



## ABNORMAL UTERINE BLEEDING - STUDY OF EFFICACY OF ULTRASOUND DIAGNOSIS IN BUNDELKHAND REGION

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### ABSTRACT

Abnormal uterine bleeding is one of the major cause of outpatient visits to the gynecologists and accounts for more than 70% of all gynecological consults in the premenopausal and postmenopausal years. Aim of the study is to determine the utility of ultrasonography in AUB and to evaluate the diagnostic efficacy of ultrasonography in detection of causes of AUB. It is a study conducted over a period of one year in department of obs. and gynae in M.L.B. Medical College, Jhansi in bundelkhand region. This study concludes that transvaginal sonography can be used as routine first step diagnostic tool and can select cases who need endometrial biopsy (histopathological examination) thus reducing no of intervention required in abnormal uterine bleeding cases.

**KEYWORDS :** Abnormal uterine bleeding, transvaginal sonography, histopathological examination.

### INTRODUCTION

Abnormal uterine bleeding (AUB) is irregular, excessive, prolonged, unexpected or acyclic bleeding from uterus that is longer or heavier than usual or does not occur at your regular time. One thirds of outpatients visits to the gynecologist are for abnormal uterine bleeding, and it accounts for more than 70% of all gynecologic consults in the premenopausal and postmenopausal years.<sup>1</sup>

Abnormal uterine bleeding include both dysfunctional uterine bleeding (DUB) and bleeding from structural causes. Awwad et al (1993) described DUB as a common debilitating problem among women in all age groups and accounting for 20% of gynaecology OPD visits and may account for 25% of all hysterectomies some mechanism of abnormal bleeding include altered synthesis of uterine prostaglandins, PGF<sub>2X</sub> and PGE<sub>2</sub> level and COX activity (Jabbour et al, 2006) or aberration in structural integrity of blood vessels of endometrium (Rogers and Abberton, 2003) there are nine main categories of AUB according to FIGO which are assigned according to the acronym PALM-COEIN: Polyp, Adenomyosis, Leiomyoma, Malignancy and hyperplasia, cogulopathy, ovulatory, dysfunction, endometrial, iatrogenic and not yet classified.

TRANSVAGINAL ultrasonography is the accepted primary modality for the evaluation of AUB.<sup>3</sup> It is non-invasive, low cost procedure that does not cost patient discomfort.

### AIMS AND OBJECTIVES

The present study has following aims and objective

1. To determine the utility of ultrasonography in AUB.
2. To evaluate the diagnostic efficacy of ultrasonography in detection of cause of AUB

### MATERIAL AND METHODS

Source of data- The present study was conducted in department of obs and gynae in M.L.B. medical College, Jhansi.

Inclusion criteria- all OPD patients presenting with abnormal

uterine bleeding, age group between menarche to menopause.

Exclusion criteria- Pregnancy and pregnancy related conditions, females less than age menarche and more than menopause. Study group comprised of 200 patients with menstrual irregularities like menorrhagia, polymenorrhea, oligomenorrhea, acyclic/ irregular mass.

Control group- comprised 200 females with normal menstrual cycle and with apparently no clinical pathology.

Consent of patients to include in study is taken. All the patients were thoroughly interrogated and subjected to detailed clinical history and examination followed by TVS/TAS in that sequence. Finally endometrial biopsy is taken sent for histopathological examination and results compared.

### OBSERVATIONS

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

Age group (in years)	Study group		Control group	
	No.	%	No.	%
<20	48	24%	50	20%
21-25	40	20%	30	15%
26-30	16	8%	20	10%
31-35	40	20%	40	20%
>36	56	28%	60	30%

Most of the patients belong to age group >36 years age accounting of 28% of study group and minimum number of patients under 26-30 years age group.

**Table 2: Distribution of cases according to residential areas.**

Residential area	Study group		Control group	
	No.	%	No.	%
Rural	136	68%	120	60%
Urban	64	32%	80	40%

Majority of patients were from rural areas accounting for 68% in study group.

