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Original article:

Study of endometrium by trans-vaginal Sonography (TVS) and it's correlation with histopathology in perimenopausal women with abnormal uterine bleeding

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ABSTRACT:

Introduction- Abnormal Uterine bleeding is one of the most common problems among peri& postmenopausal women. The key to successful clinical management is to recognize or identify the causative factors responsible. This can be achieved by thorough clinical examination, ultrasonography and histopathological examination.

Materials and methods- This is cross-sectional study to be done on 50 patients of perimenopausal age group presenting with abnormal uterine bleeding in the department of obstetrics and gynecology, TNMC ,BYL Nair Hospital, from nov 2017 to nov 2018 , attending the outpatient department planned for dilatation and curettage will be examined by transvaginal sonography for endometrial thickness before doing dilation and curettage..

Result- In our study, 21 (44 %) patients showed endometrial hyperplasia and 15 (30%) patients showed proliferative type of endometrium. Endometial hyperplasia is seen mainly in patients having ET > 10mm. All the 7 patients having endometrial thickness more than 15 mm found to be having endometrial hyperplasia. While out of 11 patients having ET 11-15 mm, 9 patients were having endometrial hyperplasia. None of the patient with ET less than 5 mm was having endometrial hyperplasia.

Conclusion- In abnormal uterine bleeding, the first investigation should be transvaginal ultrasound. TVS allows detection an endometrial pathology in majority of cases.

Keywords: abnormal uterine bleeding,endometrial thickness ,transvaginal sonography.

INTRODUCTION:

Menstrual disorders are a common indication for medical visits among women of reproductive age and menstrual bleeding affects 30% of women throughout their reproductive life time (1). Abnormal Uterine bleeding is one of the most common problems among peri& postmenopausal women.(2). AUB interferes significantly with a woman's physical, social, emotional quality of life. Diagnostic accuracy of Transvaginal Sonography (TVS), hysteroscopy, Saline Infusion Sonography (SIS) and Dilatation & Curettage (D&C) has been evaluated in various studies. In the absence any specific guidelines and recommendations we think it will be appropriate to study endometrial thickness by TVS and correlate it with D & C findings. Hence this study is planned.

AIMS AND OBJECTIVES :

AIMS

1. Evaluation of endometrial thickness with transvaginal ultrasound and its correlation with histopathology by dilation and curettage in abnormal uterine bleeding in perimenopausal women.

OBJECTIVES

1. To study the endometrial patterns in cases of abnormal uterine bleeding & anatomical (structural) lesions of uterus using transvaginalsonography& endometrial histopathology.
2. To correlate the endometrial pattern and thickness by transvaginal ultrasound with endometrial histopathology in women with AUB.
3. To determine the efficacy of Transvaginal ultrasound in depicting the pattern of endometrium.

MATERIAL AND METHODS:

INCLUSION CRITERIA

- All cases of abnormal uterine bleeding in the perimenopausal age group(>39years) admitted in TNMC,BYL NAIR HOSPITAL,MUMBAI CENTRAL.

EXCLUSION CRITERIA

- Patients with abnormal uterine bleeding in other age groups,
- Women who have attained menopause.
- Carcinoma of genital .
- Active Genital tract infection.
- Pregnancy and related causes of bleeding PV.
- Women on hormonal treatment at the time of first presentation.
- Women with intrauterine device in situ.
- Women with endocrine disorders.
- Women with bleeding disorder
- Women with adnexal pathology.

Patients fulfilling the eligibility criteria will be followed up from admission to discharge. Necessary information will be collected in predesigned data sheet & finally findings will be compiled & analysed using statistical analysis.
All the data will be collected in Excel sheet as well as Statistical software is used.

