

# Study of Histopathology If Endometrium in Cases of Abnormal Uterine Bleeding and Correlation with Endometrial Thickness on Ultrasound

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## AIMS AND OBJECTIVES

### AIM

To study the histopathology of endometrium in cases of abnormal uterine bleeding in various age groups and correlating with endometrial thickness on USG

### OBJECTIVES

1. To study the various histopathological features of endometrium in cases of abnormal uterine bleeding undergoing D&C or hysterectomy
2. To find the efficacy of D&C as a better, cost effective and minimally invasive tool for screening in patients with D&C
3. To determine the efficacy of transvaginal USG in depicting the patterns of endometrium and to possible minimize the requirement of invasive procedures
4. To identify and differentiate benign and malignant lesions

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## I. Methodology

### Method of collection of data:

This is a prospective study done in Gandhi Hospital, Secunderabad, Telangana during the period 2016-17 for a period of one year. The study was done on 120 patients presenting to OPD with abnormal uterine bleeding. Women with AUB, attending the outpatient department planned were examined by transvaginal sonogram for endometrial thickness before doing dilation and curettage. TVS was performed independent of the phase of menstrual cycle using 7.5 MHZ transvaginal transducer. The ultrasound finding that was taken is the maximum endometrial thickness measured in the sagittal plane.

TYPE OF STUDY: Prospective randomized study

SAMPLING METHOD: Simple random sampling

### INCLUSION CRITERIA

All cases of abnormal uterine bleeding attending the gynecology OPD of Gandhi Medical College during August 2016 to August 2017

### EXCLUSION CRITERIA

1. Women on hormonal treatment at the time of first presentation
2. Women with intrauterine device in situ
3. Women with endocrine disorders
4. Women with bleeding tendencies
5. Women with adnexal pathology
6. Pregnancy

**Sample Size:** 120

**Duration of the study:** August 2016 to August 2017

### Materials required for D & C

- Vaginal speculum
- Vulsellum
- Uterine sound
- Mathew Duncan Dilators
- EB Curette

- Sterile bottles filled with 10% formalin

**PRIOR TO PROCEDURE**

- Informed consent taken
- Thorough clinical examination was done and followed by routine investigations
- The transvaginal sonography with empty bladder was done using 7.5 MHZ vaginal transducer
- Two layer thickness of endometrium in A-P dimension at maximum thickness area was taken, if blood or fluid is present, endometrial thickness taken separately for two layers and added.
- Finally D&C was done and endometrial curetting sent for histopathological examination.

**PROCEDURE:**

Patient was advised to empty the bladder, Fortwin Phenergan sedation was given. Under strict aseptic precautions pelvic examination was done to know the position of cervix, size and position of the uterus. Posterior wall of vagina retracted with Sim’s speculum and anterior lip of cervix of held with Vulsellum. Uterine sound is passed to know the position and length of the uterus. The cervical canal was serially dilated with Mathew Duncan metal dilators of increasing size from 6-10 mm as required, and curettage was done with sharp curette from all walls of uterus including fundus. The tissue was sent to histopathological examination 10% formalin

**TIME SCHEDULING FOR UTERINE CURETTAGE:**

- For cyclical bleeding cases: premenstrual (25-27 days)
- Atypical bleeding cases: soon after period starts
- Continuous bleeding anytime

Postoperative management: vitals were monitored and were given Tab. Cifran 500mg, Tab Metrogyl 400mg for 5 days after the procedure.

Complications encountered that can be encountered are

Injury to cervix, perforation of uterus, injury to intraabdominal structures if curette is continued after perforations.

- Pelvic infections
- Hemorrhage
- Asherman’s syndrome

**II. Results**

Results were analyzed by chi- square test to assess the risk factor analysis and percentage comparison for histopathological evaluation. The slides were reviewed and classified according to current pathological criteria. Results were done and tabulated as follows

**CLINICAL PRESENTATION**

**TABLE 8: PERCENTAGE OF MENSTRUAL PATTERNS**

MENSTRUAL PATTERN	NO OF CASES	PERCENTAGE
Menorrhagia	48	40
Metropathia haemorrhagica	36	30
Polymenorrhoea	30	25
Oligomenorrhoea	6	5
TOTAL	120	100

