ORIGINAL RESEARCH PAPER
Volume - 9 | Issue - 12 | December - 2020 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

HISTOPATHOLOGICAL SPECTRUM OF ENDOMETRIAL BIOPSIES IN A TERTIARY CARE HOSPITAL : A RETROSPECTIVE INSTITUTIONAL STUDY

Pathology

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ABSTRACT

Endometrial biopsies are obtained for a number of reasons that include abnormal uterine bleeding in certain age groups, incomplete abortions, or suspected neoplasia and the endometrium may be sampled prior to certain procedures to treat infertility to determine the phase of the cycle to guide further tests or treatments. The study is a retrospective cross-sectional study carried out in the Department of Pathology of Owaisi hospital and research centre , on specimens received over a one-year period. 200 Samples of endometrial biopsies and curettings from women presenting with abnormal uterine bleeding received to the histopathology laboratory were analyzed. Patients were categorized into reproductive age groups (18-40 yrs), perimenopausal (41-50), and postmenopausal (>50yrs). Most common lesion is endometrial hyperplasia comprising 61% of total cases. The next common lesion is Endometrial polyp which accounts for 29% of total cases. 2 cases of Endometrial carcinoma were found which comprised of 1% of total cases.

KEYWORDS

INTRODUCTION

Endometrial biopsies are obtained for a number of reasons that include abnormal uterine bleeding in certain age groups, incomplete abortions, or suspected neoplasia and the endometrium may be sampled prior to certain procedures to treat infertility to determine the phase of the cycle to guide further tests or treatments [1]

It is a relatively quick and cost-effective way to sample the endometrium to allow for direct histological evaluation of the endometrium . The patient does not need to undergo more invasive procedures as endometrial biopsies have a high sensitivity and specificity for detection of endometrial hyperplasia and endometrial malignancy that is equal to the diagnostic accuracy dilatation and curettage (D&C) procedure. [2] The sensitivity of endometrial biopsy for the detection of endometrial abnormalities has been reported to be as high as 96% [3,4].

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.[5] .Causes of AUB are anovulation, fibroids, polyps, adenomyosis, endometritis, cyclical endometium, malignancy, endocrine disorders and pregnancy . Most common presentations of AUB are menorrhagias, polymenorrhoea, metorrhagias and intermenstrual bleeding.

MATERIALS AND METHODS

The study is a retrospective cross-sectional study carried out in the Department of Pathology of Owaisi hospital and research centre , on specimens received over a one-year period (June 2018- May 2019).

200 Samples of endometrial biopsies and curettings from women presenting with abnormal uterine bleeding received to the histopathology laboratory were analyzed. Clinical history was obtained and histopathological characteristics were studied.

Samples were fixed in 10% formal saline and routinely processed and stained with H&E. Histopathological evaluation was done under light microscope and diagnosis was reached.Patients were categorized into reproductive age groups (18-40 yrs), perimenopausal (41-50), and postmenopausal (>50yrs).

INCLUSION CRITERIA:

Patients with abnormal uterine bleeding in all age groups.

EXCLUSION CRITERIA:

Products of conception.
Inadequate samples.
Patients with cervical or vaginal pathology.

RESULTS

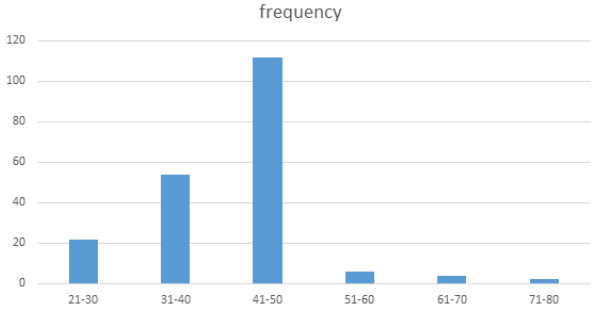
During one year 200 endometrial biopsies were received

Table 1 –Age distribution of patients

AGE GROUP(YEARS)	TOTAL	PERCENTAGE
18-45	90	45%
46-50	98	49%
>50	12	6%
TOTAL	200	100

The age of the patients presenting with AUB was from 25 to 78years.

Table1 shows that the patients were divided in 3 age groups: 18-45 years (reproductive), 46-50 years (perimenopausal) and >50 years (postmenopausal). Maximum incidence of AUB was found in perimenopausal women and least incidence was found in post menopausal women.



Graph 1: Age wise distribution of cases

Majority of the cases were seen in 41-50 age group

Table 2 - Histopathological examination of the endometrium and its various histological patterns in different age groups.

Histopathological Patterns	18-45 Years	46-50 Years	>50 Years	Total	Percentage
Proliferative	6	-	-	6	3%
Secretory	2	-	-	2	1%

Atrophic	-	2	-	2	1%
Pill Effect	2	-	-	2	1%
Endometritis	-	2	-	2	1%
Disordered Proliferative	4	-	-	4	2%
Endometrial Polyp	26	30	2	58	29%
Simple Endometrial Hyperplasia	50	54	2	106	53%
Complex Endometrial Hyperplasia Without Atypia	-	6	2	8	4%
Complex Endometrial Hyperplasia With Atypia	-	4	4	8	4%
Endometrial Carcinoma	-	-	2	2	1%
Total	90	98	12	200	100%

Most common lesion is endometrial hyperplasia comprising 61% of total cases of which the hIghest incidence is of simple endometrial hyperplasia comprising 86.88% of cases of endometrial hyperplasia and 53% of total cases.

Highest incidence of simple endometrial hyperplasia is found in perimenopausal age group.

The next common lesion is Endometrial polyp which accounts for 29% of total cases and the highest incidence of these cases is found in perimenopausal age group.

