding.

Keywords: Endometrium, Hyperplasia, Hysterectomy, Menopause, Menorrhagia, Uterine hemorrhage

Introduction

Endometrium is a dynamic, hormonally sensitive and responsive tissue which constantly and rhythmically undergoes changes in the active reproductive life. [1] Abnormal uterine bleeding is defined as a bleeding pattern that differs in frequency, duration and amount from a pattern observed during a normal menstrual cycle. [2] Abnormal uterine bleeding is one of the most frequently encountered and perplexing condition in adult women. [3]

The causes of menorrhagia may be local, systemic, and dysfunctional. Population studies have shown that approximately 10% women have menstrual blood loss >80 ml cycle. [3] The most common cause of menorrhagia in post adolescent women is distortion of endometrial architecture from a submucous leiomyoma, endometrial polyp, or adenomyosis. Systemic disorders such as hypothyroidism, liver disease, cirrhosis, chronic renal disease, chronic endometritis, and usage of intrauterine devices are also associated with menorrhagia. [4] An endometrial biopsy

should be performed on all women over 35 years with menorrhagia to rule out endometrial cancer or premalignant lesion (e.g. atypical hyperplasia). [5]

Thus, we aim to analyze different histopathological patterns of endometrium in AUB and observe the incidence of various pathologies in different age groups.

Material & Methods:

This one-year prospective study was done in the Department of Pathology, Darbhanga Medical College, Laheriasarai, Darbhanga, Bihar, India which included 100 cases of clinically diagnosed AUB.

Patients with a gestational cause, isolated cervical or vaginal pathology, leiomyoma, pregnancy-related complications, bleeding due to previously diagnosed gynaecological malignancy, hemostatic disorders and autolysed specimens were excluded.

Consent was taken from the ethical committee of the institute prior to the commencement of the study. Detailed clinical history including age, pattern and duration of abnormal bleeding, menstrual history, obstetric history, use of exogenous hormones, physical examination findings including pelvic examination and investigations were recorded.

The pattern of the bleeding was classified as menorrhagia, metrorrhagia, polymenorrhagia, metromenorrhagia, period postmenopausal bleeding. The specimens were received as endometrial curettage, endometrial biopsy and hysterectomy specimens. All specimens were fixed in 10% formalin. After detailed gross examination, paraffin blocks of tissue were made; sections were cut and stained with hematoxylin and eosin.

Histopathological examination of endometrial biopsies and hysterectomy specimens were done, followed by clinical correlation. The functional causes of AUB included in this study were normal cyclical phases (proliferative and secretory) of the endometrium and other abnormal physiological changes in the endometrium (atrophic endometrium, weakly proliferative endometrium, disordered proliferative endometrium and pill endometrium). Organic intrauterine lesions, which were the cause of AUB in this study, include chronic endometritis, hyperplasia, and endometrial carcinoma.

Results:

The present study has been conducted on 100 specimens of the endometrium (endometrial curetting's/biopsy and hysterectomy specimens) received in the Pathology Department of a rural tertiary care institution, with the clinical diagnosis of abnormal uterine bleeding.

Maximum 41% were of proloferative endometrium followed by hyperplastic and Secretory endometrium 17cases. Endometrial carcinoma constituted 1% in the postmenopausal group while disordered endometrium, pill endometrium and chronic endometritis each constituted 2% (Table 1).

Table 1: Distribution of cases of abnormal uterine bleeding.

Lesions	**N (74)**	**N (26)**	**N**
Proliferative	41	-	41
Secretory	17	-	17
Hyperplastic	10	7	17
Atrophic endometrium	-	15	15
Disordered endometrium	3	1	4
Pill endometrium	1	1	2
Chronic endometritis	1	1	2
Endometrial carcinoma	-	1	1

Endometrial stromal sarcoma	1	-	1
Total	74	26	100

AUB was most commonly seen (50%) in age group 40-49 followed by 30-39 (29%) years. [Table 2]

Table 2: Age distribution in patient of AUB.

Age group (years)	Number of cases
Under 20 years	1
20-29	8
30-39	29
40-49	50
50-59	9
60 and above	3
Total	**100**

Discussion:

In our study, proliferative phase of endometrium was found in (22.8%) cases. Similar to this Jairajpuri et al., [1] Khare et al., [7] Abdullah et al., [8] found proliferative phase endometrial in (24.92%), (26.8%), (21.7%) cases respectively.

In study by Khreisat et al. reported that adenomyosis is a common finding in hysterectomy specimen. They found nearly 37% of all the specimens proved to be adenomyosis whereas the second most common finding was fibroid uterus. [9] These findings were in accordance with our study. Sajjad et al. in their study observed 39% cases of leiomyomas, followed by adenomyosis in 19% cases. 5% cases showed dual pathology consisting of both leiomyomas and adenomyosis. [10]

Leiomyomas and adenomyosis were found to be the common causes of menorrhagia, in other studies by Sarfraz et al., Tahira et al., and Khawja et al. [11-13]

Variation in population characteristics and use of hormonal therapy may also be the contributory factors to these differences, as use of estrogen therapy declined after its role in the development of endometrial carcinoma was uncovered. Varying incidence of endometrial hyperplasia was also evident in international literature. Behnamfar et al. evaluated cystic and adenomatous hyperplasia in addition to other patterns and reported an incidence of 9% and 10.9% respectively [14]. On the other hand, Dexus and Jyotsana reported higher frequency of endometrial hyperplasia, 21% and 22.6% respectively [15-16].

Nulliparity, increased body mass index, and chronic anovulation have been implicated as risk factors for endometrial carcinoma. Effects of exogenous hormones (pill endometrium) were seen in only in 2 (0.8%) cases and in 41-50 years of age group similar to seen by other authors (1.7%-4.81%) and was seen mainly in perimenopausal age group [17, 19] In this pattern, the endometrium shows a combination of inactive glands, abortive secretions, decidual reaction, and thin blood vessels. This may be attributed to the fact that, increased numbers of patients in this age usually seek for early medical management for bleeding. Atrophic endometrium was seen in 18 cases (7.2%) out of which 17 cases occurred >60 years of age similar to other reports. [18-20]

Conclusion:

Our study revealed the highest incidence of AUB in the perimenopausal age group (41-50 years). Hence a thorough

histopathological workup and clinical correlation are mandatory in cases of abnormal uterine bleeding.

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