FIGURE - 6

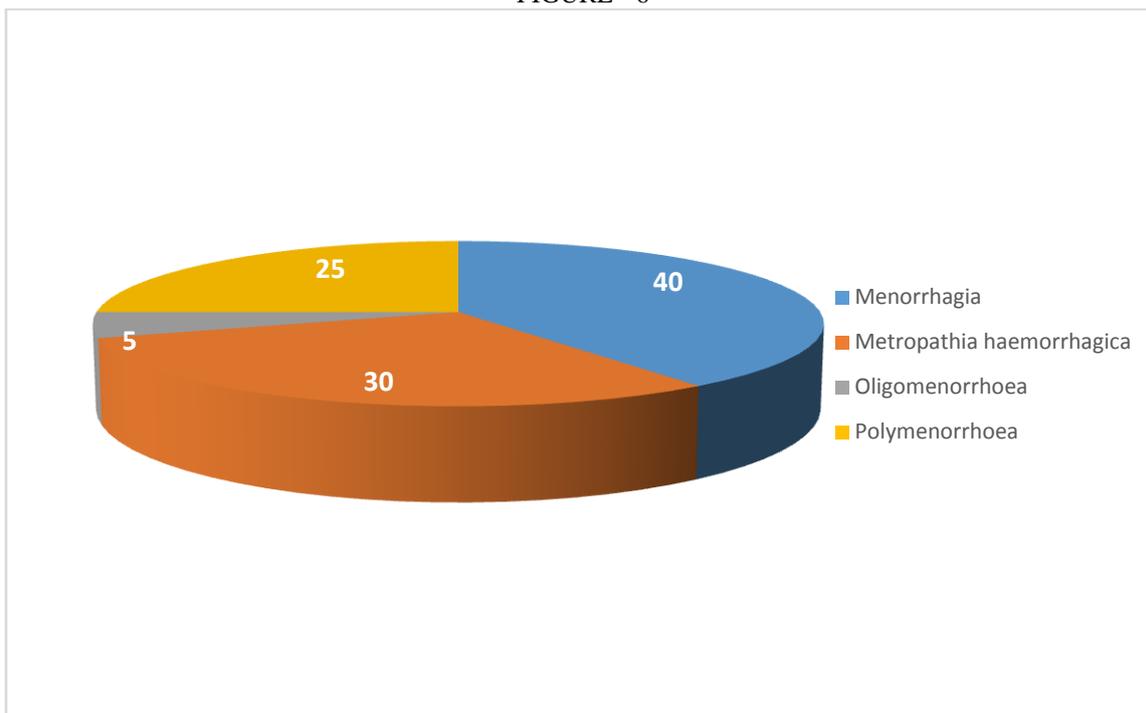
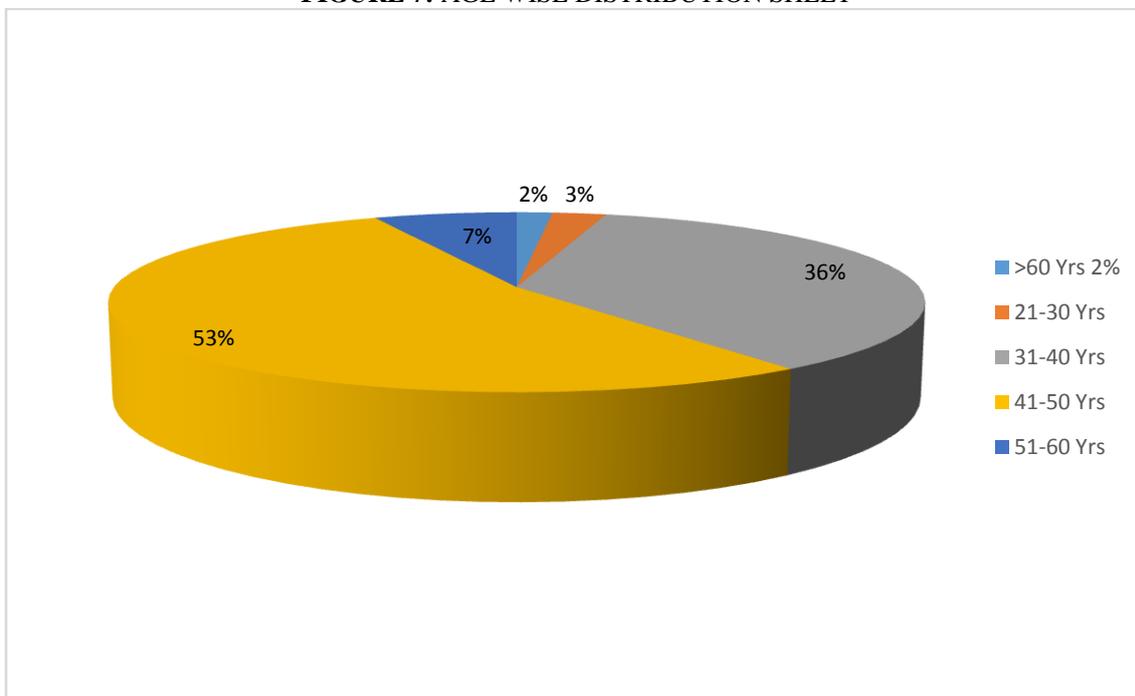


