

# **INDICATIONS OF DIAGNOSTIC HYSTEROSCOPY**

### **Abstract :**

For endometrial examination, many studies claimed office hysteroscopy as the gold standard diagnostic procedure. The increasing use of smaller diameter hysteroscopic devices, which obviate the need for cervix dilation and anaesthesia, has bolstered this assertion in recent years. This project's main purpose is to build a list of diagnostic hysteroscopy indications. Hysteroscopy enables a precise examination and direct view of the uterine cavity, as well as targeted biopsy and sampling of worrisome anomalies. Hysteroscopy can help patients with AUB, endometrial cancer, and infertility.

**Comment [V1]:** Not clear

### **INTRODUCTION:**

After menopause AUB, Endometrial Hyperplasia, malignancy, and infertility can all be evaluated using diagnostic hysteroscopy, which is a precise and less intrusive treatment. Despite the availability of hysteroscopy as an invasive procedure in the last two decades, most gynaecologists' management and research of uterine pathology needed D&C of the endometrial cavity under general anaesthesia until recently. (1) because of the development of reduced diameter hysteroscopes, diagnostic hysteroscopy has become an outpatient procedure. The major benefit of hysteroscopy is that it combines a dependable technique with better diagnostic accuracy due to direct viewing. Hysteroscopy's only drawback is that it necessitates specialised training and education, as well as a prolonged learning period..

### **HYSTEROSCOPY IN PATIENTS WITH AUB:**

AUB, which affects women over the age of 45, is the most commonly seen condition in gynaecological practise. Nearly a quarter of all reproductive-aged women are affected. As an office procedure, hysteroscopy along with biopsy after imaging of the endometrial cavity is commonly employed. Many authors have previously proven the importance of hysteroscopy as a gold standard procedure for the study of women with such pathology. Hysteroscopy is a better alternative than D&C for treating endometrial or cervical polyps because D&C has been shown to be ineffective. A few years ago, Refaie et al. looked examined 112 women in their menopause with AUB to see if office hysteroscopy influenced treatment decisions. (2)

**Comment [V2]:** 45 years

The studies discovered that 50% of women had abnormal uterine cavities and that hysteroscopic examination of AUB concluded it to be effective modality without the need for major surgery (3). 32 of 147 women with AUB and normal TVS were abnormal on hysteroscopy, and cervical polyp was the most commonly wrong diagnosed lesion by TVS, according to Barati et al. (1) In menopausal women with mild intrauterine illnesses, Bettocchi et al. established the benefit of office hysteroscopy treatment. He studied 925 menopausal women with AUB over the course of five years, dividing them into two groups based on endometrial thickness. Hysteroscopy provided a diagnostic value of 99-100% specificity and sensitivity for both groups, according to the researchers. In an attempt by several studies to characterise the findings of diagnostic hysteroscopy, H Van Dongen et al. published a systematic review. A study of 17 research was conducted in this study, and it was concluded that diagnostic hysteroscopy was beneficial in AUB. It is reliable in the diagnosis of intrauterine anomalies, with a success rate of around 96.9% (SD 5.2 percent, range 83-100 percent). (4)

To summarise, we can expect submucous myomas, polyps, and benign or malignant endometrial hyperplasia to be the most common hysteroscopic findings in people with AUB in 60–70% of patients. Furthermore, diagnostic hysteroscopy is more effective at detecting AUB in menopausal patients.

#### HYSTEROSCOPY IN ENDOMETRIAL CANCER WOMEN:

Endometrial cancer is commonest variety of cancer of pelvis. In the majority of cases, AUB is the first symptom of this type of cancer, therefore catching it early is crucial for a woman's life and advancement. Some women with endometrial adenocarcinoma go undetected, which is unfortunate. Endometrial hyperplasia is regarded to be an indication of impending endometrial cancer. The characteristic finding of this entity in an ultrasonography test is endometrial thickness. Unfortunately, ultrasound examination has a low sensitivity for diagnosing the kind of endometrial hyperplasia, especially when a guided biopsy of the suspicious uterus is still required for adequate control. An ET of more than 4 mm in postmenopausal women with AUB demands further examination. Hysteroscopy can reveal not just the presence of endometrial cancer, but also spread to lower uterine section and cervix.

