

Advanced Hysteroscopy: Can It Be Safe and Effective Alternative to Hysterectomy in Perimenopausal AUB?

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Received on: 05 June 2024; Accepted on: 26 June 2024; Published on: 16 December 2024

ABSTRACT

Background: Abnormal uterine bleeding (AUB) is one of the most common indications for hysterectomy in perimenopausal age-group patients. Due to inadequate and varied response to medical management, fear of malignancy and lack of awareness, patients prefer to opt for hysterectomy. The incidence of unwanted hysterectomies is increasing particularly in rural and tribal populations in our country. Hysteroscopy is considered the gold standard technique for diagnosing and managing pathological conditions affecting the uterine cavity. Immediate treatment of endocervical, endometrial, or submucosal pathologies is possible with advanced operative hysteroscopy and it is associated with high patient satisfaction. Major surgery like hysterectomy can be avoided in case of benign uterine pathologies.

Aims and objectives: To evaluate the role of advanced hysteroscopy in perimenopausal age-group patients with chronic AUB and to study the effect of operative hysteroscopy on improvement in the quality of life of perimenopausal AUB patients.

Materials and methods: It was a retrospective study conducted over a period of one and a half year. 128 patients of age-group 35–50 years with AUB who had undergone hysteroscopy were included. Any demonstrable pelvic pathologies like pelvic malignancies and active pelvic inflammatory diseases were set as an exclusion criteria. Institutional standard operating protocol for hysteroscopic surgeries was followed. As per the protocol experienced senior faculties were the operating surgeons for all the cases. Demographic characteristics, hysteroscopic findings, and histopathology reports were correlated. All the patients were followed up for 6 months after hysteroscopic surgery.

Results: A significant number of patients were diagnosed with intracavitary lesions and they were managed successfully through operative hysteroscopy. Patients were satisfied with their quality of life after hysteroscopic surgeries.

Conclusion: Operative hysteroscopic surgeries have been shown to be effective in treating AUB and possibly avoiding or delaying hysterectomy in perimenopausal women.

Keywords: Hysteroscopy, Hysterectomy, Perimenopausal abnormal uterine bleeding.

World Journal of Laparoscopic Surgery (2025): 10.5005/jp-journals-10033-1641

BACKGROUND

Abnormal uterine bleeding (AUB) is very commonly seen in perimenopausal age-group patients and it is also seen with a significant number of patients attending Gynec OPD.¹ Patients present with both heavy and irregular menstrual bleeding for the last couple of months. Chronic AUB is defined as “bleeding from the uterine corpus that is abnormal in volume, regularity and/or timing that has been present for the majority of the last six months.”² It affects the quality of life in women significantly and it is also associated with loss of productivity and major health care costs.

Perimenopausal age-group that is 35–50 years is the most vulnerable age-group, as these patients suffer from several perimenopausal symptoms such as irregular menses, vaginal dryness, mood swings, hot flushes, etc. More than 90% of women experience at least one episode of AUB and 78% of them experience at least three episodes of AUB during their transition to menopause.³ Due to inadequate and varied responses to medical management, fear of malignancy and lack of awareness, patients prefer to opt for hysterectomy. Sometimes due to an increase in the severity of symptoms and failure of medical management, a hysterectomy is advised for chronic AUB patients by a treating clinician. Abnormal uterine bleeding is one of the most common indications for hysterectomy in perimenopausal age-group patients. The incidence is increasing in rural and tribal populations in our country. Hysteroscopy is considered the

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How to cite this article: Sonawane SS, Kathaley M. Advanced Hysteroscopy: Can It Be Safe and Effective Alternative to Hysterectomy in Perimenopausal AUB? *World J Lap Surg* 2025;18(1):26–29.

Source of support: Nil

Conflict of interest: None

standard technique for diagnosing and managing pathological conditions affecting the uterine cavity. Immediate treatment of endocervical, endometrial, or submucosal pathologies is possible with advanced operative hysteroscopy and it is associated with high patient satisfaction.⁴

AIMS AND OBJECTIVES

To evaluate the role of advanced hysteroscopy in perimenopausal age-group patients with chronic AUB and to study its effect on improvement in their quality of life.

