

## HISTOPATHOLOGICAL EVALUATION OF ENDOMETRIAL CURETTINGS IN PERIMENOPAUSAL WOMEN PRESENTING WITH ABNORMAL UTERINE BLEEDING (AUB)

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### ABSTRACT

#### BACKGROUND

Abnormal Uterine Bleeding (AUB) includes both Dysfunctional Uterine Bleeding (DUB) where no demonstrable pathology is seen and bleeding from causes like polyp, leiomyoma, hyperplasia and carcinoma. AUB accounts for more than 70% of all gynaecological consultation in perimenopausal age group. Endometrial curettage is an important diagnostic tool to rule out organic cases like endometrial hyperplasia and endometrial carcinoma.

#### MATERIALS AND METHODS

The study was carried out at department of Pathology, Govt. Medical College, Jammu, over a period of 1 year from Feb 1, 2017 to Jan 31, 2018. The study was conducted on 60 endometrial samples obtained from perimenopausal women (41-50 years), presenting with abnormal uterine bleeding.

#### RESULTS

The most common clinical presentation was menorrhagia (51%), followed by metrorrhagia (25%), polymenorrhagia (13%), menometrorrhagia (8%) and oligomenorrhagia (3%). Among the total 60 cases, non-organic/ functional causes accounted for 63% (42 cases) of the total cases, while organic causes were seen in 37%(18 cases). The most common endometrial pattern seen among functional cases of AUB was proliferative endometrium in 27% (16 cases) ,followed by secretary endometrium in 15%( 9 cases) ,atrophic endometrium in 10%( 6 cases) and iatrogenic endometrium in 7% (4 cases) Among the organic causes, the commonest was simple hyperplasia without atypia comprising 12% (7 cases), followed by polyp 7%(4 cases).Complex hyperplasia without atypia and atypical hyperplasia comprised 5% (3 cases) each while chronic endometritis was seen in 5% cases(3 cases).Endometrial carcinoma was noted in 1% (2 cases), both cases were of adenocarcinoma.

#### CONCLUSION

Histopathological evaluation of endometrial curetting yielded various patterns ranging from physiological to pathological lesions of endometrium. Functional/non-organic causes were most frequently seen than organic causes. Amongst organic causes, hyperplasias were the predominant cause. As endometrial hyperplasia is a precursor of endometrial cancer, with overall risk of progression to cancer being 5-10%, its identification is important in perimenopausal patients presenting with AUB

#### KEYWORDS

Abnormal Uterine Bleeding (AUB); Dysfunctional Uterine Bleeding (DUB).

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#### BACKGROUND

Abnormal Uterine Bleeding (AUB) a term used to describe any type of bleeding that does not fall within the normal range for amount, frequency, duration and cyclicity.<sup>1</sup> It includes both dysfunctional Uterine Bleeding (DUB) where no demonstrable pathology is seen and bleeding from causes like polyp, leiomyoma, hyperplasia and carcinoma. Majority of these lesions can be diagnosed by endometrial sampling.<sup>2</sup>

Perimenopause is the interval in which a woman's body makes a natural shift from more or less regular cycles of ovulation and menstruation toward permanent infertility or menopause. This phase, generally occurs at around 40-50 years of age. AUB accounts for more than 70% of all gynaecological consultation in perimenopausal and postmenopausal years.<sup>3</sup> The prevalence increases with age, peaking just prior to menopause, thus, making perimenopausal women vulnerable.<sup>4</sup> Variations from the normal cyclical pattern in the perimenopausal age may be due to hormonal changes or due to neoplastic conditions. AUB may be the symptom of endometrial carcinoma in 8-50% of cases.<sup>5</sup> The increased risk of endometrial hyperplasia and endometrial carcinoma is more evident in perimenopausal and postmenopausal women with AUB.<sup>6</sup>

Endometrial curettage is an important diagnostic tool to rule out organic cases like endometrial hyperplasia and endometrial carcinoma.

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It should be performed on all women over age 35 years with menorrhagia to exclude endometrial carcinoma or premalignant lesions.

The present study was conducted to determine various causes of AUB in perimenopausal women by histopathological examination of endometrial curettings and find out the most common pathology.

*Aims and Objectives*

The present study was conducted to determine various causes of AUB in perimenopausal women by histopathological examination of endometrial curettings and find out the most common pathology.

**MATERIALS AND METHODS**

The study was carried out at department of Pathology, Govt. Medical College, Jammu, over a period of 1 year from Feb 1 2017 to Jan 31 2018. The study was conducted on 60 endometrial samples obtained from perimenopausal women

(41-50 years). Patients in the perimenopausal age group presenting with symptoms of abnormal uterine bleeding (AUB) were selected. Complete history including drug history was taken.

All specimens were fixed in 10% formalin, processed and embedded in paraffin and 3-4 microns thick sections were made. Sections were stained with Haematoxylin and Eosin (H&E) stain. The slides were studied, and pattern of uterine histopathological changes analysed.

*Settings and Design*

Prospective study of 1 year.

**RESULTS**

A total of 60 samples of endometrial curettings in the perimenopausal age group (41-50 years) were submitted in the said period for histopathological examination.