TABLE 9: AGE DISTRIBUTIONS OF PATIENTS

AGE GROUP	NO. OF CASES	PERCENTAGE
21-30 Yrs.	3	3%
31-40 Yrs.	43	36%
41-50 Yrs.	64	53%
51-60 Yrs.	8	7%
>60 Yrs.	2	2%
TOTAL	120	100%

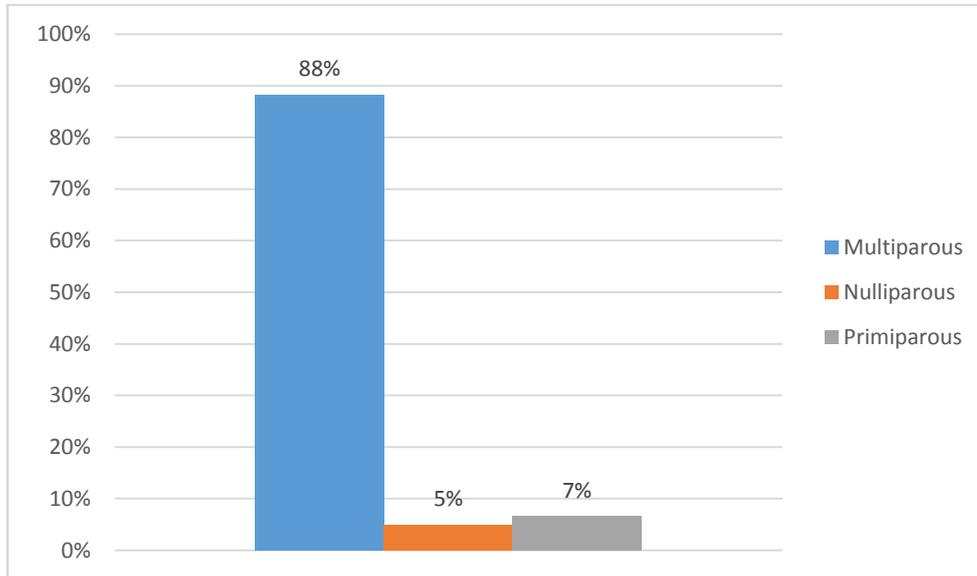
FIGURE 7: AGE WISE DISTRIBUTION SHEET



**TABLE 10: PARITY**

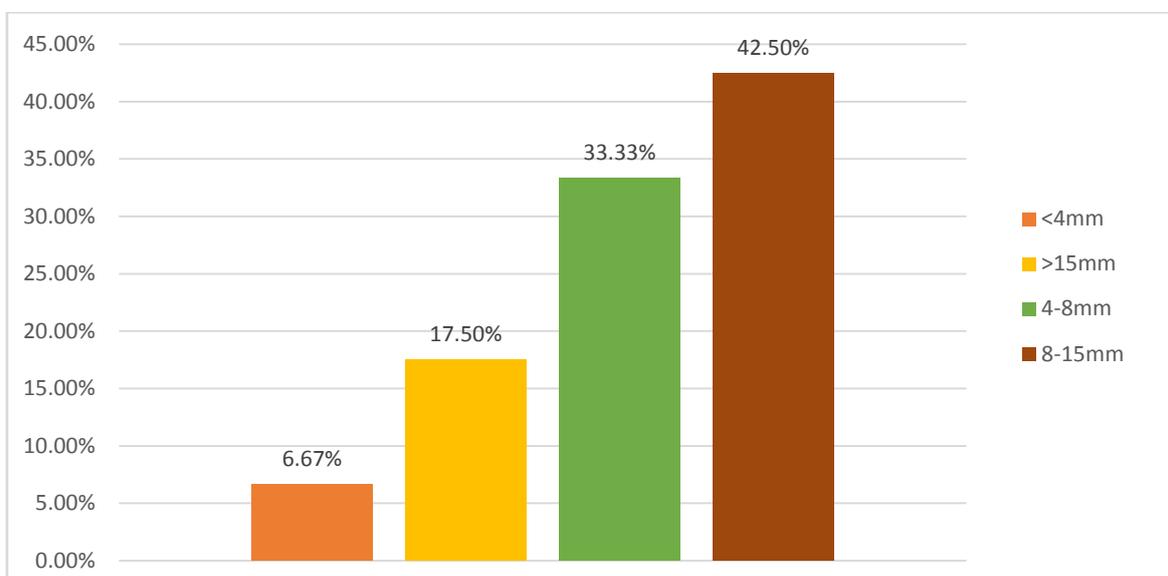
PARITY	NO. OF CASES	PERCENTAGE
Nulliparous	6	5%
Primiparous	8	7%
Multiparous	106	88%
TOTAL	120	100%