Table 1: Hysteroscopic findings

| <i>Hysteroscopic findings</i> | <i>Number of patients</i> |
|---|--|
| Submucous fibroid (42.1%) | 54 – Grade 0 – (31), Gr.1 – (21), Gr.2 – (2) |
| Polyp (32%) | 41 Sessile – 14: Pedunculated – 27 |
| Adenomyosis with hypervascularization (12.5%) | 16 |
| Hyperplastic endometrium (10.9%) | 14 |
| Suspected endometrial neoplastic lesions (3.9%) | 5 |
| Endometritis (4.6%) | 6 |
| Intra-uterine adhesions (17.9%) | 23 |
| Isthmocele (3.9%) | 5 |
| Missing cut (3.1%) | 4 |
| Old RPOC (2.3%) | 3 |

Table 2: Post-hysteroscopy follow-up results (up to 6 months)

| <i>Follow-up results</i> | <i>Number of patients</i> |
|--|---------------------------|
| Recurrence of symptoms pain/bleeding/both | 28 (21.8%) |
| Symptoms subsided with hormonal/analgesics/antibiotics therapy | 9 (7%) |
| Patient underwent hysterectomy | 26 (20.3%) |
| Patients diagnosed CA endometrium on histopathology | 4 (3.1%) |
| Loss to follow-up at 6 months | 11 (8.5%) |
| Patients responded well to hysteroscopic surgery | 91 (71%) |

Table 3: Indications for hysterectomy (total 26)

| <i>Indications for hysterectomy</i> | <i>Number of patients</i> |
|---------------------------------------|---------------------------|
| Adenomyosis (7.03%) | 9 |
| Multiple uterine fibroids (4.6%) | 6 |
| Large adnexal masses (3.1%) | 4 |
| CA endometrium (3.1%) | 4 |
| CIN progressed to higher grade (1.5%) | 2 |
| Coagulation disorder (0.78%) | 1 |

MATERIALS AND METHODS

It is a retrospective study conducted over a period of one and a half year from June 2022 to December 2023 in a tertiary care institute. A total of 128 patients of age-group 35–50 years with chronic AUB who underwent hysteroscopic surgeries were included in the study. Any demonstrable pelvic abnormalities like pelvic malignancies and active pelvic inflammatory diseases were set as an exclusion criteria. Department has a standard operating protocol for operative hysteroscopy procedures. This study was conducted in accordance with the ethical standards and approved by the institutional Ethics Committee (IEC 109/2023-24). Senior Gynec endoscopic surgeons were the operating faculty for all the cases. All the diagnostic and operative hysteroscopy cases were analyzed. Hysteroscopic findings and histopathology reports were correlated. Their follow-up clinical records up to 6 months were collected. Data were analyzed on the basis of demographic characteristics, surgical findings, histopathological reports and follow-up records.

RESULTS

Most of the patients with chronic AUB who had undergone hysteroscopy were in the age-group of 40–45 years. The average age of the patients was 43 years. Patients with a higher parity of three or more than three were commonly seen with AUB. Commonly performed hysteroscopic procedures were submucous fibroid resection, polypectomy, adhesiolysis, endometrial biopsy, TCRE, missing copper T removal, isthmocele resection, cervical biopsy, therapeutic curettage, mirena insertion, etc. The most common finding on hysteroscopy was a submucous fibroid (42.1%) followed by polyps (32%) commonly seen in the age-group of 40–45 years (Table 1). Histopathology reports revealed simple hyperplasia without atypia as the most common finding followed by disordered proliferative phase and cystic glandular hyperplasia. Four patients were diagnosed with endometrial carcinoma. The average time taken for the hysteroscopic surgeries was 16 minutes. Fluid deficit calculated during procedure varied from 150 to 900 mL. Six months follow-up after hysteroscopy procedure revealed that 91 patients responded well to hysteroscopic surgeries and further major surgery like hysterectomy was not required in these patients. Patients who had a recurrence of symptoms were treated conservatively. A total of 26 patients had undergone hysterectomy within 6 months of hysteroscopic procedures (Table 2). The most

common indication for hysterectomy was adenomyosis followed by multiple uterine fibroids, adnexal masses and endometrial carcinoma (Table 3). Maximum patients who had undergone hysterectomy were in the age-group of 41–44 years. Minor hysteroscopic complications such as vaginal bleeding, headache, fever, transient hypotension were seen in a few patients. One patient with the coagulation disorder and the other with mild pulmonary edema required ICU admission for a day. Blood transfusion was required in three anemic patients. Follow-up patients at the end of 6 months of hysteroscopic procedure were interrogated and found to have a better quality of life in 71% of patients.

DISCUSSION

Almost one-third of the patients in perimenopausal age-group visiting Gynec OPD's are diagnosed to have AUB.³ FIGO classified AUB into the structural and non-structural causes popularly known by the acronym PALM COEN.² Structural causes like endometrial polyps and submucous fibroids can be managed through hysteroscopy. Endometrial pathologies can be diagnosed effectively through hysteroscopy-guided biopsy with the help of histopathological examination. Many patients are reluctant for conservative uterine preserving approach due to various reasons such as chronic symptoms, prolonged course of medications and its cost, fear of recurrence of disease, and malignancy. As a result, patients who have already completed their family, demand hysterectomy without understanding its implications on their health. Hysterectomy is a major surgical procedure and apart from surgical risk, it is also associated with many health-related complications especially when done in reproductive age. Salpingo-oophorectomy along with hysterectomy renders women to various side effects like reduction in bone mineral density and early menopause. Hysterectomy is a major surgery and it predisposes to surgical or postoperative complications, such as hemorrhage, injury to vital organs, septicemia, and vesicovaginal fistulas. Fatal complications though are rare but can be seen in low-resource setting healthcare facilities.

