
**ISSN Print:** 2394-7500
**ISSN Online:** 2394-5869
**Impact Factor (RJIF):** 8.4
IJAR 2025; 11(4): 125-127
www.allresearchjournal.com
Received: 05-02-2025
Accepted: 09-03-2025

**Mehraj Bano**
Department of Obstetrics & Gynecological Nursing, Venkteswar College of Nursing, Sai Tirupati University, Udaipur, Rajasthan, India

**Geetanjali Sharma**
HOD, Department of Obstetrics & Gynecological Nursing, Venkteswar College of Nursing, Sai Tirupati University, Udaipur, Rajasthan, India

**Corresponding Author:**
**Mehraj Bano**
Department of Obstetrics & Gynecological Nursing, Venkteswar College of Nursing, Sai Tirupati University, Udaipur, Rajasthan, India

# Comparative study of transvaginal sonography and hysteroscopy as diagnostic modalities evaluation in abnormal uterine bleeding among women in selected hospitals at Udaipur

**Mehraj Bano and Geetanjali Sharma**

**Abstract**
**Introduction:** A tear happens spontaneously as the baby stretches the vagina during birth. An episiotomy is a cut made by a healthcare professional into the perineum and vaginal wall to make more space for your baby to be born. Episiotomy was introduced in the early 1920s, as a means to cut short second stage of labour and prevent to pernieal tears (PT) by widening the perineum. A postpartum dry heat and moist heat is a special application used in the early postpartum period to help ease the pain, promote healing, and give good hygiene to the perineal area.
**Aims and Methods:**

- To compare the diagnostic value of transvaginal ultrasound and hysteroscopy in evaluation of abnormal uterine bleeding.
- To correlated transvaginal Sonography & hysteroscopy finding with histopathological finding for evaluating intrauterine pathology in case of abnormal uterine bleeding.
- To compare the diagnostic performance of transvaginal ultrasound & diagnostic hysteroscopy in the detection of abnormal uterine bleeding in women.

**Results:** The method adopted for the present study was prospective comparative approach as the study aimed to comparison of transvaginal USG and hysteroscopy as diagnostic modalities evaluation in abnormal uterine bleeding among women. 60 women with abnormal uterine bleeding using nonprobability convenience sampling technique. Data collected by evaluation Scale. Prospective comparative research design, the study was conducted at selected hospital of Udaipur, Rajasthan. Both transvaginal USG and hysteroscopy were accurate an abnormality was diagnosed giving a specificity of 68.96% & 82.14% and positive predictive value of 72.33% & 84.84%. The ability to diagnose a lesion (sensitivity) was more with hysteroscopy in comparison to transveginal USG (87.5% v/s 77.41%), while a negative diagnosis was less wrongly made with hysteroscopy (false negative rate: 12.5% v/s 22.58%). Out of 60 patients tested 32 patients normal findings, 28 patients had abnormal findings, out of which 5 (8.3) cases had endometrial polyp and Submucos myoma, 13 (21.7) cases had hyperplasia, 4 (6.7) cases had endometrial atrophy and 1(4.7) cases had irregular shedding pattern of endometrium. This indicates there is significant association in experimental group and not significant association in control group. Hence research hypothesis $H_1$ was accepted. The main focus of the study was to Comparison of transvaginal USG and hysteroscopy as diagnostic modalities evaluation in abnormal uterine bleeding among women.
**Conclusion:** In the present study 60 women's were selected through nonprobability convenient sampling technique. Researcher used Prospective comparative design to diagnostic value during abnormal uterine bleeding were collected through evolution scale and data were analysed through suitable statistical method.

**Keywords:** Comparative, women's, transvaginal Hysteroscopy, Abnormal uterine bleeding & diagnostic modalities.

## Introduction

Abnormal uterine bleeding is defined as any type of bleeding in which the duration, frequency, or amount is excessive for an individual patient [1].

Apart from social inconvenience in many cases, abnormal uterine bleeding can result in anemia, impaired quality of life, and physical and psychological distress. Abnormal uterine bleeding (AUB) is responsible for about more than one-third of gynaecologic consultations

and about two-thirds of hysterectomies. Though abnormal uterine bleeding is a common gynaecological presentation it is often complex and difficult to diagnose the exact cause. A detailed history and physical examination are fundamental for the diagnosis of abnormal uterine bleeding (AUB) [2].

Fibroids and polyps are the most common cause of anatomic abnormal uterine bleeding. While most patients with abnormal uterine bleeding have benign diseases, thorough investigation is necessary, particularly in the perimenopausal women. As benign uterine diseases and endometrial hyperplasia are responsible for about 70% of abnormal uterine bleeding, investigating the uterine cavity enables the gynecologist to offer the most appropriate treatment [3].