**FIGURE 8: AUB IN RELATION TO PARITY**



**TABLE 11: THICKNESS OF ENDOMETRIUM:**

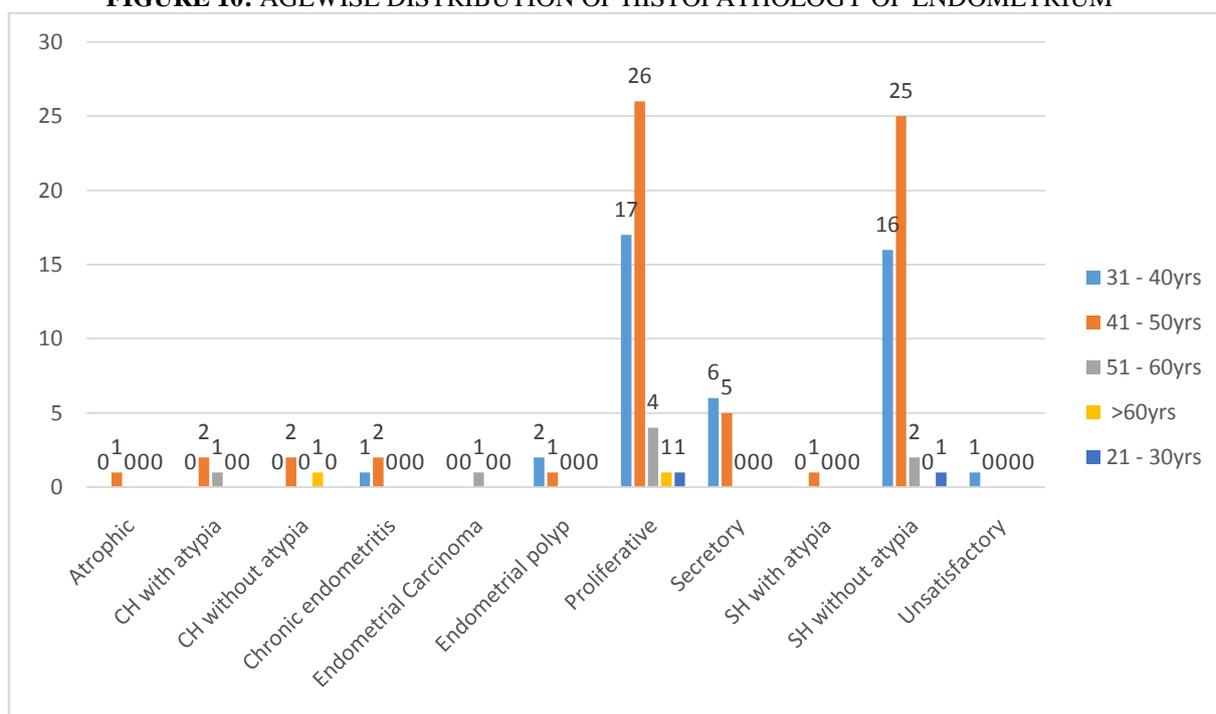
THICKNESS OF ENDOMETRIUM	NO. OF CASES	PERCENTAGE
<4mm	8	6.67%
4-8mm	40	33.33%
8-15mm	51	42.50%
>15mm	21	17.50%
TOTAL	120	100%