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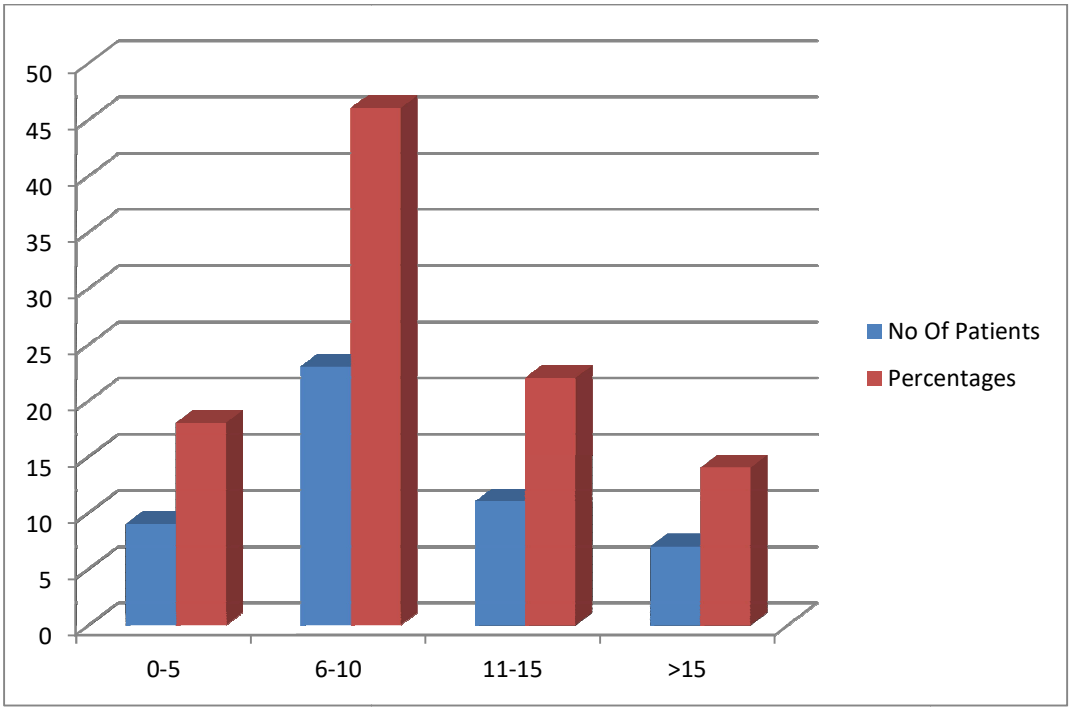
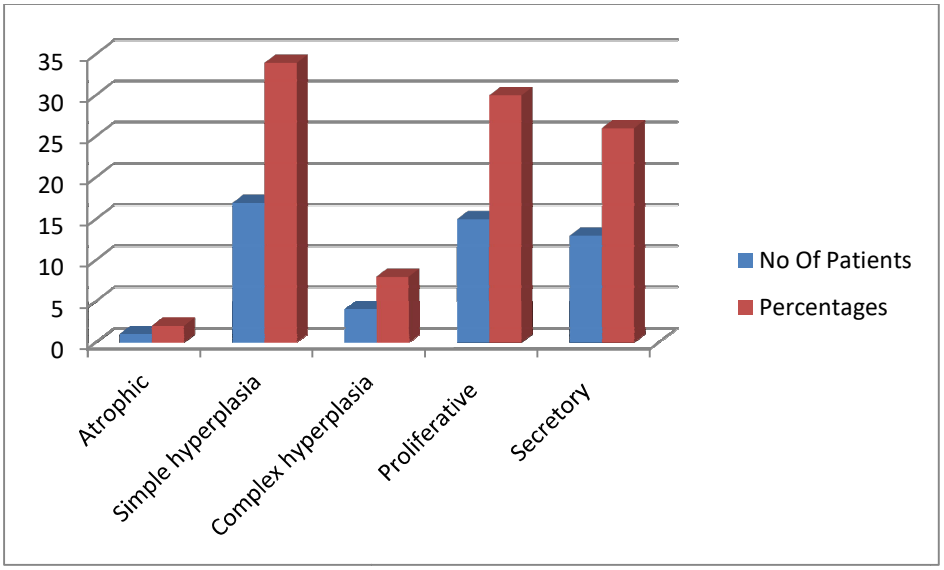
RESULT AND OBSERVATION :