2 cases of Endometrial carcinoma were found in post menopausal age group which comprised of 1% of total cases .The most common lesion in post menopausal age group is complex endometrial hyperplasia with atypia which is seen in 4 % of total cases .

MICROPHOTOGRAPHS OF DIFFERENT LESIONS

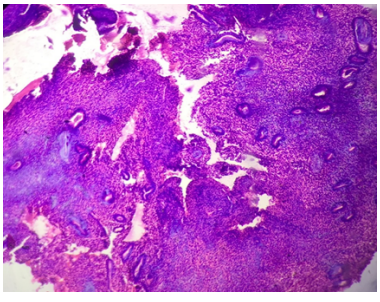


FIGURE A: PROLIFERATIVE ENDOMETRIUM

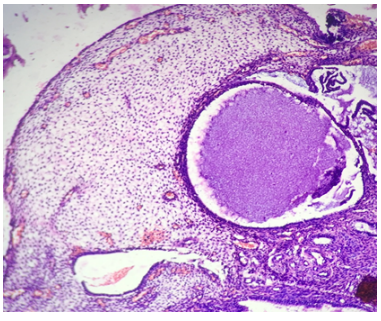


FIGURE B: ENDOMETRIAL POLYP

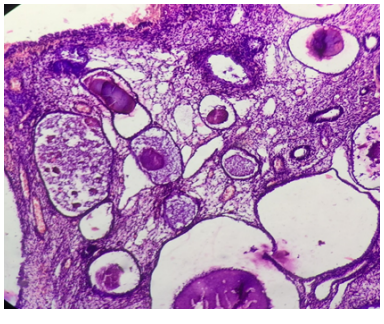


FIGURE C :ATROPHIC ENDOMETRIUM

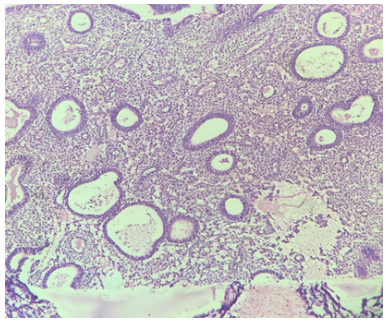


FIGURE D : SIMPLE ENDOMETRIAL HYPERPLASIA

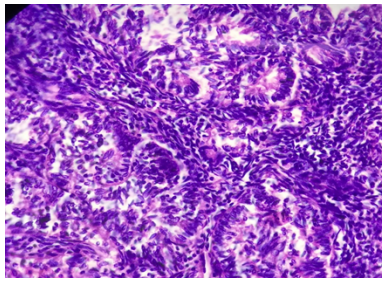


FIGURE E: COMPLEX ENDOMETRIAL HYPERPLASIA WITH ATYPIA

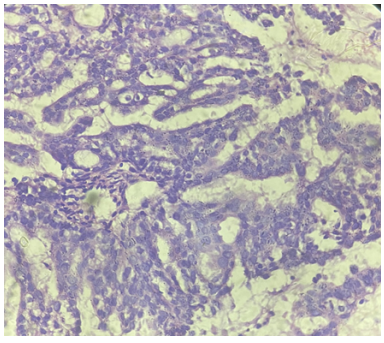


FIGURE F:ENDOMETRIAL CARCINOMA

DISCUSSION

The Most Common Lesion In Our Study Is Endometrial Hyperplasia.

The aetiology and significance of hyperplastic endometrial lesions is debated. Exposure of endometrium to continuous oestrogen unopposed by progesterone can lead to endometrial hyperplasia. The diagnosis of endometrial hyperplasia should be suspected in women with heavy, prolonged, frequent or irregular uterine bleeding. In particulars abnormal uterine bleeding in perimenopausal women is the most common symptom of endometrial neoplasia, although such bleeding is usually 80% due to a benign condition.[6]

Table 3 -Comparision studies for incidence of endometrial hyperplasia

	Our study	Bharti et al[7]	Bhosle et al[8]
Simple hyperplasia without atypia	53%	78.26%	17.8%
Complex hyperplasia without atypia	4%	13.04%	

The present study is concordant to study conducted by bharti et al [7] where the incidence of hyperplastic lesions is very high . However it is in variance with the study conducted by bhosle et al [8] where the incidence of hyperplastic lesions is 17.8%

Next common pathology was Endometrial polyp which was seen in 29% of cases. The large majority of endometrial polyps are not true neoplasms but probably represent circumscribed foci of hyperplasia, possibly due to a decreased expression of hormone receptors in the stromal component.[9]

The prevalence of endometrial polyp in the general population is about

24% [10] ,this is in contrast to the study conducted by baral et al [11]where the incidence is only 1.3%

Table 4- Comparision studies for endometrial carcinoma

	Our study	Aslam et al.[12]	Dhakal et al.[13]
Endometrial carcinoma	1%	1%	2%

The frequency of endometrial carcinoma in the present study is 1% of total endometrial biopsies and it is lower compared to a study done in Nepal by Dhakal et al. (2%, N=32) and similar to a study by Aslam et al (1%).

About 5 % cases had normal endometrium ,it is comparable to the study conducted asuzu et al [14] where about 39 cases had normal endometrium at either the proliferative or the secretory phases. This accounts for 8% of the cases and were cases of dysfunctional uterine bleeding (DUB),this is at variance with reports from Ilorin which revealed a high frequency of secretory phase endometrium (20.3%) [3] and studies from elsewhere in the world [15, 16].

CONCLUSION

Abnormal uterine bleeding (AUB) is a common gynaecopathological problem with varied clinical presentation and multiple causes. The most common cause of AUB in this study is hyperplasia. Due to preneoplastic nature, hyperplasias have to be detected early. Timely evaluation of AUB by histopathology can be life saving with early tissue diagnosis and management.

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