In this study, Cordeiro and her colleagues compared the diagnostic outcomes of AUB in 245 postmenopausal patients having increasing ET in TVS.

**Comment [V3]:** Could be brought in a same paragraph

JT Clark and colleagues published a rigorous quantitative evaluation that has provided many answers to the ongoing debate about benefit of hysteroscopy in the endometrial pathology diagnosis. The findings of this review, which included 65 papers, are as follows: For endometrial cancer, hysteroscopy exhibited an overall sensitivity and specificity of 86.4 percent and 99.2 percent, respectively. The range in sensitivity of diagnostic hysteroscopy in endometrial illness (cancer and hyperplasia) was much more than the difference in specificity, and it was thus accepted that as a procedure, diagnostic hysteroscopy has less serious complications, and high diagnosing ability in endometrial carcinoma but it does not exclude it also is more accurate in postmenopausal women.

#### HYSTEROSCOPY IN PATIENTS WITH INFERTILE :

As per WHO standards, all infertile women should get HSG to be properly checked for uterine abnormalities that cause infertility. A uterine cavity examination looks for uterine malformations including polyps, myomas, or septums that could prevent embryo implantation. The benefits of regular hysteroscopy before attempting IVF are still debated. (5) In examining these patients, hysteroscopic examination appears to be more successful than HSG. In a research by Barati et al., patients with infertility without cause and with uterine cause of infertility were enrolled.

To investigate them, he employed TVS and HSG, or TVS, HSG, and hysteroscopy. Even after a normal TVS and HSG, hysteroscopy revealed 38.8% positive result. He came to the opinion that office hysteroscopy must be included in infertile women's routine examination. Kumar and his colleagues conducted a two-year study to assess the diagnostic efficacy of HSG and hysteroscopy uterine cavity infertility. HSG and hysteroscopy were performed on 60 individuals. HSG has a 90% specificity and a 40% false negative rate, according to the researchers. "While HSG is useful as a screening tool, it must be accompanied with hysteroscopy, which is an observer-dependent procedure.

**Comment [V4]:** Spelling error is found

After hysteroscopically investigating 556 women who were having difficulty conceiving after a year of unprotected intercourse, Koskas et al. discovered that office hysteroscopy for infertility revealed aberrant results in 30% in women over 30 to more than 60% of women over 42 years old. As a result, they've added a new argument to the mix. Infertile women's first-line assessments must involve office hysteroscopy, regardless of age.

## REFERENCES:

1. Hysteroscopy and Infertility | GLOWM [Internet]. [cited 2022 Jan 12]. Available from: [http://www.glowm.com/section-view/heading/Hysteroscopy and Infertility/item/89](http://www.glowm.com/section-view/heading/Hysteroscopy%20and%20Infertility/item/89)
2. Soares SR, dos Reis MMBB, Camargos AF. Diagnostic accuracy of sonohysterography, transvaginal sonography, and hysterosalpingography in patients with uterine cavity diseases. *Fertil Steril*. 2000 Feb;73(2):406–11.
3. Niknejadi M, Haghighi H, Ahmadi F, Niknejad F, Chehrazi M, Vosough A, et al. Diagnostic Accuracy of Transvaginal Sonography in the Detection of Uterine Abnormalities in Infertile Women. *Iran J Radiol*. 2012 Sep 17;9(3):139–44.
4. Tsonis O, Gkrozou F, Dimitriou E, Paschopoulos M. Comparative retrospective study on transvaginal sonography versus office hysteroscopy in the diagnosis of endometrial pathology among different subgroups. *J Obstet Gynaecol Res*. 2021 Feb;47(2):669–78.
5. Diagnosis and Treatment of Unexplained Infertility [Internet]. [cited 2021 Jun 10]. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2505167/>

UNDER PEER REVIEW