Pattern of Bleeding	Menorrhagia	Metrorrhagia	Polymenorrhagia	Menometrorrhagia	Oligomenorrhagia
Percentage	51%	25%	13%	8%	3%

**Table 1. Pattern of Clinical Presentation**

The most common clinical presentation was menorrhagia (51%), followed by metrorrhagia (25%), polymenorrhagia (13%), menometrorrhagia (8%) and oligomenorrhagia (3%).

Causes	No. of Cases	Percentage
Non-organic	38	63%
Organic	22	37%
<b>Total</b>	<b>60</b>	<b>100%</b>

**Table 2. Causes of AUB**

Among the total 60 cases, non-organic/ functional causes accounted for 63% (42 cases) of the total cases, while organic causes were seen in 37%(18 cases).

Type of Endometrium	Total Cases	Percentage
<b>Functional</b>	<b>38</b>	<b>63%</b>
Proliferative	16	27%
Secretary	9	15%
Atrophic	6	10%
Iatrogenic(Pill)	4	7%
Disordered Proliferative	2	4%
Menstrual	1	2%
<b>Organic</b>	<b>22</b>	<b>37%</b>
Endometritis	3	5%
Polyp	4	7%
Simple Hyperplasia	7	12%
Complex hyperplasia	3	5%
Atypical Hyperplasia	3	5%
Carcinoma	2	1%

**Table 3. Histopathological Findings in Cases of AUB (60 cases)**

*Non-Organic Causes*

The most common endometrial pattern seen in cases of AUB was proliferative endometrium in 27% (16 cases), followed by secretary endometrium in 15%(9 cases), atrophic endometrium in 10%(6 cases), iatrogenic endometrium in 7% (4 cases) and disordered proliferative endometrium in 4% (2 cases). Menstrual endometrium was seen in only 2%(1 case).

*Organic Causes*

Among the organic causes, the commonest was simple hyperplasia without atypia comprising 12% (7 cases), followed by polyp 7%(4 cases). Complex hyperplasia without atypia and atypical hyperplasia comprised 5% (3 cases) each while chronic endometritis was seen in 5% cases (3 cases). Endometrial carcinoma was noted in 1% (2 cases), both cases were of adenocarcinoma.

**DISCUSSION**

Endometrium is hormonally responsive tissue and constantly undergoes changes throughout the reproductive life and therefore is vulnerable for pathological lesions. Abnormal uterine bleeding is a common gynaecological disorder in perimenopausal women because of fluctuations in the estradiol levels due to decline in ovarian function and its causes include wide spectrum of diseases.

The main objective of endometrial curettings in AUB is to exclude intrauterine lesions such as endometritis, endometrial polyp and endometrial carcinoma.

In the present study menorrhagia was the most common presenting symptom which was in concordance with studies by Debas AK et al,<sup>7</sup> Mahmood MF et al<sup>8</sup> Sarawat A et al<sup>9</sup> and Arti R et al.<sup>10</sup>

In our study, most endometrial curetting samples revealed normal histology like proliferative phase in 27% of

cases and secretory phase in 15% of cases. Similar results were claimed by different studies like Shazia F et al.<sup>11</sup> They reported proliferative endometrium in 33% and secretory endometrium in 26% of their cases, Shaheen S et al<sup>12</sup> showed proliferative endometrium in 58.6% in menorrhagic patients and in a study by Fraser,<sup>13</sup> it was found in 315.93% of patients.

Chronic endometritis is defined as presence of plasma cells in addition to lymphocytes in the endometrial stroma. In the present study, 5% of AUB patients were having endometritis. In another study conducted by Goldstein S R et al,<sup>14</sup> 26 cases (17%) of endometritis were seen in menorrhagic patients.

In the current study, endometrial polyp was reported in 7% of cases, comparable to study by Khan S, et al<sup>15</sup> where endometrial polyp was seen in 0.6% cases.

In our study, simple endometrial hyperplasia was observed in 12% of cases. In a study by Khan S et al,<sup>15</sup> endometrial hyperplasia was observed in 12.6% of cases and Bahnamfar et al<sup>16</sup> reported it in 11%. Higher incidence was also reported by Vaidya S, et al<sup>17</sup> and Muzaffar M, et al<sup>18</sup> in their series of 10.94% and 24.7% respectively.

The incidence of atypical hyperplasia was observed in 5% in our study while it was 4% in a study by Luqman<sup>19</sup>

In the present study, 1% were diagnosed as endometrial carcinoma on histopathological examination of endometrial curetting in patients presenting with AUB. Similar observation was made by Vaidya S, et al<sup>17</sup> and Mencalgia L<sup>20</sup> in 3.6% and 4.4% of their cases.

## CONCLUSION

Histopathological evaluation of endometrial curetting yielded various patterns ranging from physiological to pathological lesions of endometrium. Functional/non-organic causes were most commonly seen, with proliferative endometrium being the commonest, followed by secretory endometrium. Amongst organic causes, hyperplasias were the predominant cause. As endometrial hyperplasia is a precursor of endometrial cancer, with overall risk of progression to cancer being 5-10%, its identification is important in perimenopausal patients presenting with AUB.

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