



Research Paper

“Transvaginal Ultrasound For Endometrial Thickness In Abnormal Uterine Bleeding With Its Histopathology”

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ABSTRACT:- Aim: In this study we evaluate the usefulness of transvaginal ultrasound to assess endometrial thickness and its correlation with histopathology in cases of abnormal uterine bleeding.

Methods: It is a prospective cross sectional study done on 100 women who were enrolled between August 2013 to July 2015.

Result: Out of 100 cases, 40 women were in reproductive age, 40 women were in perimenopausal age and 20 were postmenopausal age.

Conclusion: TVS with HPE correlation helps us to identify atypical hyperplasia at the earliest which is a precursor of adenocarcinoma in 29%.

KEYWORDS: Transvaginal, abnormal uterine bleeding, Menorrhagia, Proliferative endometrium.

I. INTRODUCTION

Abnormal Uterine bleeding (Aub) is one of the most common problem among peri & postmenopausal women. A menstrual abnormality is the cause of discomfort, inconvenience and disruption of healthy, social and physical life styles among women worldwide. It is responsible for more than 20% of all visits to outpatient clinic and may accounts for more than 25% of all hysterectomies [1,2] In perimenopausal women, Aub is diagnosed when there is a substantial change in frequency, duration or amount of bleeding or between periods. In postmenopausal women, any vaginal bleeding during after 1 year of cessation of menses is considered abnormal and required evaluation. [3, 4]

There are many diagnostic modalities for evaluating endometrial pathologies in women who have Aub. These include dilation & Curettage, and hysteroscopy. Recently transvaginal sonogram (TVS) has permitted the use of higher frequency ultrasound waves at greater proximity of the uterus. It is relatively cheap, non invasive diagnostic modality of studying the endometrial pattern and its thickness and at the same time to exclude organic pathology in case of Aub [5]

II. METHODS

It is a prospective cross sectional study done in the dept of OBG in Dr. B R Ambedkar Medical College & Hospital, Bangalore for a period of 2 yrs from August 2013 to July 2015. In this 100 women were enrolled who were coming to OPD. Patients included were with H/o of irregular or excessive vaginal bleeding, who were >20yrs and both nulliparous and parous women. Patients with medical disorders and < 20yrs were excluded. These women examined with detailed history, pelvic examination with basic lab investigations & TVS done for endometrial thickness along with any pathology, later they were subjected to curettage for histopathological study and results correlated with TVS.

III. RESULTS

In our study, out of 100 women who were in the age group of 20-63 yrs were included. These were divided into 3 group like, reproductive age (20-40) as group A, perimenopausal age (41-50) as group B, and finally as post menopausal age (51-63) as group C. 40% of cases in our study were in reproductive age and perimenopausal age and 20% were post menopausal age as shown in Table 1. Menstrual pattern like

menorrhagia seen in 30% in Group A, 40% in Group B and Nil in Group C. But post coital bleeding seen in 45% in Group C as shown in Table 2.

Clinical diagnosis in our study showed, 10 cases of fibroid (25%) in Group A, 6 cases (15%) in Group B. But in Group C, 9 cases of Cervical Carcinoma (45%) as shown in Table 3. Endometrial thickness was normal in 22 cases (85%) in Group A, 16 cases (40%) in Group B and 3 cases (15%) in Group C. But 60% & 85% had abnormal endometrial thickness in both Group B & Group C, as shown in Table 4. Histopathological examination report showed 3 cases of simple hyperplasia in Group A, 8 cases of cystoglandular hyperplasia and 9 cases of simple hyperplasia in Group B and finally 9 cases of cervical carcinoma in Group C as shown in Table 5.

IV. DISCUSSION

Abnormal uterine bleeding is common in peri menopausal & postmenopausal women. The etiology varies from simple dysfunctional uterine bleeding to benign lesions like polyp, fibroid & malignancies. Apart from the clinical examination, various diagnostic modalities are available to confirm our diagnosis. In our study the efficacy of trans vaginal sonogram for diagnosing abnormal uterine bleeding & its correlation with histopathology of endometrium by fractional curettage were studied.

In our study 100 cases of AUB were enrolled, out of which 40 cases (40%) belonged to reproductive age group, 40 cases (40%) in peri menopausal and 20 cases (20%) in post menopausal age group respectively. Majority of women in reproductive age group were 31-40 yrs. In this study, in reproductive age group, 16(40%) cases of women had poly menorrhagia, 16(40%) cases of perimenopausal age had menorrhagia as main complaint and finally in postmenopausal age group 11(55%) cases had menometrorrhagia. Based on clinical diagnosis, 25(62.5%) cases were DUB in reproductive age and 30(75%) in peri menopausal age group. But in postmenopausal age group 9(45%) cases were cervical carcinoma. Regarding endometrial thickness by TVS and results were correlated with HPE reports. In reproductive group 18(45%) cases had ET b/w 12-16mm and out of 18 cases, 10 cases were leiomyoma. In perimenopausal group 15(37.5%) had ET b/w 8-12mm and 4 cases had endometrial polyp and 6 cases were myoma. In postmenopausal group 9(45%) had ET b/w 5-8mm and 5 cases had simple hyperplasia and 3 cases were endometrial polyp.

