

# A study of clinical correlation with histopathological diagnosis of abnormal uterine bleeding

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## Abstract

**Background:** Abnormal uterine bleeding in perimenopausal women accounts for about 70% of gynaecologic Outpatient Department visits. Perimenopause, also called the menopausal transition, 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. Polymenorrhagia, intermenstrual bleeding and metrorrhagia are other common disorders at perimenopause. Endometrial sampling is a safe and effective diagnostic step in evaluation of abnormal uterine bleeding after ruling out medical causes. The present study was aimed to review the causes of abnormal uterine bleeding in perimenopausal women establishing the correlation with clinical diagnosis and histopathological examinations. **Material and Methods:** a total of 150 perimenopausal women with abnormal uterine bleeding in the age group of 37-51 years for a period of 6 months were included. These women were evaluated clinically and ultrasonographically for the cause of abnormal uterine bleeding. Clinical impression and USG reports were correlated. These women underwent dilatation and curettage for endometrial sampling and specimen sent for histopathological examination. Histopathological reports were correlated with clinical diagnosis. **Results:** Most of the patients with AUB were between 37-41 years of age (56%). The incidence was high in parity-3 (26%) and grand multipara (49.33%). The majority of the women were presented with menorrhagia (54.66%). Clinically, majority of the cases were diagnosed as fibroids 66 (44%) followed by dysfunctional uterine bleeding (DUB) 56 (37.33%). However, histopathological reports confirmed fibroid in 52 cases, DUB in 49, adenomyosis in 36 and polyp in 11 cases. **Discussion:** Fibroids are common finding in women with menorrhagia. Clinical, radiological and pathological evaluation correlated very well to diagnose fibroids and DUB. However clinically as well USG proved of little help to diagnose adenomyosis and carcinoma of cervix and endometrium. Thus, histopathological evaluation of endometrium is recommended in perimenopausal women.

**Keywords:** abnormal uterine bleeding, perimenopause, histopathological examination.

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## INTRODUCTION

Abnormal uterine bleeding (AUB) is the commonest presenting symptom and major gynecological problem responsible for as many as one-third of all out patient

gynecologic visit.<sup>1-4</sup> It is the term used to describe any type of bleeding that does not fall within the normal ranges for amount, frequency, duration or cyclicality.<sup>5</sup> It includes both dysfunctional uterine bleeding (DUB) and bleeding from structural causes like fibroids, polyps and endometrial carcinoma. Perimenopause is the period, 2-8 years preceding menopause and one year after the final menses (WHO). However, practically it can be better defined as the phase preceding the onset of menopause, generally occurring around 40-50 years of age during which the regular cycle of a woman transits to a pattern of irregular cycles. In premenopausal women, AUB includes any change in frequency, duration, or amount of flow during menstrual cycle, as well as bleeding between cycles. Although irregular bleeding patterns are a normal and expected part of perimenopause, the incidence of

uterine pathology and associated medical complications also increase in this age group.<sup>6</sup> Polymenorrhagia, intermenstrual bleeding and metrorrhagia are other common disorders at perimenopause. DUB, fibroid uterus and adenomyosis are the common hyperoestrogenic conditions where endometrium is in the proliferative phase and if untreated may lead to endometrial carcinoma. Endometrial sampling is a safe and effective diagnostic step in evaluation of abnormal uterine bleeding after ruling out medical causes. It has several advantages over other available diagnostic methods like ultrasonography, hormonal assay, hysteroscopy and hysterosalpingography. An endometrial biopsy and curettage, though invasive, provides a relatively cost-effective tissue diagnosis for wide range of morphologic patterns resulting from both normal and abnormal changes like hyperplasia, carcinoma, exogenous hormonal effects and infections.<sup>7</sup> Histopathological diagnosis varies in relation to the age with endometrial carcinoma and hyperplasia being more in peri and postmenopausal group while in younger age groups, changes associated to hormonal effects seems to be more common. The present study was aimed to review the causes of abnormal uterine bleeding in perimenopausal women establishing the correlation with clinical diagnosis and histopathological examinations.

## MATERIAL AND METHODS

In this retrospective study a total of 150 perimenopausal women with abnormal uterine bleeding in the age group of 37-51 years for a period of 6 months were included. These women were analyzed by recording age, parity, menstrual symptoms and associated symptoms for clinical evaluation. Women with associated medical disorders were not included in this study. Ultrasonographic (USG) evaluation of all the women was done. Clinical impression and USG reports were correlated. These women underwent dilatation and curettage (D and C) for endometrial sampling and specimen sent for histopathological examination (HPE). The HPE reports were analyzed. These women were further managed either conservatively or surgically depending upon the response. Histopathological reports were correlated with clinical diagnosis.

## RESULTS

A total 150 women presenting with AUB were included in this study. A correlation between age, parity and incidence of abnormal uterine bleeding is depicted in Table 1. Most of the patients with AUB were between 37-41 years of age (56%). The incidence was high in parity-3 (26%) and grand multipara (49.33%). This shows incidence of abnormal uterine bleeding increases as the parity increases.

