

Study of Hysteroscopic Evaluation in Patients with Abnormal Uterine Bleeding

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Abstract

Background and Aim: Abnormal uterine bleeding in premenopausal and postmenopausal women is the single most common reason for gynaecological referrals. Present study was done with an aim of Hysteroscopic Evaluation in Patients with Abnormal Uterine Bleeding. *Methods:* The study includes the patients attending gynaecology OPD at Gujarat Adani institute of medical science, Bhuj, Kutch, over a period of 18 months. Under anaesthesia, patient is placed in dorsal lithotomy position. The sample size of the study includes 70 patients. The hysteroscope is inserted into the cervical canal and advanced into the uterine cavity through internal os under direct vision by manipulating along the axis of the canal. Endometrial cavity were visualised systematically. Any intrauterine pathology is looked for and endometrial samplings were taken from the abnormal sites for Histopathological examination. *Results:* Of the 70 patients majority, 11 (42%) had symptoms for more than 1 year, 45 patients (30%) had symptoms for 6 months to 1 year and 14 patients (28%) had symptoms for less than 6 months. Majority of the patients presented with menorrhagia. One of the most consistent findings in this study has been the detection of intra uterine pathology like endometrial hyperplasia (17 cases, 18%), endometrial polyp (13 cases, 18%)

and submucous myoma (3 cases, 5%) with 100% accuracy with hysteroscopy. *Conclusion:* Hysteroscopy was more sensitive in detecting endometrial polyp, submucous fibroid and endometrial hyperplasia but it was found less sensitive than curettage in detecting cancer and normal endometrium.

Keywords: Endometrial Hyperplasia; Hysteroscopic; Menorrhagia; Submucous Myoma; Uterine Bleeding.

Introduction

Abnormal uterine bleeding in premenopausal and postmenopausal women is the single most common reason for gynaecological referrals. In more than 40% of the referred patients polyps and myomas have been reported. Abnormal uterine bleeding (AUB) is defined as any type of bleeding in which the duration, frequency, or amount is excessive for an individual patient [1,2].

Abnormal uterine bleeding is responsible for more than one-third of gynecologic consultations and nearly two-thirds of hysterectomies [1]. It is estimated that a woman has a 1 in 20 lifetime chance of consulting her primary physician because of menorrhagia. Many authors have suggested endometrial sampling must be taken in all women ≥ 35 years old with abnormal uterine bleeding [3].

Since Dilatation & Curettage is a blind procedure, it will only scrap less than 50% of the endometrial cavity in 60% of the patients, becomes less accurate than hysteroscopy in diagnosing structural pathology such as polyps, fibroids, Intrauterine adhesions and congenital malformations. It has a cancer detection

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failure rate of 0.9%. Transvaginal Scan is also less accurate than hysteroscopy in diagnosing intrauterine pathology [4].

Though the ultimate gold standard in uterine cavity evaluation is hysterectomy, it cannot be used as a diagnostic tool. Instead of that, Hysteroscopy can be used as a diagnostic tool as it permits direct visualisation of the cervical canal and uterine cavity, enabling observation of intrauterine abnormalities. This safe procedure will lead to more accurate diagnosis and specific surgical or medical treatment directed at the specific pathology and will avoid the need for major surgery [5,6].

Hysteroscopy involves inserting an optic endoscope into the endometrial cavity and cervical canal via vaginal route and biopsy of endometrium allows histologic diagnosis of intrauterine pathology⁴. According to different investigators, the efficacy of hysteroscopy in diagnosing the presence of endometrial hyperplasia ranges from 56 to 82% compared with histology and is 100% in diagnosing its absence [7].

A thorough history and physical examination are fundamental for the workup of AUB. While evaluating the causes for AUB, it is found that benign uterine diseases and endometrial hyperplasia are accounting for at least 70% of AUB cases, which enables the gynecologist for investigating the uterine cavity to offer the most appropriate therapy [8].

Some authors have said that the accuracy of diagnosis based on hysteroscopic visualization is high for endometrial cancer and moderate for other endometrial diseases. Since Hysteroscopy and its directed biopsy is more accurate than dilatation and curettage, it is considered an accurate 'gold standard' in uterine cavity evaluation.

Patil SG *et al*, 2009, in this prospective study, they have done diagnostic hysteroscopy in AUB cases and found that hysteroscopy provides more accurate diagnosis than D&C. Zhu HL *et al*, 2010, in this study they have aimed to explore the value of hysteroscopy and directed biopsy in the diagnosis of endometrial carcinoma in 287 patients who were treated in Beijing University People's Hospital, Beijing. They have found that Compared with fractional D&C, hysteroscopy and directed biopsy offered improved pathological diagnostic accuracy before surgery.

