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Original Research Article

Diagnostic office hysteroscopy in a tertiary care centre: a retrospective analysis

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ABSTRACT

Background: Office hysteroscopy is the standard technique for evaluation of intrauterine pathologies in abnormal uterine bleeding, infertility, recurrent pregnancy loss, secondary amenorrhea, post-menopausal bleeding. It is easy to perform, well tolerated by patients and has less complication rates with availability of adequate expertise and equipment. Our aim was to assess the role of diagnostic office hysteroscopy in gynaecology in a referral centre.
Methods: A retrospective descriptive study based on hospital records conducted in a government tertiary care centre. Data collected from hospital registers were analysed for common indications, pathology, complications, safety and efficacy of the procedure.
Results: Diagnostic office hysteroscopy done on 1624 patients from January 2018 to January 2023 were analysed. Most common indication was infertility. Common pathology seen were intrauterine adhesions, mullerian anomalies and endometrial polyps. Procedure was successful in 94.4% of patients. No major complication observed in any patient.
Conclusions: Our findings show that office hysteroscopy is effective, feasible, convenient and safe; in diagnosing various intrauterine pathologies and it is well tolerated by patients. There is no requirement for admission or anesthesia.

Keywords: Efficacy, Infertility, Intrauterine pathology, Office hysteroscope

INTRODUCTION

Office hysteroscopy has become an important armamentarium among gynaecologists as it helps in direct visualisation of pathology within the uterine cavity and endocervical canal.[1] Advances in technology in terms of availability of narrow endoscopes, better visualisation and magnification has allowed diagnosis of many intrauterine pathologies like polyps, adhesions, submucous fibroids, uterine anomalies, retained intrauterine devices and other foreign bodies, retained products of conception with greater ease and precision.[2] Being an office procedure, it has various advantages like avoiding admission and anaesthesia, decreasing load in operation theatres and decrease in cost.[3] It increases patient acceptability and convenience.[4] The use of non-touch vaginoscopic approach has better patient comfort.[5] It also plays a role in assessment of cavity post hysteroscopic surgeries like septal resection, metroplasty, adhesiolysis and guides in assisted reproductive techniques.

Aims and objectives

To assess the role of office hysteroscopy in gynaecology in a referral centre.

METHODS

This was a retrospective descriptive study conducted in gynaecology department of premier tertiary care referral centre of Indian Armed Forces. The hospital records of 5 years from January 2018 to January 2023 were collected and analysed. Data of all patients registered for hospital hysteroscopy was collected. Patients with incomplete data

entered were excluded. The study was conducted to see the feasibility, safety and efficacy of the procedure. The study also analysed the common indications and pathology diagnosed by office hysteroscopy.

Procedure

Office hysteroscopy was performed under aseptic precautions in minor operation theatre attached to the department as OPD procedure. Diclofenac rectal suppository was given to all patients 30 minutes before procedure. An intravenous line was secured to all patients before procedure. No antibiotic was given to any patients. No cervical ripening was given to all patients. Patients with secondary amenorrhea, suspected intrauterine adhesions and postmenopausal patients without previous vaginal deliveries were asked to insert tablet misoprostol 400 µg per vaginally 12 hours prior to scheduled procedure. The team consisted of a gynaecologist, a lady attendant and an operation room assistant. The procedure was performed in early follicular phase in premenopausal women. All procedures were performed as non-touch vaginoscopic approach. Procedure was performed using 30-degree 2.9 mm scope. Only diagnostic hysteroscopy was performed as office procedure. Patients requiring operative hysteroscopy were done under anaesthesia. 0.9% saline was used as distension medium. All patients were counselled, procedure explained and written consent taken. Patient's vitals were monitored during and after procedure. 30 minutes after procedure patients were reassessed and sent home. Hysteroscopy was not performed on patients with active infection of genital tract, ongoing bleeding, pregnancy and high-risk medical disorders.

RESULTS

Total 1624 patients were included in the study. Most common indication in our centre was infertility (n=1328). This may not correspond to general population as our centre having a specialised centre for assisted reproductive procedure more patients with infertility were referred to our centre. The other common indications were abnormal uterine bleeding, recurrent pregnancy loss and postmenopausal bleeding. The average age of patients with various pathologies are as in Table 1. Highest incidence of abnormal pathology was seen in abnormal uterine bleeding and postmenopausal bleeding.

Table 1: Indications for office hysteroscopy.