In Other study done by Vakiani M et al conducted a study in 1996 on histopathological findings of the endometrium in patients with DUB. 7000 endometrial curettages from patients with AUB were studied. Among these 1282 cases were defined as DUB. Endometrial curetting revealed an anovulatory cycle in 984(77%) of the patients and 446(47.5%) showed endometrial hyperplasia. 412(41.8%) showed abnormal proliferation due to prolonged persistence of a follicle while 106 showed deficient endometrial proliferation[6]. In another study showed 260 patients of which 139 patients have normal scan findings. After comparison with hysteroscopy 135 patients scan were true negative. Abnormal scan found in 121 patients out of which only 105(86%) were abnormal hysteroscopically. In onlu 16 patients with false positive abnormal scans, hysteroscopy revealed no endometrial abnormality[7]. In other study showed 100 patients. Of which 50 were DUB and 50 of reproductive age. Reports showed normal endometrium was seen in 60%. Endometrial hyperplasia was in 28% cases[8].

V. CONCLUSION

Transvaginal sonography has a good diagnostic accuracy in detecting endometrial hyperplasia. Due to the fact that TVS is safe, acceptable and non invasive which is easily available in all health centre and it should be continued as first line of diagnostic step in women with AUB.

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Table No 1-Grouping of Cases

| SI No | Group | Cases | |
|-------|---|-------|-----|
| | | Nos | % |
| 1 | A .Reproductive Group (20-40Years) | 40 | 40 |
| 2 | B. Perimenopausal group (41-50 years) | 40 | 40 |
| 3 | C. Post menopausal group (51-63 years) | 20 | 20 |
| | Total | 100 | 100 |

Table No 2-Menstrual pattern with AUB

| SI No | | Group A | | Group B | | Group C | |
|-------|------------------|---------|-----|---------|-----|---------|-----|
| | | No | % | No | % | No | % |
| 1 | Menorrhagia | 12 | 30 | 16 | 40 | - | - |
| 2 | Poly menorrhea | 12 | 30 | 8 | 20 | - | - |
| 3 | Poly Menorrhagia | 16 | 40 | 12 | 30 | - | - |
| 4 | Menometrorrhagia | - | - | 4 | 10 | 11 | 55 |
| 5 | Post Coital | - | - | - | - | 9 | 45 |
| | Total | 40 | 100 | 40 | 100 | 20 | 100 |

Table No-3. Clinical Diagnosis

| SI No | Clinical Diagnosis | Group A | | Group B | | Group C | |
|-------|--------------------|---------|------|---------|----|---------|----|
| | | No | % | No | % | No | % |
| 1 | Polyp | 05 | 12.5 | 04 | 10 | 03 | 15 |
| 2 | Fibroid | 10 | 25 | 06 | 15 | - | - |
| 3 | DUB | 25 | 62.5 | 30 | 75 | 08 | 40 |
| 4 | Ca Cx | - | - | - | - | 09 | 45 |

Table No-4 Endometrial Thickness

| SI No | Endometrial Thickness | Group A | | Group B | | Group C | |
|-------|-----------------------|---------|-----|---------|------|---------|-----|
| | | No | % | No | % | No | % |
| 1 | 4 – 5mm | - | - | 3 | 7.5 | 3 | 15 |
| 2 | 5.1 – 8mm | 10 | 25 | 13 | 32.5 | 9 | 45 |
| 3 | 8.1 – 12mm | 12 | 30 | 15 | 37.5 | 8 | 40 |
| 4 | 12.1– 16mm | 18 | 45 | 9 | 22.5 | - | - |
| | Total | 40 | 100 | 40 | 100 | 20 | 100 |

Table No-5: Histopathological results

| SL No | HPE | Group A | Group B | Group C |
|-------|----------------------------|-----------|-----------|-----------|
| | | Nos | Nos | Nos |
| 1 | Proliferative | 09 | 06 | 03 |
| 2 | Secretory | 13 | 06 | - |
| 3 | Atropic | - | - | - |
| 4 | Endometrial polyp | 05 | 04 | 03 |
| 5 | Cystoglandular hyperplasia | - | 08 | - |
| 6 | Simple hyperplasia | 03 | 09 | 05 |
| 7 | Atypical hyperplasia | - | 01 | - |
| 8 | Fibroid | 10 | 06 | - |
| 9 | Adeno Ca | - | - | 05 |
| 10 | Squamous Ca | - | - | 04 |
| | Total | 40 | 40 | 20 |