Abnormal uterine bleeding (AUB) is defined as any bleeding from the genital tract which is a deviation from the normal in frequency, cyclicity or quantity.it is one of the common disorders in gynaecology and accounts for 30-40% of cases in the outpatient clinic [9].

The type of abnormal uterine bleeding, menorrhagia or metrorrhagia can indicate the cause of the bleeding, but further investigation is always needed. Investigation can be done by a diagnostic hysteroscopy. However, a hysteroscopy is an invasive and discomforting procedure. Transvaginal Sonography (TVS) is a non-invasive alternative, but has a low specificity in measuring endometrial thickness [10].

Hysteroscopy has the advantage of providing a direct visualization of the entire uterine cavity and endometrium, allowing biopsy to be taken during the procedure from suspected abnormal sites. Though hysteroscopy has become standard of choice for evaluating uterine cavity, it is an invasive procedure, performed under local or general anaesthesia, and associated with discomfort. The purpose of this study is to evaluate the diagnostic accuracy of transvaginal Sonography and hysteroscopy in order to examine if the number of hysteroscopic procedures can be reduced.

**Problem Statement**

"Comparative study of transvaginal sonography and hysteroscopy as diagnostic modalities evaluation in abnormal uterine bleeding among women in selected hospitals at Udaipur."

**Objectives**

- To compare the diagnostic value of transvaginal ultrasound and hysteroscopy in evaluation of abnormal uterine bleeding.
- To correlated transvaginal Sonography & hysteroscopy finding with histopathological finding for evaluating intrauterine pathology in case of abnormal uterine bleeding.
- To compare the diagnostic performance of transvaginal ultrasound & diagnostic hysteroscopy in the detection of abnormal uterine bleeding in women.

**Research Hypothesis**

**$H_1$:** There will be a significant association between the knowledge and attitudes of women regarding abnormal uterine bleeding.

**Methodology**

The methods adopted for the present study was prospective comparative approach as the study aimed of transvaginal Sonography and hysteroscopy as diagnostic modalities evaluation in abnormal uterine bleeding among 60 women using nonprobability convenience sampling technique. Data collected by Evaluation scale. Prospective comparative research design, the study was conducted in Geetanjali Hospital, Ananta Hospital & Pacific Hospital at Udaipur.

**Criteria for sample selection**

**Inclusion criteria**

The study includes:

- Woman's 25-60 yrs of age will be included.
- Parous & Nulliparous women with abnormal uterine bleeding.
- Participants who do not have any other medical and surgical complications.

**Exclusion criteria**

**The study excludes**

- Profuse bleeding per vagina.
- Infection in the uterine tract.
- Known cases of carcinoma cervix and uterine malignancy.
- Nulliparous patients with dysfunctional uterine bleeding were also excluded from the study

**Development and description of tool**

The tool was developed based on review of literature, opinion from experts in the field of Medical and Nursing. The following steps were undertaken to prepare the final tool The tool consists of two sections:

**Section A:** Demographic variable:

It consists of 6 items seeking information about age group**,** parity, educational status, area of residence**,** Prominent Pattern of bleeding**,** Duration of illness.

**Section B:** Evaluation scale for transvaginal Sonography & Hysteroscopy.

**Table 1:** Evaluation Scale for Transvaginal Sonography & Hysteroscopy

| Diagnosis | Findings |
|---|---|
| Polyp | |
| Submucous myoma | |
| Hyperplasia | |
| Endometritis | |
| E. atrophy | |
| Irregular shedding | |
| Normal | |
| Total | |

**Reliability of the tool**

In this study, evaluation Scale was used to find out transvaginal USG and hysteroscopy as diagnostic modalities evaluation in abnormal uterine bleeding among women, is a reliable tool**.**

**Ethical consideration**

Ethical considerations are vital to any research study because of the influence on the researcher's ability to acquire and retain participants.

The researcher has administer evaluation scale to find out transvaginal USG and hysteroscopy as diagnostic modalities evaluation in abnormal uterine bleeding among women in selected hospitals of Udaipur." The proposed study was

conducted after the approval from Venkteshwar College of nursing Ethical Committee. Permission were obtained from the concerned authorities. Informed consent were obtained from the woman's suffering from abnormal bleeding. Respondents had given the right to withdraw from the study at any time they want and assurance was given to the study subjects that, the privacy and anonymity of the individual will be maintained confidentially.

**Intervention**

After securing written permission from the respective authority and based on the inclusion and exclusion criteria the sample was selected. 17 Informed consent was taken from the women's having transvaginal USG & Hysteroscopy. After explaining the study, first check all reports done by the gynaecologist after that administer evaluation scale and find out reason due to abnormal vaginal bleeding occurring.