Indication for office hysteroscopy	Number of patients (%)	Age (years)
Infertility	1328 (82.07)	29.09 (20-47)
Abnormal uterine bleeding	95 (5.87)	39.54 (24-52)
Recurrent pregnancy loss	92 (5.68)	30.07 (21-40)
Secondary amenorrhea	14 (0.86)	38.50 (35-42)
Missing intrauterine device	4 (0.24)	29.69 (20-35)
Post menopausal bleeding	51 (3.15)	56.37 (48-77)
Retained products of conception	7 (0.43)	32 (29-33)
Post procedure relook hysteroscopy	14 (0.87)	30.05 (21-41)
Suspected polyp	13 (0.80)	30.61 (21-50)

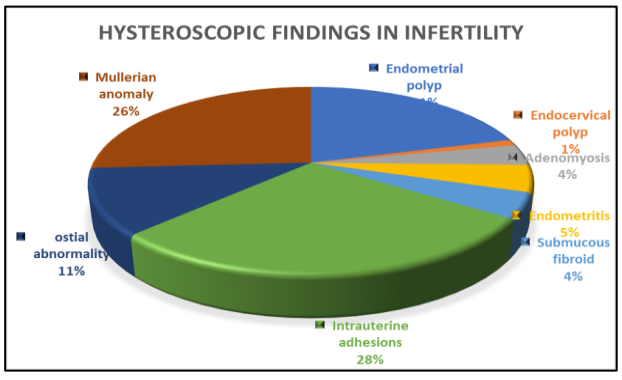

Figure 1: Hysteroscopic findings in infertility.

34.99% of patients in infertility group had an abnormal intrauterine pathology. Common pathology seen in infertility group were intrauterine adhesions of various severity (8.20%), various mullerian anomalies (7.53%), and endometrial polyps (6.02%). Diagnostic office hysteroscopy was successful in 94.2% of patients with infertility.

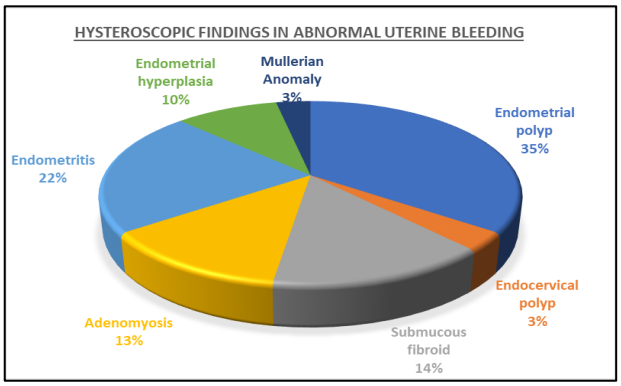

Figure 2: Hysteroscopic findings in abnormal uterine bleeding.

Mean age of patients with recurrent pregnancy loss (RPL) was 30 years. 22.83% of patients with RPL had an intrauterine pathology. The most common pathology was mullerian anomaly, of which incomplete uterine septum was the most common anomaly. 16.30% of patients with RPL had intrauterine adhesions.

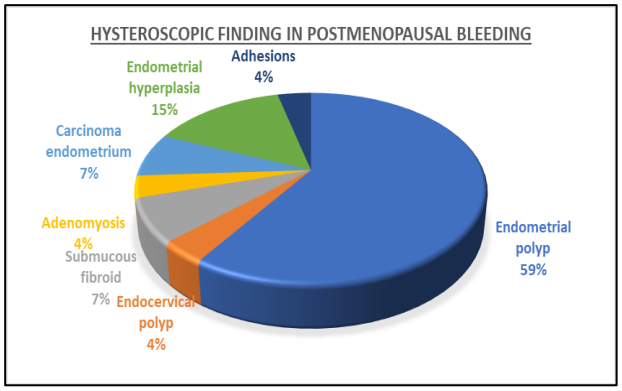

Figure 3: Hysteroscopic findings in post menopausal bleeding.

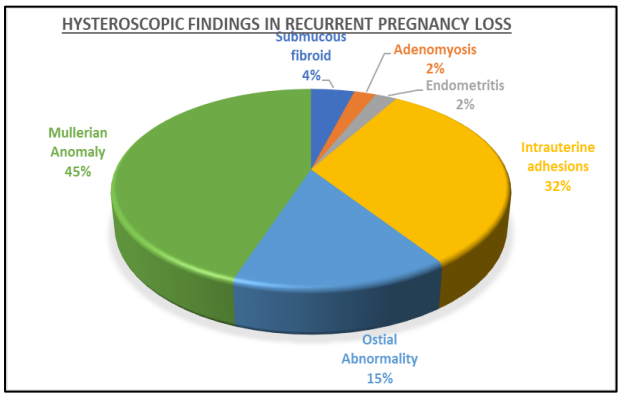

Figure 3: Hysteroscopic findings in recurrent pregnancy loss.

Mean age of patients presenting with abnormal uterine bleeding was 39.54 and 66.32% of patients with AUB had an intrauterine pathology. Commonly seen pathologies were endometrial polyps, endometritis, submucous fibroids and adenomyosis.

