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**Research Article**

### EVALUATION OF ENDOMETRIAL PATHOLOGY IN WOMEN WITH ABNORMAL UTERINE BLEEDING

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**Abstract:**

**Objective:** To evaluation of endometrial pathology in women with abnormal uterine bleeding.

**Material and methods:** This cross sectional study was conducted at Department of Obstetrics & Gynecology, Sheikh Zaid Hospital, Rahim Yar Khan from April 2019 to October 2019 over the period of 6 months. Total 135 women with AUB having age 21-70 years were selected for this study. A complete clinical history, complete clinical examination, laboratory investigations, pelvic scan and endometrial biopsy were done to diagnose causes of AUB.

**Results:** Total 135 patients of AUB were selected for this study. Most (67/50%) of the patients of AUB were between 41-50 years. Menorrhagia was the most common (85/63%) clinical presentation followed by menometrorrhagia in 38 (28%) patients and 12 (9%) patients with post-menopausal bleeding. On histopathological examination, most of the cases had disordered proliferative endometrium 48 (35.6%) followed by Secretory endometrium in 32 (23.70%) patients, Proliferative endometrium in 17 (12.59%) patients, Pill endometrium in 6 (4.44%) patients.

**Conclusions:** Abnormal uterine bleeding was more common in the perimenopausal age group and majority had disordered proliferative endometrium and secretory changes. Endometrial sampling followed by histopathological examination helps us to diagnose the underlying pathology and will help in treating the patients appropriately including ruling out premalignant and malignant conditions of the uterus.

**Keywords:** Abnormal uterine bleeding, Endometrium, Dilation and curettage

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## INTRODUCTION:

Abnormal uterine bleeding is the single most common complaint that reproductive age women bring to the clinicians. It is the organized sequence of endocrine signals in an ovulatory cycle that gives menstruatory predictability and consistency. However, anovulation produces an unpredictable and disorganized pattern of ovarian steroid hormone synthesis resulting in a disordered pattern of endometrium.<sup>1</sup>

AUB is bleeding that does not fall into the normal range of amount, frequency, duration and cyclicity of the normal pattern of menstrual cycle.<sup>2</sup> Clinical management and education of medical personal, the design and interpretation of clinical trials have been hampered by absence of a consensus system of classification of AUB. To address this issue FIGO designed the PALM COEIN in 2011. There are nine main categories which are arranged according to the acronym PALM COEIN, Polyp, Adenomyosis, Leiomyomas, Malignancy, Coagulopathy, Ovulatory dysfunction, Endometrial, iatrogenic and not yet classified.<sup>3</sup> The study of endometrial pattern by histopathological examination of endometrial curettings by dilatation and curettage guides the clinician for further management of patients with AUB. In addition, it helps to rule out ominous pathology like endometrial hyperplasia and endometrial carcinoma which is on the rising trend in recent times.<sup>4</sup> Various studies on endometrial pattern has been conducted throughout the past years with various patterns of endometrium like secretory, proliferative, disordered proliferative, atrophic, endometritis, endometrial hyperplasia and endometrial carcinoma being commonly seen.

However, with the changes in life style, increasing risk factors there is a rising incidence of AUB and people being more aware of the need to seek treatment for AUB. We attempted to study the different pathologies associated with AUB by endometrial biopsy with dilatation and curettage which offers a sensitivity of 90% in detecting endometrial abnormalities.<sup>5</sup>

## MATERIAL AND METHODS:

This cross sectional study was conducted at Department of Obstetrics & Gynecology, Sheikh Zaid Hospital, Rahim Yar Khan from April 2019 to October 2019 over the period of 6 months. Total 135 women with AUB having age 21-70 years were selected for this study. Patients with pregnancy related bleeding, leiomyomas, bleeding disorders, isolated cervical or and vaginal pathologies with

bleeding, medical conditions such as thyroid dysfunctions, liver or and renal disorders and those on exogenous hormones, contraception were excluded by history, examination and investigations. Pelvic ultrasound was done for all the selected patients. Patient's age, parity, menstrual pattern general and pelvic examination was done to rule out the other causes of bleeding.