**Plan for data analysis**

The Researcher used Descriptive statistics which include frequency, percentage and mean, medium and standard deviation to find out transvaginal USG and hysteroscopy as diagnostic modalities evaluation in abnormal uterine bleeding among women. Chi-square test was done to find out the association between demographic variables.

**Projected outcome**

After the study, the researcher will know whether transvaginal USG and hysteroscopy as diagnostic modalities evaluation in abnormal uterine bleeding.

**Study Results**

**Section A: Socio-demographic data**

**Among 60 Postnatal mothers with uterine bleeding:** Were 25 (41.7%) belongs to the age group 31-35 years, were 40 (66.7%) belongs to multipara, were 25 (41.7%) belongs to senior secondary education, were 35 (58.7%) belongs to rural, were 20 (33.3%) belongs to the metorrhagia, were 35 (58.3%) belongs to the 4 to 6 months.

**Section B: Comparison of the validity of transvaginal ultrasound and hysteroscopy in evaluation of abnormal uterine bleeding**

Both transvaginal USG and hysteroscopy were accurate an abnormality was diagnosed giving a specificity of 68.96% & 82.14% and positive predictive value of 72.33% & 84.84%. The ability to diagnose a lesion (sensitivity) was more with hysteroscopy in comparison to transveginal USG (87.5% v/s 77.41%), while a negative diagnosis was less wrongly made with hysteroscopy (false negative rate: 12.5% v/s 22.58%).

**Section C: Find out Final diagnosis after transvaginal USG and hysteroscopy**

Out of 60 patients tested 32 patients normal findings, 28 patients had abnormal findings, out of which 5 (8.3) cases had endometrial polyp and submucos myoma, 13 (21.7) cases had hyperplasia, 4 (6.7) cases had endometrial atrophy and 1(4.7) cases had irregular shedding pattern of endometrium.

**Section-D: Association between pre-test knowledge score of respondents with selected Socio-demographic variable**

Findings related to association between pre-test knowledge score of respondents with selected Socio-demographic variable such as age in years ($\chi 2$=8.09), parity 31 ($\chi 2$=6.04), occupation (7.62), area of residence ($\chi 2$=8.27) and prominent pattern of bleeding ($\chi 2$=8.33) were found to be significant at 0.05 level.

**H1:** There is a significant association between the pain score with their selected socio demographic variables in both experimental and control group.

Hypothesis was tested at 0.05 levels. This indicates there is significant association in experimental group and not significant association in control group. Hence research hypothesis H1 was accepted.

**Discussion**

In this study out of 60 patients tested 32 patients normal findings, 28 patients had abnormal findings, out of which 5 (8.3) cases had endometrial polyp and submucos myoma, 13 (21.7) cases had hyperplasia, 4 (6.7) cases had endometrial atrophy and 1(4.7) cases had irregular shedding pattern of endometrium.

The above result supported by, Davis E. and Sparzak PB. (2022) Abnormal uterine bleeding is a broad term that describes irregularities in the menstrual cycle involving frequency, regularity, duration, and volume of flow outside of pregnancy. Up to one-third of women will experience abnormal uterine bleeding in their life, with irregularities most commonly occurring at menarche and perimenopause. A normal menstrual cycle has a frequency of 24 to 38 days, lasts 7 to 9 days, with 5 to 80 milliliters of blood loss. Variations in any of these 4 parameters constitute abnormal uterine bleeding. This activity reviews abnormal uterine bleeding diagnosis and treatment and explains the importance of an inter-professional approach to evaluating and treating abnormal uterine bleeding [13].

**Conclusion**

In the present study 60 women's suffering from abnormal uterine bleeding were selected by nonprobability convenience sampling technique. Researcher used Prospective comparative research design to comparison of transvaginal USG and hysteroscopy as diagnostic modalities evaluation in abnormal uterine bleeding and data were collected through transvaginal USG and hysteroscopy analytical scale and data were analysed through suitable statistical method.

**References**

1. Lasmar RB, Dias R, Barrozo PR, Oliveira MA, Coutinho ES, Daniela BR. Prevalence of hysteroscopic finding and histologic diagnosis in patients with abnormal uterine bleeding. Fertil Steril. 2008 Jun;89(6):1803-1807.
2. Clark T, Bakour SH, Gupta JK, Khan KS. Evaluation of outpatient hysteroscopy and ultrasonography in the diagnosis of endometrial disease. Obstet Gynecol. 2002;99:1001-1007.
3. Procopé B. Etiology of postmenopausal bleeding. Acta Obstet Gynecol Scand. 1971;50:311-313.
4. Vilos GA, Abdu-Rafea B. New developments in ambulatory hysteroscopic surgery. Best Pract Res Clin Obstet Gynaecol. 2005;19:727-742.
5. Goodman A. Abnormal genital tract bleeding. Clin Cornerstone. 2002;3:25-35.