**TABLE 12: HISTOPATHOLOGY OF ENDOMETRIUM AND AGE WISE DISTRIBUTION**

AGE GROUP	21-30yrs	31-40yrs	41-50yrs	51-60yrs	>60yrs	TOTAL
Proliferative	1	17	26	4	1	49
Secretory	0	6	5	0	0	11
Atrophic	0	0	1	0	0	1
Chronic endometritis	0	1	2	0	0	3
Endometrial polyp	0	2	1	0	0	3
SH without atypia	1	16	25	2	0	44
CH without atypia	0	0	2	0	1	3
SH with atypia	0	0	1	0	0	1
CH with atypia	0	0	2	1	0	3
Endometrial Carcinoma	0	0	0	1	0	1
Unsatisfactory	0	1	0	0	0	1
TOTAL	2	43	65	8	2	120

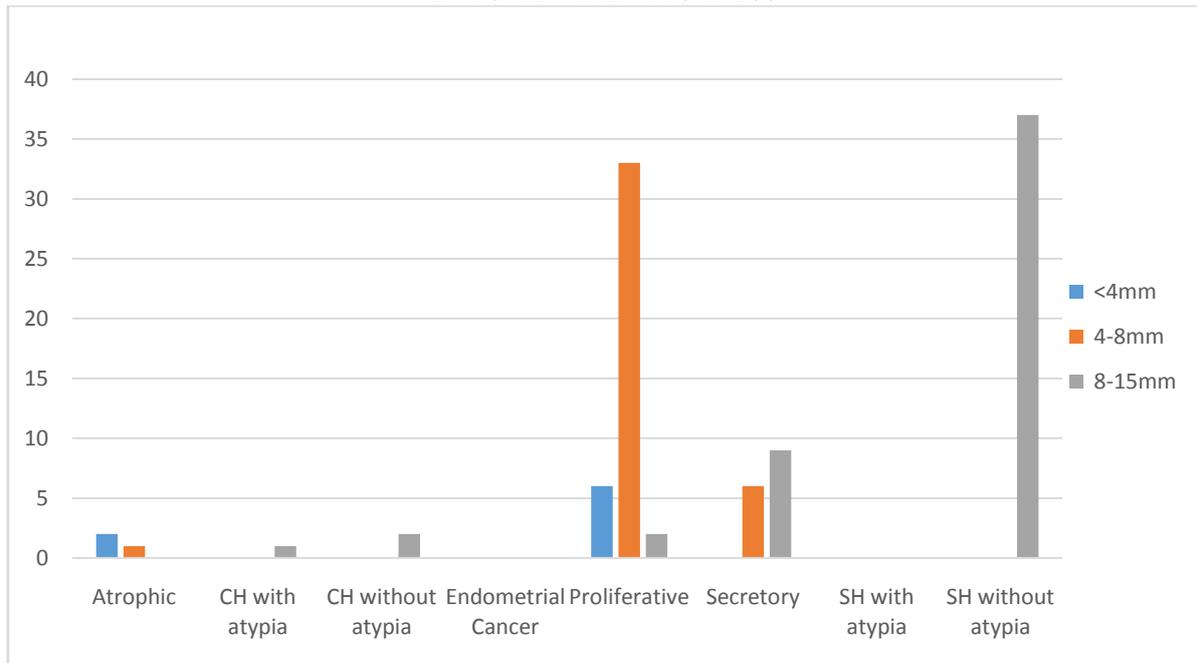
**FIGURE 10: AGEWISE DISTRIBUTION OF HISTOPATHOLOGY OF ENDOMETRIUM**



**TABLE 13: HISTOPATHOLOGY OF ENDOMETRIUM AND ENDOMETRIAL THICKNESS**

ENDOMETRIAL THICKNESS	<4mm	4-8mm	8-15mm	>15mm
Proliferative	6	33	2	0
Secretory	0	6	9	0
SH without atypia	0	0	37	18
CH without atypia	0	0	2	1
SH with atypia	0	0	0	0
CH with atypia	0	0	1	1
Atrophic	2	1	0	0
Endometrial Cancer	0	0	0	1
TOTAL NO. OF CASES	8	40	51	21