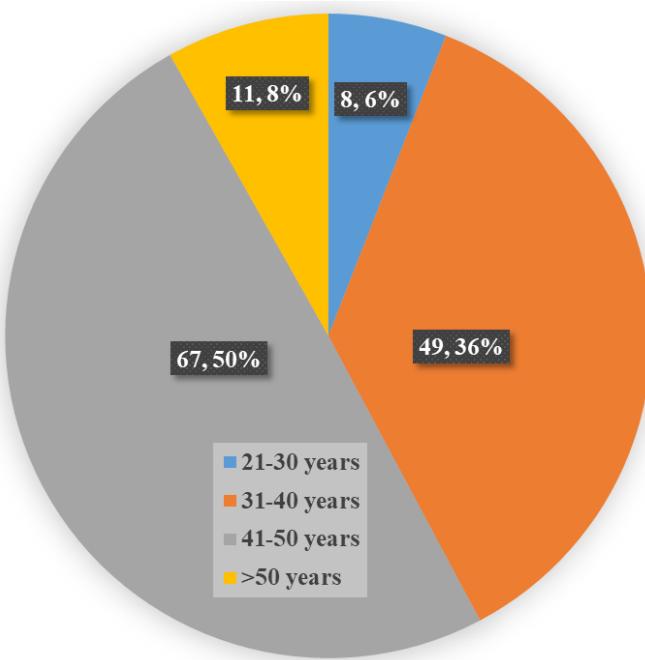
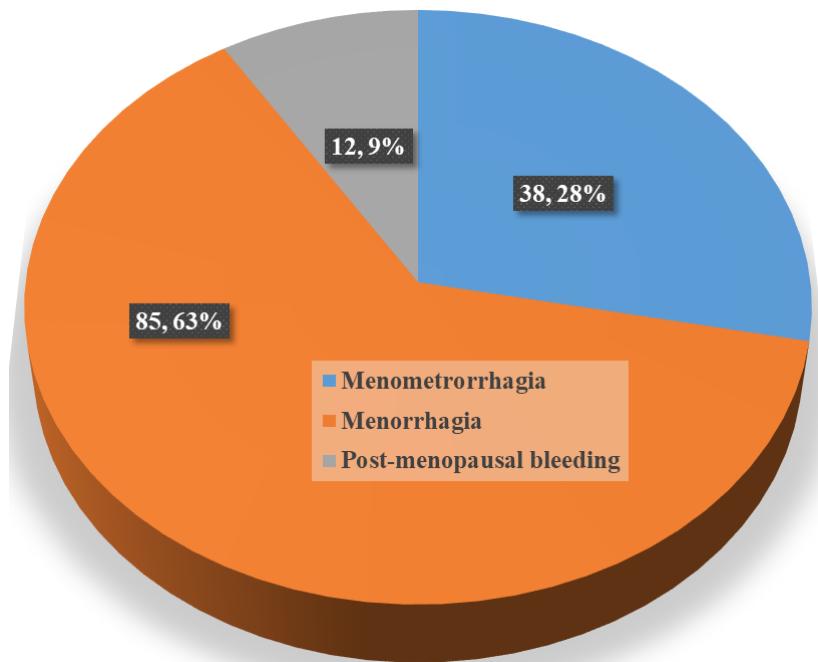
Endometrial tissue obtained by Dilatation and Curettage was immediately kept in 10% formalin and subjected to histopathological study in the Department of Pathology. Time of endometrial biopsy was taken after 15 days from the last menstrual period (preferably Day 21-22) so that hormonal status could be determined in addition to pathology. Women who were bleeding were put on non-hormonal methods of treatment till the procedure was awaited. The detailed clinical presentations, histopathological study reports and correlation with other parameters like age parity and socioeconomic status have been reviewed and critically analyzed.

All the collected data was analyzed by using SPSS version 20. Mean and SD was calculated for numerical data. Frequencies were calculated for categorical data.

## RESULTS:

Total 135 patients of AUB were selected for this study. Most (67/50%) of the patients of AUB were between 41-50 years followed by 49 (36%) patients were between 31-40 years, 11 (8%) patients were >50 years and 8 (6%) patients were between 21-30 years. (Fig. 1) Menorrhagia was the most common (85/63%) clinical presentation followed by menometrorrhagia in 38 (28%) patients and 12 (9%) patients with post-menopausal bleeding. (Fig. 2) Nulliparous were 5 (3%), primiparous were 14 (8%), multiparous were 96 (74%) and grand multiparous were 20 (15%). (Table 1)