ENDOMETRIAL THICKNESS BY TVS



Graph 1endometrial thickness by tvs method

Type of Endometrial pattern and Hyperplasia by Histopathology



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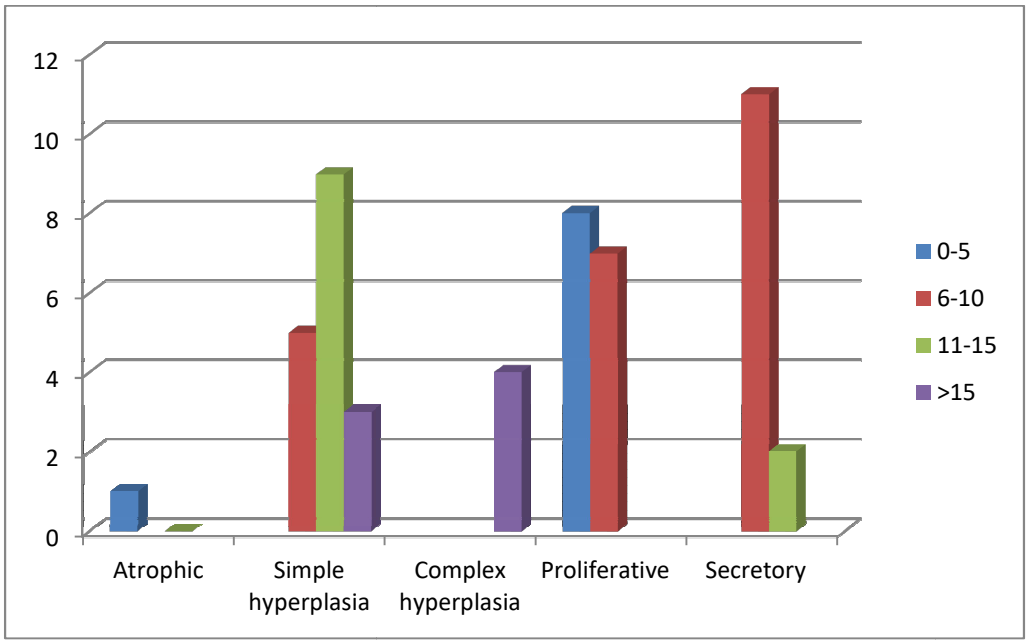
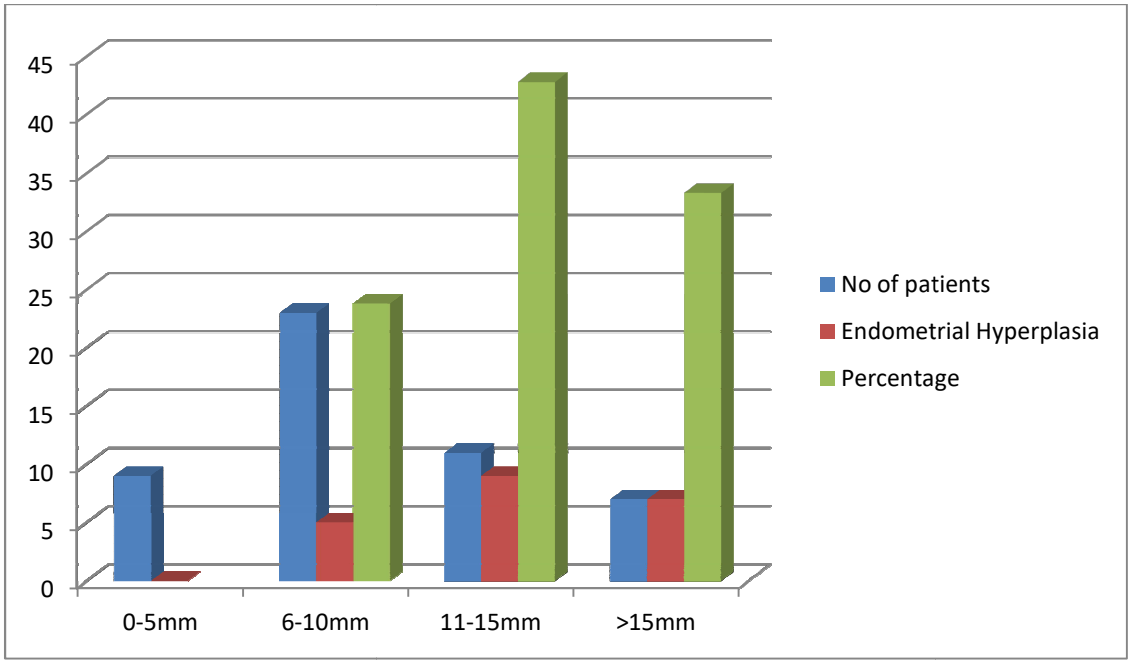
Graph 2 Type of Endometrial pattern and Hyperplasia by Histopathology