Hysteroscopy is better and useful diagnostic tool for assessing intracavitary abnormalities. It is safe, less clinically significant complications and allows for the visualization of the probable uterine source of bleeding in the presence of organic lesions and also provides a means to sample the site most likely to

yield positive results [4]. Hence, Hysteroscopic evaluation in patients with abnormal uterine bleeding is needed.

Materials & Methods

The study includes the patients attending gynaecology OPD at Gujarat Adani institute of medical science, Bhuj, Kutch, over a period of 18 months. The sample size of the study includes 70 patients. An inclusion criterion of the study includes the following: Premenopausal women with Menorrhagia, Menometrorrhagia, Polymenorrhea, Oligomenorrhea. Exclusion criteria includes the following: Pregnancy, Fibroid uterus, IUCD (Intrauterine contraceptive devices), Hormone producing Ovarian tumors in USG, Endocrine disorders like hyper- or hypothyroidism, Diabetes, adrenal disease, prolactin disorders, Coagulation disorders, liver/renal diseases, Known Cervical or uterine malignancy, On medications like steroids, neuroleptics, anticoagulants and cytotoxic agents, Recent uterine perforation.

Method of collection of data: It is a prospective study to be conducted to evaluate the intrauterine pathology in 70 premenopausal women with abnormal uterine bleeding attending gynaecological outpatient department at our institute.

Materials used in the study are as follows: Rigid Hysteroscope, light source, uterine distension medium and video camera system.

Method: After taking a detailed history and physical examination, patient were investigated to rule out organic causes of AUB with CBC, RFT, LFT, Blood grouping n Rh typing, coagulation profile, thyroid function tests n UPT to rule out pregnancy and USG. After getting informed written consent for the procedure, diagnostic hysteroscopy were performed.

Pre procedure: Patient was called on D7-D10 of her menstrual cycle (early proliferative phase). Patient were kept nil orally for 6 hours before procedure.

Procedure: Under anaesthesia, patient is placed in dorsal lithotomy position; Perineum and vagina are gently swabbed with povidone iodine. Posterior vagina is depressed with Sims speculum. The anterior lip of the cervix is grasped with a vulsellum. A suitable telescope is selected and checked for clarity of the eye-piece and objective lens. The light generator is switched on, and the fibre optic cable is attached to the telescope. The telescope is inserted into the

diagnostic sheath and the selected medium- Normal saline is flushed through the sheath to expel any air within the sheath [2].

Stryker Hysteroscope (Endoscope) is used for study. The hysteroscope is inserted into the cervical canal and advanced into the uterine cavity through internal os under direct vision by manipulating along the axis of the canal. Endometrial cavity were visualised systematically. Any intrauterine pathology is looked for and endometrial samplings were taken from the abnormal sites for Histopathological examination. Fluid input and output were monitored to avoid overload. After the procedure patient's general condition, vitals were checked. Any bleeding per vaginum were watched for. The present study did require the investigation or interventions to be conducted on patients, which were as follows: Introducing hysteroscope into the uterine cavity, taking specimen from abnormal endometrial lesions. histopathological examination. Hence the ethical clearance was obtained from the ethical committee of the institute before commencement of the study.

Results

The subjects included 70 female patients aged between 25 to 70 years with mean age of 43.6 years and SD=10.8. Overall, 43.9% of patients were between 40-50 years old. The patients were classified in three age groups of child bearing age. The patients' complaints were menorrhagia in 12 cases (21%), metrometrorrhagia in 39 cases (65.7%), and postmenopausal bleeding in 19 cases (13.3%).

In the present study panoramic hysteroscopy was performed using a 4 mm hysteroscope with 30 degrees fore oblique lens (kalekar, India) in 70 patients who presented with abnormal uterine bleeding followed by dilatation and curettage. The curetted endometrium

was sent for histopathological analysis. In the present study maximum age incidence was between 30-39, the youngest patient in this study was 24 yrs old and the oldest was 60 yrs. Of the 70 patients majority, 11 (42%) had symptoms for more than 1 year, 45 patients (30%) had symptoms for 6 months to 1 year and 14 patients (28%) had symptoms for less than 6 months.

