

# Diagnostic Approach in Perimenopausal Women with Abnormal Uterine Bleeding

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## ABSTRACT

**Introduction:** Abnormal uterine bleeding (AUB) is very common problem in patient attending outpatient department, especially in perimenopausal group.

**Objective:** To study prevalence of abnormal uterine bleeding and its type in perimenopausal women as well as to compare diagnostic efficacy of ultrasonography, hysteroscopy and histopathology.

**Material and method:** The study was carried out in Department of Obstetrics and Gynecology, Era Medical College, Lucknow, in 100 patient attending outpatient department with AUB in perimenopausal age group.

**Observation:** Most of the patients were multiparous, more than 50% belong to socioeconomic class III and IV and mean age was  $43.05 \pm 4.09$  years. Commonest complaint was menorrhagia (45%) followed by metrorrhagia in 19% and menometrorrhagia in 14%. Majority of patients (85%) had uterine volume between 151 and 250 cm<sup>3</sup>. Only three patient had uterine volume more than 252 cm<sup>3</sup>. Endometrial hyperplasia was diagnosed in 14% with ultrasonography, 11% on hysteroscopy while in 15% on histopathological examination.

**Conclusion:** In perimenopausal women with AUB, ultrasonography should be first investigation because of its freely availability, noninvasiveness and cost effectiveness.

**Keywords:** Perimenopause, Abnormal uterine bleeding, Hysteroscopy.

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## INTRODUCTION

In 2001, Stages of reproductive aging workshop (STRAW) perimenopause is defined as the period beginning with menopausal transition and ending 12 months after the last menstrual period.<sup>1,2</sup> This period may last for many years

(2-8 years). Menstrual irregularity in the form of frequency and volume may occur due to fluctuating hormone levels and can be considered normal and expected but many time uterine as well as adenexal pathology may be there.<sup>3</sup>

Ultrasound is a simple, easily available, affordable and noninvasive diagnostic modality to study endometrial pattern and its thickness. At the same time, adenexal and other uterine pathology like intra mural fibroid can also be detected simultaneously with ultrasonography.<sup>4,5</sup> For better visualization of endometrium high frequency transducer should be preferred transvaginally.<sup>6</sup>

For histopathological examination aspiration along with currattage with 4 no Karman's cannula is sufficient. Initially, dilatation and curettage (D&C) was considered gold standard investigation in abnormal uterine bleeding (AUB) cases but being a blind procedure, it has a chance of missing small focal lesion.<sup>7-9</sup>

## MATERIAL AND METHOD

The study was carried out in Department of Obstetrics and Gynecology, Era Medical College, Lucknow, in 100 women in perimenopausal age group (41-51 years). All women underwent for ultrasonography (transvaginal), endometrial histopathology (manual vacuum aspiration method) and hysteroscopy after clinical examination and routine investigations.

## OBSERVATIONS

Thirty-eight percent women were in 40 to 43 years, 41% in 44 to 47 years while 21% were in 48 to 51 years (Table 1). Most of women were multiparous having 2 to 4 children, i.e. 53% (Table 2). Majority of women presented with chief complaint of menorrhagia (45%) followed by polymenorrhoea (23%) and metrorrhagia (19%) (Table 3). Majority (85%) of women had uterine volume between 150 and 250 cm<sup>3</sup>.

Endometrial hyperplasia was found in 14% on ultrasonography, in 11% on hysteroscopy while in 15% on histopathology (Tables 4 to 6). On analyzing the association between symptoms and endometrial pathologies 77.77% patient with menorrhagia were found to have no endometrial pathologies while 78.99% patients of metrorrhagia were found to have endometrial pathologies.