Mean age of patients presenting with postmenopausal bleeding was 56.37 and 58.81% of these patients had an intrauterine pathology, the most common pathology seen was endometrial polyp (31.37%). Other common indications for diagnostic office hysteroscopy were polyps suspected on sonography, secondary amenorrhea, missing intrauterine devices, relook hysteroscopy after hysteroscopic procedures like septal resection, intrauterine Adhesiolysis and hysteroscopic metroplasty.

Office hysteroscopy was successful in 94.4% of patients. It was 100% successful in patients with abnormal uterine bleeding, recurrent pregnancy loss and patients with retained products of conception. Patients presenting with secondary amenorrhea and who had intrauterine adhesions (42.85%) and patients with postmenopausal bleeding (13.72%) had high failure rates and most common cause for inability to perform office hysteroscopy was cervical stenosis. All patients where office hysteroscopy could not be done, the procedure was later completed under anaesthesia after dilating the cervix with dilators or by cutting the adhesions under vision using hysteroscopic scissors.

Table 2: Procedure failure rates among various pathology.

Failure rate (global)	5.6%
Infertility	5.79%
Abnormal uterine bleeding	0%
Postmenopausal bleeding	13.72%
Recurrent pregnancy loss	0%
Retained products of conception	0%
Secondary amenorrhea	42.85%

Table 3: Common causes of failure of office hysteroscopy.

Internal os stenosis	27.27%
Pain	15.58%
Apprehension	5.19%
Bleeding	1.29%
Infection	1.29%
Suboptimal visualisation	42.86%
Unexplained	6.49%

DISCUSSION

The rates, common indications for procedure and pathology encountered may not be applicable for general population as our centre being a referral centre gets only patients with pathology being referred to us. Use of office hysteroscopy for diagnostic evaluation of abnormal uterine bleeding is well established.[6] Patients with cardiopulmonary disease and sleep apnea may not be appropriate for office hysteroscopy. Patient willingness, physician skills and expertise, assessment of patient comorbidities, availability of proper equipment and patient support are prerequisites for successful procedure.

Office hysteroscopy is usually successful in 94% of patients especially when scopes of lesser diameter is used. Oral, sublingual and vaginal Misoprostol has been studied in various dosages for preoperative ripening of cervix to decrease pain and increase success of procedure.[7] In our opinion misoprostol is required in patients with intrauterine adhesions only. Procedure is usually successful even in nulligravida and post caesarean patients with a scope diameter of 2.9 mm. Use of misoprostol may be associated with mild abdominal pain, vaginal bleeding and increased body temperature.[8]

Office diagnostic hysteroscopy is associated with higher patient satisfaction and faster recovery compared to hospital-based hysteroscopy.[9] It is more convenient for patients and gynaecologists as requirement for anaesthesia and admission is avoided. It is cost effective; patients anxiety is reduced and helps operating room available for more complex cases.

We excluded patients with acute pelvic infection, and active infection from the procedure as it is contraindicated.[10,11] We have not given any antibiotic during or after the procedure and we have not encountered any infection in the patients. Studies also show that antibiotic prophylaxis does not reduce postoperative infection after diagnostic hysteroscopy.[12,13]

Other common intraoperative complications which can happen are perforation, haemorrhage, air and gas embolism, fluid overload and vasovagal reaction.

Perforation is a known complication of hysteroscopic procedure.[14,15] Common risk factors are blind insertion of instruments, cervical stenosis, anatomic distortion like malposition, malformations, intrauterine adhesions, and myometrial thinning. In our study we did not have any perforation. The reason being vaginoscopic approach was followed in all patients and os was negotiated only under vision. Because of skill and expertise overshooting was never allowed. We followed a smooth entry and never forced when there was a resistance. There were 2 incidences where false passage was created but because of experience the anatomy was immediately recognised and further advancement was stopped.

Vasovagal reaction was encountered in 3 patients where the procedure was immediately stopped and managed. If bradycardia or symptoms (nausea, vomiting, diaphoresis, pallor or loss of consciousness) persists, atropine may be administered as a single dose of 0.5 mg intravenously or every 3 to 5 minutes, not exceeding a total of 3 mg.[16]

When a 0-degree scope is used the entire hysteroscope has to be moved to visualize various parts of the uterine cavity. Whereas when a 30-degree scope is used there is no movement at the level of internal os and cervix, as only light cord is turned. This helps in reducing pain and vasovagal attacks in patients.

Strengths of this study is large number of patients included in the study. Procedure done by many experienced gynaecologists and results not tailored to single person.

Limitations are potential useful information like parity, previous vaginal delivery, visual analyzation of pain score were not included in the study.

CONCLUSION

Our findings show that office hysteroscopy is effective, feasible, convenient and safe, in diagnosing various intrauterine pathologies. It is well tolerated by patients and beneficial to physicians and health care system. There is no requirement for admission, no requirement of general or local anaesthesia, no nosocomial infections, helps faster recovery, no absence from work, and is cost effective. Precious operating theatre time may be better utilised for complex procedures.

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Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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