On histopathological examination, most of the cases had disordered proliferative endometrium 48 (35.6%) followed by Secretory endometrium in 32 (23.70%) patients, Proliferative endometrium in 17 (12.59%) patients, Pill endometrium in 6 (4.44%), Chronic endometritis in 5 (3.7%), Benign endometrial polyp in 11 (8.15%), Atrophic endometrium 6 (4.44%), Simple hyperplasia in 2 (1.48%), Complex hyperplasia without atypia in 1 (0.74%) and Well differentiated endometrial adenocarcinoma in 1 (.74%) cases. (Table 2)

**Fig. 1: Age distribution****Fig. 2: Clinical presentation**

**Table 1: Parity and AUB**

<b>Parity</b>	<b>Total</b>	<b>Percentage</b>
Nulliparous	5	3
Primiparous	14	8
Multiparous	96	74
Grand multiparous	20	15
Total	135	100

**Table 2: Distribution of cases depending on histopathology**

<b>HPE</b>	<b>Total</b>	<b>Percentage</b>
Disordered proliferative endometrium	48	35.6
Secretory endometrium	32	23.70
Proliferative endometrium	17	12.59
Pill endometrium	6	4.44
Chronic endometritis	5	3.7
Benign endometrial polyp	11	8.15
Atrophic endometrium	6	4.44
Simple hyperplasia	2	1.48
Complex hyperplasia without atypia	1	0.74
Well differentiated endometrial adenocarcinoma	1	0.74
Grand total	135	100

### DISCUSSION:

Abnormal uterine bleeding is a broad term that describes irregularities in the menstrual cycle involving frequency, regularity, duration and volume of flow outside of pregnancy. A normal menstrual cycle has a frequency of 24-38 days, last 7-9 days with 5-80 ml of blood loss. Variations in any of these 4 parameters constitute AUB.<sup>6</sup>

The purpose of present study was to study the endometrial pathology in women with abnormal uterine bleeding. Most of the cases (50%) with AUB were between 41-50 years. In one study by Dayal et al,<sup>7</sup> out of the 563 patients of AUB who have undergone endometrial biopsies, total 36.56% patients were between 41-50 years of age which is comparable with our findings. Similarly Radhika et al<sup>8</sup> reported 42.6% patients with AUB were between 41-50 years. In another study of Jignasha et al<sup>9</sup> total 33% patients of AUB were belonged age group 41-50 years. In study of Ajit et al<sup>10</sup> 41.25% patients were between 41-50 years. The reason may be perimenopausal depletion of ovarian follicles with infrequent ovulation leading to prolonged and excessive bleeding from thickened endometrium in the absence of progesterone.<sup>11</sup>

In present study, menorrhagia was the most common (85/63%) clinical presentation followed by menometrorrhagia in 38 (28%) patients and 12 (9%) patients with post-menopausal bleeding.

In study of Ajit et al,<sup>10</sup> menorrhagia (51.87%) was the most common presentation which is comparable

with our findings. Similar findings (51.9%) were reported by Muzaffar et al.<sup>12</sup>

Nair RK et al<sup>13</sup> reported 64% of AUB cases presented with menorrhagia. Jaideep M et al<sup>14</sup> (38.67%), Rashmi V<sup>15</sup> (40%) and Pilli GS et al<sup>16</sup> (46%) observed menorrhagia as the commonest mode of presentation.

Endometrial pathology showing disordered proliferative endometrium was observed in 35.6% cases, secretory endometrium in 23.70%, these figures were similar to study done by Jignasha et al<sup>9</sup> in which 34% cases had disordered proliferative endometrium and 32% were secretory.

Proliferative pattern of endometrium was observed in 12.2% patients by Sajitha et al.<sup>17</sup>

Disordered proliferative endometrium is a type of focal hyperplasia which lies in between the spectrum of proliferative endometrium on one hand and hyperplasia at the other end.

Secretory pattern was observed in 23.70% of cases, this was comparable to the study by Saraswathi et al (28%).<sup>18</sup> Endometritis was seen in 3.7% however study by Malathi et al<sup>19</sup> reported 2.1%. Polyps were observed in 8.15% which is comparable to Gulia et al<sup>20</sup> with 10% from 435 cases.

### CONCLUSION:

Abnormal uterine bleeding was more common in the perimenopausal age group and majority had disordered proliferative endometrium and secretory

changes. Endometrial sampling followed by histopathological examination helps us to diagnose the underlying pathology and will help in treating the patients appropriately including ruling out premalignant and malignant conditions of the uterus.

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