Majority of the patients presented with menorrhagia. The second commonest had post menopausal bleeding, 19 cases (32%). There were 12 cases (12%) with polymenorrhagia and 5 patients (10%) with metrorrhagia. Abnormal findings were seen in 23 patients (46%), while in the remaining 27 patients (54%), no abnormality was detected (negative hysteroscopic view). The most common abnormality was endometrial hyperplasia (10 cases, 20%), followed by endometrial polyps (7 cases, 14%). There were also 2 cases (4%) of submucous myomas, 3 cases (6%) of endometrial hypertrophy and 1 case (2%) of endometritis. In the 29 cases (48%) of negative hysteroscopic view, 2 abnormal findings were detected on histopathology, 1 case each of endometrial atrophy and endometritis. 1 case of endometritis reported on hysteroscopy was diagnosed as normal. One of the most consistent findings in this study has been the detection of intra uterine pathology like endometrial hyperplasia (17 cases, 18%), endometrial polyp (13 cases, 18%) and submucous myoma (3 cases, 5%) with 100% accuracy with hysteroscopy.

Of the 30 normal cases reported, 11 cases had abnormal findings. The diagnosis of 10 cases of endometrial polyps and 2 case of submucous myoma was missed by endometrial histopathology. Histopathology correctly diagnosed all cases of endometrial hyperplasia (19 cases), atrophic endometrium (6 cases), endometritis (3 cases) with 100% accuracy.

Table 1: Duration of symptoms

Duration	No. of Patients	Percentage
< 6 months	14	15
6 m - 1 year	45	54
> 1 year	11	11

Table 2: Findings at Hysteroscopy

Findings	No. of Patients	Percentage
Normal	29	48
Endometrial hyperplasia	17	18
Endometrial polyps	13	18
Submucous myoma	3	5
Endometrial atrophy	6	9
Endometritis	2	2

Table 3: Findings at endometrial histopathology

Findings	No. of Patients
Normal	30
Endometrial Hyperplasia	19
Simple	10
Cystoglandular	6
Adenomatous	3
Endometrial polyps	10
Submucous myoma	2
Endometrial atrophy	6
Endometritis	3

Discussion

In the present study hysteroscopy showed its abnormality detection rate of almost 48%. These findings correlate with Siegler who reported abnormality detection rate of hysteroscopy at 43-47%. Saraiya et al reported similar findings. Overall age distribution in this study showed increasing number of patients in the older age group, which is in agreement with loeffler study. In the present study, endometrial hyperplasia was detected in 17, polyps 13, myomas 3 and endometrial carcinoma in 2 on hysteroscopy.

Leiomyoma was diagnosed in 15 of cases on hysteroscopy which were missed on curettage. Similar hysteroscopy findings have been reported by Siegler and Saraiya in cases of abnormal uterine bleeding. They reported 14-17% incidence of myoma in patients of abnormal uterine bleeding. The sub mucous myoma may be missed during curettage and the abnormal bleeding will persist because the myoma has been eroded by scraping. Hysteroscopy was found to be the better method for the diagnosis of polyps as it could diagnose 15 cases as against 5 with curettage.

The abnormality detection rate of hysteroscopy and curettage vary in different types of abnormal uterine bleeding. Hysteroscopy picked up an abnormality in 25 menorrhagic patients as compared to 8 cases with curettage. This difference in the detection rates of curettage and hysteroscopy is statistically significant (Table 3). Therefore, hysteroscopy is mandatory in the evaluation of the patients with menorrhagia. Similar findings were reported by Barbot et al in their study. None of the two techniques could detect a lesion in the patients with polymenorrhoea. Therefore, none of the techniques had an edge over the other. Hysteroscopy and curettage were equally accurate in detecting a carcinoma endometrium in the patients with postmenopausal bleeding (Group-V) while curettage missed myoma in one patient and polyp in another patient with postmenopausal bleeding.

In this study intrauterine adhesions were seen in two cases and subseptate uterus in two cases. These are lesions which cannot be picked up on histopathology. In one case a forgotten intrauterine contraceptive device was found. This patient had undergone curettage, but was not relieved of menorrhagia till hysteroscopy was done and the intrauterine contraceptive device identified and removed. In two cases hysteroscopy was normal but histopathology showed tubercular endometritis. In this series of 70 patients, there were no complications related to the hysteroscopic observations, with the exception of one case of uterine perforation in the initial phase of the study, but this patient was managed conservatively and did not require any additional treatment.

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Conclusion

Hysteroscopy was more sensitive in detecting endometrial polyp, submucous fibroid and endometrial hyperplasia but it was found less sensitive than curettage in detecting cancer and normal endometrium. On the other hand, hysteroscopy was highly specific in conditions like endometrial cancer, polyp, atrophic and normal endometrium. Hysteroscopy guided biopsy and histopathology compliment each other in evaluation of a patient with abnormal uterine bleeding for accurate diagnosis and further treatment

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