**Table 1:** Distribution of age and parity of women with abnormal uterine bleeding

Parity	37-41 yrs	42-56 yrs	47-51 yrs	Total
0	01 (1.19%)	01 (2.63%)	00 (0.00%)	02 (1.33%)
1	05 (5.95%)	03 (7.89%)	00 (0.00%)	08 (5.33%)
2	19 (22.61%)	06 (15.78%)	02 (7.14%)	27 (18%)
3	25 (29.67%)	12 (31.57%)	02 (7.14%)	39 (26%)
Grand multipara	34 (40.47%)	16 (42.10%)	24 (85.71%)	74 (49.33%)
<b>Total</b>	<b>84 (56%)</b>	<b>38 (25.33%)</b>	<b>28 (18.66%)</b>	<b>150</b>

The majority of the women were presented with menorrhagia 82 (54.66%), 42 (28%) with polymenorrhagia, 16 (10.66%) had intermenstrual bleeding and 10 (6.66%) had metrorrhagia. The most common associated symptom was dysmenorrhoea found in 37- 41 years of age. Clinically, majority of the cases

were diagnosed as fibroids 66 (44%) followed by dysfunctional uterine bleeding (DUB) 56 (37.33%), adenomyosis 21 (14%) and polyp 7 (4.66%). However, histopathological reports confirmed fibroid in 52 cases, DUB in 49, adenomyosis in 36 and polyp in 11 cases.

**Table 2:** Causes of AUB through Clinical and Histopathological diagnosis

Causes	Clinically diagnosed	Histopathologically diagnosed
Fibroid	66 (44%)	52 (34.66%)
DUB	56 (37.33%)	49 (32.66%)
Adenomyosis	21 (14%)	36 (24%)
Polyp	07 (4.66%)	11 (7.33%)
Carcinoma cervix	00	01 (0.66%)
Carcinoma endometrium	00	01 (0.66%)
<b>Total</b>	<b>150</b>	<b>150</b>

Thus out of 66 suspected fibroid uterus 52 (78.7%) were confirmed by HPE. Out of 56 suspected cases of DUB, 49 (87.5%) were confirmed by HPE, 36 (24%) turned out

adenomyosis by HPE. Seven cases of polyp were confirmed by HPE in addition to other four cases. Two cases each of carcinoma cervix and endometrium

confirmed by HPE were missed clinically. The clinical and histopathological correlation is depicted in Table 2.

## DISCUSSION

Abnormal uterine bleeding in perimenopausal women is associated with endometrial carcinoma in approximately 10% of cases, so evaluation of women's risk factors for endometrial hyperplasia or carcinoma is recommended.<sup>8</sup> Patients were evaluated and the cause of AUB in them was diagnosed clinically by proper history, physical examination and USG findings. The most common clinical presentation in the present study was represented by menorrhagia (54.66%) followed by polymenorrhagia (28%), intermenstrual bleeding (16%) and metrorrhagia (6.66%) among others. Menorrhagia was also found to be a common clinical presentation in most of the previous studies by Bhosle *et al* (53.3%)<sup>9</sup>, Nargis *et al* (52%)<sup>10</sup>, Pillai (46.4%)<sup>11</sup> and Jetley *et al* (46.4%).<sup>12</sup> Fibroids are common finding in women with menorrhagia. Menorrhagia in fibroids is due to increased in size of the uterine cavity thereby increasing the surface area of the endometrium, hyperestrogenemia causing endometrial hyperplasia, vascular alteration of the endometrium and obstetric effect of fibroid on uterine vasculature leading to congestion in the endometrium. Majority of women with uterine fibroid associated with menorrhagia are treated by hysterectomy. In our study, fibroid uterus was responsible for abnormal uterine bleeding (AUB) in 34.6% of women. Bhosle *et al* (54%)<sup>9</sup>, Pillai (55.7%)<sup>11</sup> and Nargis *et al* (58%)<sup>10</sup> found fibroid as the common finding though slightly more than the present study. Adenomyosis occurs more frequently during perimenopause, being a lesion detected in 20% of surgically treated gynaecological cases. Diagnosis of adenomyosis on clinical findings is usually different. It is a lesion characterized by the presence of foci within the myometrium, consisting of glands and endometrial stroma, located at distance of the junction between the endometrium and the myometrium. Transabdominal sonography (TAS) does not allow reliable diagnosis of adenomyosis or consistent differentiation from leiomyomas, even transvaginal sonography (TVS) has limitation in tissue characterization. MRI is more helpful to diagnose adenomyosis but expensive [13]. In our study clinically only 14% were diagnosed clinically as adenomyosis and HPE diagnosed 24%. The reported prevalence of adenomyosis in hysterectomy specimens varies from 5% to 70%.

In conclusion, clinical, radiological and pathological evaluation correlated very well to diagnose fibroids and DUB. However clinically as well USG proved of little help to diagnose adenomyosis and carcinoma of cervix and endometrium. Thus, histopathological evaluation of endometrium is especially recommended in women around the age of forty years presenting with AUB, to rule out preneoplastic lesions and malignancies.

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