The Ministry of Health and Family Welfare—Government of India released guidelines to prevent unnecessary hysterectomies on 4th October 2022.⁵ The National Family Health Survey-4 (2015–2016) data estimate hysterectomy prevalence to be 9.2% among women 40–49 years. The median age at hysterectomy was 37 years. Heavy menstrual bleeding or pain was self-reported as the leading indication for hysterectomy.⁵ These government guidelines address the seriousness of the issue and elaborates on the need for preserving the uterus and treating benign pathologies conservatively.⁶ Hysteroscopy has a significant diagnostic value and it is safe and cost-effective. It can be performed in the office setting as well. Transvaginal sonography (TVS) though considered as an initial investigation of choice, it may miss a few endometrial pathologies, such as small polyps, submucous fibroids, and rarely CA endometrium.^{7,8}

Traditionally done D&C procedures are replaced by hysteroscopy due to the see and treat approach.⁹ In this study, AUB was found to be more common in 41–45 (35%) years of age-group patients. Anupma Kumari and Kumar R studied and found AUB was most common with the age-group of 40–45 years (65.55%), and 46–50 years (27.77%) respectively.¹⁰

The incidence of structural causes of AUB increases with age. In our study, we found 70% of the patients diagnosed to have polyp and submucous fibroids.¹¹ Parity increases the incidence of AUB, in our study, 74 (57.8%) patients were found to have parity more than three whereas Sreeja PA found AUB with parity 2 (42.04%) followed by parity 3 (18.1%), respectively.¹² Tinelli et al. in their study shown that few patients with atrophic endometrium on TVS were diagnosed as a cases of CA endometrium on histopathological examination obtained through hysteroscopy. In our study, two patients of CA endometrium had endometrial thickness of less than 5 mm on TVS.¹³ Soja M et al. found polyps and submucous fibroids as the most common cause for the structural defect in AUB. In our study, polyps and submucous fibroids were the most common hysteroscopy findings.¹⁴

Study shows that apart from structural causes, the most common diagnosis on endometrial histopathology was simple endometrial hyperplasia without atypia. These patients responded well to the conservative medicine line of management after hysteroscopy. Wortman et al. confirmed that major operative hysteroscopic surgery resulting in a 98.8% rate of satisfied patients.¹⁵ In our study, follow-up cases were interrogated about the quality of life through questionnaire and clinical examination. About 71% of the patients were found to have a better quality of life after 6 months of hysteroscopic procedure.

Vilà Famada et al. described hysteroscopic procedures as safe surgical procedures with minimal complications. In our study, all the hysteroscopic procedures were uneventful except for two known cases of medical disorder that required ICU admission for a day.¹⁶

A total of 128 patients who had either come demanding hysterectomy or were referred for further management after failed medical treatment were diagnosed correctly and treated with standard management protocols through hysteroscopy. Ninety one patients responded well to hysteroscopic procedures and revealed improvement in their quality of life. Hysteroscopy helped in formulating further lines of management for AUB patients. Patients who had recurrence of symptoms were treated conservatively and few patients had undergone hysterectomy as a last resort when it was actually indicated. On interrogating patients after hysteroscopic procedure we perceived that hysteroscopic examination, its see

and treat approach and histopathology report played a crucial role in allaying the anxiety of the patients regarding their endometrial diseases and helped us in the productive counseling and further management.

CONCLUSION

Hysteroscopy as a daycare procedure can effectively diagnose and treat endometrial causes of AUB in the same setting with high patient and surgeon's satisfaction.

This low-cost minimal invasive procedure can effectively prevent unwanted hysterectomies in a perimenopausal age-group patients. Long-term prospective studies are required to see the overall impact on the quality of life of perimenopausal age-group patients.

Clinical Significance

Recently due to the alarming increase in the incidence of hysterectomy in rural and tribal areas, there has been growing concern about its impact on women's health and overall quality of life. In our view, inspite of being a daycare procedure, hysteroscopy is still not effectively utilized to diagnose and treat endometrial causes of AUB. Modern hysteroscopy facilities if made available in rural health centers can definitely prove a great milestone in the management of AUB and can effectively prevent unnecessary hysterectomies. Additionally, it will also provide an opportunity for effective screening of cervical premalignant and malignant lesions, PID, and sexually transmitted diseases.

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