**Table 3: Distribution of cases according to their educational status**

Education	Study group		Control group	
	No.	%	No.	%
Illiterate	52	26%	60	30%
Literate	28	14%	30	15%
Primary	32	16%	30	15%
Middle	24	12%	20	10%
High school	48	24%	40	20%
Graduate and those	16	8%	20	10%

Majority of patients (26%) from study group lies in illiterate group, followed by 24% cases in high school.

**Table 4: Distribution of cases according to menstrual history**

Clinical symptom	Study group	
	No.	%
Menorrhagia	80	40%
Menometrorrhagia	28	14%
Metrorrhagia	36	18%
Hypomenorrhea	12	6%
Polymenorrhea	16	8%
Irregular/Acyclic bleeding	28	14%

It is found that majority of cases had menorrhagia.

**Table 5: Distribution of causes of AUB as detected by TVS and Histopathological examination**

Cause of AUB	TVS		Histopathological examination	
	No.	%	No.	%
Leiomyoma	84	42%	80	40%
DUB	56	28%	48	24%
Adenomyosis	12	6%	20	10%
Endometrial polyp	8	4%	16	8%
Thin atrophic endometrium	16	8%	16	8%
Endometrial hyperplasia	16	8%	8	4%
Endometrial carcinoma	8	4%	12	6%

In our study group of 200 people, most cases detected by TVS were leiomyoma accounting for 42% followed by DUB. As per histopathological examination, leiomyoma followed by DUB account for most cases. Cases of AUB as detected by TVS and histopathological examination are comparable.

#### DISCUSSION:

As per our study, there were twin peaks in age group one at 36-45 years age group (28%) followed by 24% in <20 years age group. Peak in the age group >36 years age shows AUB problems are more common in late reproductive and perimenopausal age group.

Most cases belong to low socio economic and rural areas. This may be due to the reason that Bundelkhand region is backward region consisting of rural areas mainly.

According to educational status, most of cases 26% were illiterate and 24% has high school education only. Only 8% of patients were graduated. Improved facilities with an access to medical services among the affluent and educated patients account for the decrease

associated with the problems.

In our study most common clinical presentation is menorrhagia and acyclic bleeding. As these problems bother the females mostly. Hypomenorrhea account for least cases. Generally females ignore this problem.

As per our study, most cases detected by TVS accounted for leiomyoma (42%) followed by DUB (28%) then endometrial hyperplasia (8%) and adenomyosis (6%), endometrial polyp (4%) and endometrial carcinoma (4%).

The result is comparable with histopathological examination which is taken as true diagnosis of AUB. Causes of AUB as per histopathological examination were leiomyoma (40%) > DUB (24%)>Adenomyosis (10%)>Endometrial polyp >Endometrial carcinoma> Endometrial hyperplasia. Our results were comparable with studies like Dijkhuizen et al<sup>4</sup> which had similar diagnostic values with specificity 89% and sensitivity 96% with TVS. William and Marshburn<sup>5</sup> series vaginal probe ultrasonography detected intrauterine lesion with sensitivity 67% and specificity ,93% PPV 80% and NPV 86%.

#### CONCLUSION:

TVS is advanced, easy, safe, tolerable and rapid procedure with excellent diagnostic accuracy in diagnosis of uterine pathology of AUB. It evaluates endoluminal abnormalities more definitely, hence may direct biopsy procedures and minimize false negative results. But it cannot substitute tissue diagnosis thus, transvaginal sonography can be used as routine first step diagnostic tool.

With the help of high resolution sonography, minor details of endometrium and major details of endocrinopathology and associated anomalies can be detected by TVS alone.

We can select cases who need endometrial biopsy, thus reducing number of interventions required. At the same time, it is not the substitute of histopathology. They are complementary. Non invasive methods can be used as routine 1st step in diagnosis as the detection rate is comparable.

Both the methods are significantly efficient Results are comparable.

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