**FIGURE 11: HISTOPATHOLOGY OF ENDOMETRIUM WITH ENDOMETRIAL THICKNESS**

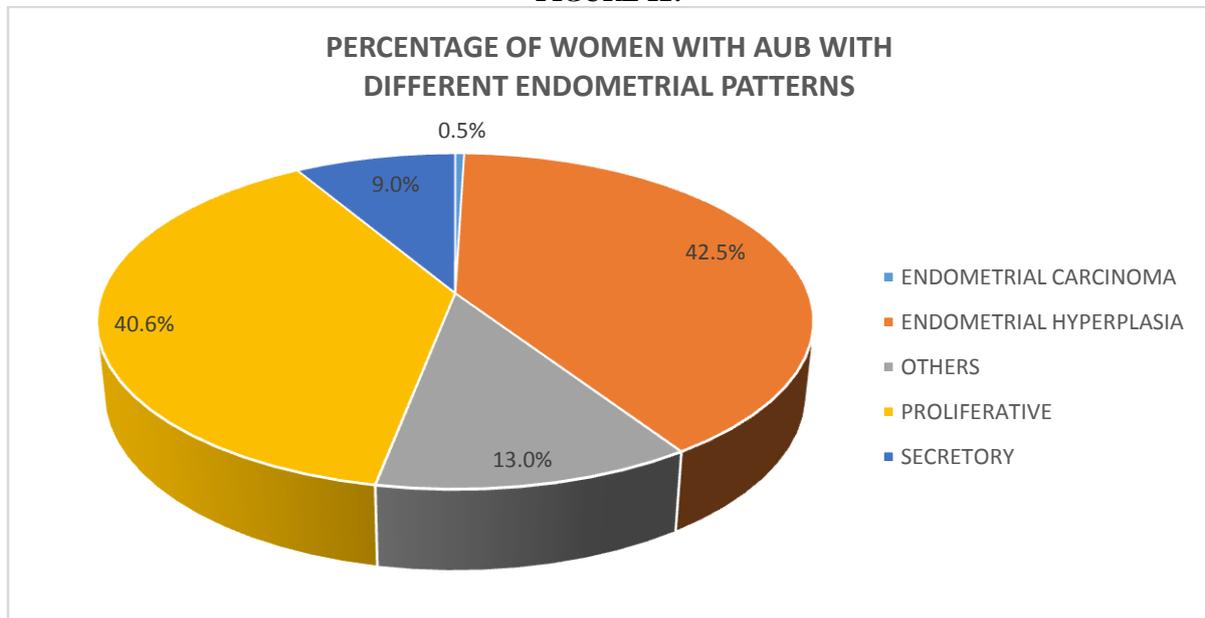


Chi square values of Histopathology of endometrium VS endometrial thickness on TVS is **120.008** and 'P' value is **<0.0001** which is significant

**TABLE 14: OVERALL PERCENTAGE OF ENDOMETRIAL PATTERNS IN AUB**

HPE PATTERN	PERCENTAGE OF WOMEN WITH AUB
PROLIFERATIVE	40.6%
SECRETORY	9.0%
ENDOMETRIAL HYPERPLASIA	42.5%
ENDOMETRIAL CARCINOMA	0.5%
OTHERS	13.0%

**FIGURE 12:**



### **III. Conclusion And Recommendation**

All patients having AUB during and after the reproductive age should be screened for endometrial pathology. Accurate analysis of endometrial samplings is the key to proper diagnosis, effective therapy and optimal outcome. The commonest pathology is endometrial hyperplasia and it is commonly seen in the perimenopausal age group to rule out preneoplastic aneoplastic etiology. D&C is the accurate procedure for detecting the endometrial pathologies specially hyperplasia, but focal lesions like endometrial polyp and myometrial lesions like leiomyoma and adenomyosis can be missed. Therefore, persistent uterine bleeding after curettage indicates the presence of lesions and warrants hysterectomy

This study also shows the in perimenopausal women with abnormal uterine bleeding, the first investigation should be a transvaginal sonogram. If endometrial thickness is  $\geq 8$ mm on TVS they can be subjected to D&C and this study also shows that an endometrial thickness cut off value of 8mm can avoid D&C in most women with AUB.

The main disadvantage of TVS is the technique of measuring the endometrium and experience of the operator which will affect the measurements.

Dr. L. Santhilatha" Study of Histopathology If Endometrium in Cases of Abnormal Uterine Bleeding and Correlation with Endometrial Thickness on Ultrasound."IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 17, no. 10, 2018, pp 58-64.