ABSTRACT

Introduction: Dilatation and curettage (D&C) once considered to be the best choice for diagnosing the uterine pathology, is now being replaced by minimally invasive technique called, transvaginal sonography. Transvaginal sonography (TVS) converts high-frequency sound waves into different echo patterns and converted into a definite pattern of images, which are interpreted by consultants. The present study is based on role of TVS in abnormal uterine bleeding in a cohort.

Materials and Methods: This prospective cohort study was conducted in Department of Obstetrics and Gynecology, Teerthanker Mahaveer Medical College and Research Center, Moradabad, Uttar Pradesh, India. 70 nonpregnant females 38-51 years of age on no hormonal treatment were chosen for the study, obtaining a written informed consent. D&C was performed followed by TVS using high-frequency transducer was performed in each case.

Results: Results of D&C and TVS compared and contrasted. On the comparison, we found that TVS detected those lesions which were missed by D&C. D&C reports showed that in 47 out of 70 cases there were normal proliferative endometria. An endometrial pathology was found in 38 patients. Endometrial hyperplasia was diagnosed in 13, polyps in 14, and endometrial carcinoma in 5 cases. An abnormal sonography was found in 41 of 70 cases.

Conclusion: We concluded our study with the fact that TVS is the first line of diagnostic modality for the females complaining of uterine bleeding in the majority of cases. TVS is noninvasive, simple, and reliable technique, to carry out and detect lesions more efficiently than any other technique.

Keywords: Cohort, Malignancy, Polyps, Transvaginal sonography

INTRODUCTION

Most of the females of (30-50 years of age approximately) attending gynecology clinic present with irregular, prolonged unexpected bleeding, regardless of the cause.\(^1,2\) This bleeding of unexpected origin not only affects their day-to-day life, but, if left without care can pose serious consequences.\(^3,4\) Dilatation and curettage (D&C) once considered to be the best choice for diagnosing the uterine pathology, is now being replaced by minimally invasive technique called, Transvaginal sonography.\(^5\) On diagnosis, about 85-90% of problems are benign in nature and rest used to malignant, until unless proved otherwise.\(^6,7\) Transvaginal sonography (TVS) converts high frequency sound waves into different echo patterns and converted into a definite pattern of images, which are interpreted by consultants.\(^8\) Ultrasound waves do not have any deterrent effect even in pregnant females.\(^9\) D&C once supposed to be the best choice is now not a favorite choice, because it is found to skip certain important causes of unexpected causes of uterine bleeding.\(^10\) Due to its certain limitations of D&C TVS replaced D&C, and now the investigation of choice in abnormal uterine bleeding.\(^11,12\) The present study is based on role of TVS in abnormal uterine bleeding in a cohort.

MATERIALS AND METHODS

Seventy women of age range 38-51 years who attended the department of OBG were included in this study.
Women, known to have any form of hormonal treatment, any gynecological malignancy or hormonal disorders were excluded. The institutional ethical and research committee approved the study and informed consent from every woman was taken. TVS was performed using Madison ultrasound system.

Endometrial thickness was measured. A cut-off value of $8 \pm 0.2$ mm was taken. By TVS can detect suspicious endometrial pathologies. Endometrial thickness of more than after that D&C was performed. Histopathology of endometrium as obtained was compared with the TVS.

RESULTS

Histological reports showed that in 47 out of 70 cases there were normal proliferative endometria. An endometrial pathology was found in 38 patients. Endometrial hyperplasia was diagnosed in 13, polyps in 14, and endometrial carcinoma in 5 cases. Endometrial echoes were visualized and measured by TVS in all cases. An abnormal sonography was found in 41 of 70 cases. Results of TVS and histopathology among 70 cases are shown in Table 1 (Figure 1).

DISCUSSION

Today the need of an hour is that we should employ those diagnostic techniques that should be easy to perform, cheap, noninvasive, and acceptable to the patients. TVS fulfills all these criteria in perimenopausal age group. Supplemented by other uterine visualization techniques, it can be used a primary investigative technique for most of the uterine pathologies.

Thickness of the uterine endometrium as accessed by TVS can detect suspicious endometrial pathologies. Endometrial thickness of more than $8 \pm 0.2$ mm is considered suspicious of endometrial pathology in perimenopausal age group and requires further investigative techniques. 13, 14

As noticed by other workers, empty bladder enhances TVS visualization and detects abnormal uterine pathologies well, especially of the uterine cavity. 15, 16 TVS in experienced hands is free from all type of risks as compared with D&C. Instrument as used in this study also plays a vital role in better diagnosis. Direct visualization of uterine cavity (Hysteroscopy) supplemented by TVS detects abnormal uterine pathologies better in contrary to using these techniques singly. TVS can be performed without any anesthetic procedure, by just taking patient in confidence. 16, 17 Studies show that about 3.5-5% of images cannot be diagnosed well even in very experienced hands and in those cases further more advanced techniques should be employed. 18, 19

CONCLUSION

From the study conducted above, we are very much sure that TVS is the ideal first line of diagnostic modality for the females complaining of uterine bleeding in the majority of cases. TVS has proved its supremacy in being noninvasive, simple, valid technique, which does not even require anesthesia to carry out and detect lesions more efficiently than any other technique. Hence we, the author, recommend this technique in the majority of cases in abnormal uterine bleeding, because this study was conducted in fairly large number of sample.

REFERENCES


<table>
<thead>
<tr>
<th>Post dilatation and curettage evaluation</th>
<th>TVS evaluation</th>
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<tbody>
<tr>
<td>Number of patients</td>
<td>70</td>
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<tr>
<td>Normal endometrium</td>
<td>27</td>
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<tr>
<td>Endometrial polyps</td>
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<tr>
<td>Hyperplasia</td>
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<td>Uterine malignancy</td>
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<td>Others</td>
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<td><strong>TVS: Transvaginal sonography</strong></td>
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</table>

Figure 1: Two diagnostic techniques

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