CORRELATION OF HISTOPATHOLGICAL FINDINGS AND TVS FINDINGS



Graph 3CORRELATION OF HISTOPATHOLGICAL FINDINGS AND TVS FINDINGS



Graph:4 **Correlation between endometrial thickness on TVS and endometrial hyperplasia**

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Clinical Presentation

Various Menstrual Patterns	No Of Patients	Percentages
Menorrhagia	21	42 %
Polymenorrhoea	13	26 %
Menometrorrhagia	15	30 %
oligomenorrhoea	1	2 %

Table 1. Clinical Presentation of patients

Parity

Parity	No Of Patients	Percentage
0	2	4 %
1	9	18 %
2	12	24 %
3	8	16 %

Table 2: Parity of the patient

DISCUSSION:

Endometrium is mirror of hormonal status in women. Histological variation can be seen in endometrium according to age of women,phase of menstrual cycle and any another specific pathology(3). Abnormal uterine bleeding (AUB) is primarily a change from normal menstrual pattern. It may involve frequency and duration of cycle, duration of flow and also the amount of blood loss.

Graph 1 show correlation of patient's menstrual symptom with endometrial thickness. Out of 50 cases of abnormal uterine bleeding, maximum no of patient (46 %) had ET between 6-10 mm, followed by 11-15 mm of ET in 21 % cases.Thulasi et al has Correlated endometrial thickness by Trans-Vaginal Sonography [TVS] and histopathology (4). In their study 30 patients had endometrial hyperplasia when the endometrial thickness exceeded10mm. There was no evidence of hyperplasia when the endometrial thickness was less than 10 mm. But in our study we found that 5 patient having ET 5-10 mm were presented with hyperplasia.

Graph 3 and 4 shows correlation of endometrial thickness on TVS and histopathological findings In the present study, analysis of patient's histopathological findings showed Endometrial hyperplasia in 21 cases, on comparison with histopathology report 7 cases having ET more than 15 mm were truly diagnosed on TVS. In a group where ET is 11-15 mm out of 11 cases 9 patients were confirmed with histopathology and 2 cases missed. According to WHO classification of tumours the endometrial hyperplasia are classified as simple or complex based on the absence or presence of architectural abnormalities like glandular complexity and crowding, further designated as atypical if they show nuclear atypia (5).

Table 1 shows distribution of cases according to clinical presentation, out of 50 cases maximum no of patient (42 %) presented with heavy menstrual bleeding , this is as per revised terminology by AICOG which correspond to menorrhagia, while frequent bleeding (polymenorrhoea) in (26%) of patient and heavy prolonged bleeding (Menometrorrhagia) in (4%) of patient. Choudhary J et al has also reported that majority of patients(50 % of cases) having menorrhagia (6).Bleeding pattern was comparable to the study done by Pillai SS et al who reported 46.5% patients having menstrual complaints of menorrhagia(7). Panda's had 60% cases of menorrhagia followed by Polymenorrhagia and Metrorrhagia. Tahir MM et al, Bigrigg et al Menorrhagia 40.75%, PMB 30.75% Kekelci et al Menorrhagia 21%, PMB 13.3%,Menometrorrhagia 65.7%..

Table 2 shows the lowest incidence was seen in nulliparous women in the present study. By these observations, it may be implied that incidence of AUB is highest in parous women.Shajitha S et al has also the observed the same findings.

CONCLUSION:

Based on the findings of the above study, it can be concluded that in abnormal uterine bleeding, the first investigation should be transvaginal ultrasound. If the endometrial thickness exceeds 10mm, a dilatation and curettage procedure is to be done to rule out any endometrial hyperplasia. TVS allows detection an endometrial pathology in majority of cases.

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