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**Table 1:** Distribution of cases according to their age

Sl. no.	Age group	No. of patients	Percentage
1	40-43 years	38	38
2	44-47 years	41	41
3	48-51 years	21	21

**Table 2:** Distribution of cases according to their parity

Sl. no.	Parity	No. of patients	Percentage
1	<2	19	19
2	2-4	53	53
3	>4	28	28

**Table 3:** Distribution of cases according to their symptoms

Sl. no.	Chief complaints	No. of patients	Percentage
1	Menorrhagia	40	40
2	Metrorrhagia	19	19
3	Menometrorrhagia	12	12
4	Polymenorrhea	23	23
5	Hypomenorrhea	4	4
6	Postcoital/other	2	2
Total		100	100

**Table 4:** Distribution of cases according to ultrasound findings

Sl. no.	Usg findings	No. of patients	Percentage
1	Normal	36	36
2	Submucous myoma	3	3
3	Endometrial hyperplasia	14	14
4	Atrophic endometrium	3	3
5	Endometrial polyp	9	9
6	Fibroid	22	22
7	PID	26	26
8	Forgotten IUCD	2	2

**Table 5:** Comparative findings on ultrasound, hysteroscopy and histopathology

Pathology	Ultrasound	Hysteroscopy	Histopathology
Normal	36	50	49
Endometrial hyperplasia	14	11	15
Endometrial polyp	10	13	12
Atrophic endometrium	5	6	5
Endocervical polyp	2	2	3
Submucous myoma	9	10	9
Endometrial carcinoma	—	1	1
Retained product of conception	2	5	4
Forgotton IUCD	2	2	—
Adenaxal path, PID 20 and other fibroid	—	—	—

**Table 6:** Hysteroscopic findings

Sl. no.	Hysteroscopic findings	No. of patients	Percentage
1	Normal	44	44
2	Endometrial hyperplasia	11	11
3	Endometrial polyp	13	13
4	Atrophic endometrial	6	6
5	Endometrial malignancy	2	2
6	Endocervical polyp	8	8
7	Submucous myoma	8	8
8	Retained product	5	5
9	Forgotton IUCD	2	2
Total		100	100

**DISCUSSION**

Ultrasound diagnosed adenaxal pathology in 20 patients of AUB which were not possible with hysteroscope alone. Besides this, simple measurement of endometrial thickness with ultrasound is enough to suggest presence of endometrial pathology. The specificity and positive predictive value of ultrasound was found comparable to hysteroscope, i.e. 95.83 and 95%. On comparison of ultrasound with histopathological examination, the sensitivity and negative predictive value of ultrasound for diagnosing endometrial pathology was 73.07 and 76.66%.

Hysteroscope was found to be more accurate in detecting endometrial polyp, submucous myoma, endocervical polyp and endometrial cancer. Sensitivity and specificity

of hysteroscopic examination in diagnosing endometrial pathology was found to be 89.79 and 97.56% while positive and negative predictive values were 97.95 and 90.56% respectively.

Study by Machado et al in 2005 concluded that endometrial thickness less than 5 mm did not need D&C as none of these patients had or malignancy.<sup>9</sup> The upper limit for normal endometrial thickness is controversial but most studies favored cut off value of 8 mm.<sup>10-12</sup>

The risk of endometrial cancer is significantly high in patients with complex atypical hyperplasia in comparison to simple hyperplasia.<sup>13-15</sup>

Hystopathological examination especially under hysteroscopic guidance is the gold standard for diagnosis of endometrial pathology.<sup>14</sup> It diagnosed four cases of endometrial hyperplasia missed by hysteroscopy alone.

**CONCLUSION**

In perimenopausal women after clinical examination (speculum and bimanual) and Pap smear, ultrasonography should be first investigation as it is easily available, less expensive, safe and noninvasive method. It excludes those

adenexal or myometrial pathologies which may be missed in clinical assessment. Hysteroscopy has the additional advantage of its therapeutic value at the same time. Hysteroscopy may be reserved for the cases suspicious of endometrial pathology on ultrasound and all cases of metrorrhagia, menometrorrhagia and postmenopausal bleeding.

Both ultrasonography and hysteroscopy are complementary to each other in case of AUB and simultaneous biopsy confirmed the diagnosis.

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