

Hysteroscopy as a tool in evaluation of abnormal uterine bleeding

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Abstract

Background: Abnormal uterine bleeding is one of the leading causes of seeking gynecological advice. Hysteroscopy allows direct visualization of the endometrial cavity and, importantly, directed endometrial sampling of any suspicious areas.

Objectives: To study various hysteroscopic abnormalities in patients presenting with Abnormal Uterine Bleeding and to determine most common anomalies in different forms of abnormal uterine bleeding.

Methodology: The present study “Hysteroscopy as a tool in Evaluation of Abnormal Uterine Bleeding” was an observational study and was carried out in the Postgraduate Department of Obstetrics and Gynaecology, Government Lalla Ded Hospital of Government Medical college, Srinagar.

Results: The most common abnormality diagnosed by hysteroscopy in patients with Abnormal uterine bleeding was Endometrial Hyperplasia (52 cases, 26%) followed by endometrial polyps (38 cases, 19%). Considering the various forms of Abnormal uterine

bleeding, most common pathology was **endometrial hyperplasia** in menorrhagia, endometrial polyps in Polymenorrhea and endometrial hyperplasia in postmenopausal bleeding.

Conclusion: Hysteroscopy allows an adequate exploration of the uterine cavity under visual control. It allows finding cause of bleeding, biopsy and immediate treatment in certain conditions.

Introduction

Abnormal uterine bleeding is one of the leading causes of seeking gynecological advice. Abnormal uterine bleeding (AUB) accounts for a significant proportion of gynecological referrals¹. Abnormal Uterine Bleeding is one of the common presentations of endometrial hyperplasia (precancerous), adenocarcinoma, other uterine tumors, cervical malignancy, vaginal cancer. Thus, identifying the etiology is important.^{2,3,4} Evaluation of the problem has included investigations ranging from the traditional diagnostic dilatation and curettage (D&C), office based endometrial biopsy (EMBX), to pelvic ultrasonography for evaluation of

endometrial/myometrial pathology contributing to the presentation.¹

The international federation of gynecology and obstetrics (FIGO) has approved a new classification system (polyps, adenomyosis, leiomyoma, malignancy and hyperplasia – coagulopathy, ovulatory disorders, endometrial causes, iatrogenic, not classified [PALMCOEIN]) for causes of Abnormal Uterine Bleeding in nonpregnant women of reproductive age.⁵ The basic system comprises 9 categories: The first 4 are defined by visually objective structural criteria PALM; a second 4 that are unrelated to structural anomalies COEI, and a final category reserved for entities that are not yet classified.⁵

The PALM group

The PALM categories refer to discrete (structural) entities that can be measured visually with imaging techniques, such as sonography and/or histopathology testing.

Polyps (endometrial and endocervical) as defined by one or a combination of ultrasound and hysteroscopic imaging with or without histopathology testing.

Adenomyosis, minimal criterion is identification on ultrasound testing.

Leiomyoma, minimal criterion is identification on ultrasound testing.

The leiomyoma secondary classification system categorizes lesions as “submucosal” versus “others”.

Submucosal types are 0 (pedunculated intracavitary), 1 (< 50% intramural), and 2 (≥ 50% intramural).

Other types are 3 (contacts endometrium, 100% intramural), 4 (intramural), 5 (subserosal ≥ 50% intramural), 6 (subserosal < 50% intramural), 7 (subserosal pedunculated), and 8 (includes cervical or parasitic and other lesions not related to the myometrium).

Malignancy and hyperplasia would be referred to as AUBM, with sub-classification according to the WHO or FIGO system.

The COEIN group

In contrast to the PALM group, the COEIN group includes nonstructural entities that are not defined on imaging or histopathology testing.

Coagulopathy occurs in approximately 13% of women with heavy menstrual bleeding.^{6,7}

Ovulatory dysfunction can lead to amenorrhea or heavy menstrual bleeding. Ovulatory disorders can occur because of endocrinopathies, iatrogenic causes, or at adolescence or transition to menopause.

Endometrial disorders are likely to occur when other abnormalities are excluded in the presence of normal ovulatory function.

Iatrogenic causes include “breakthrough bleeding” during use of single or combined gonadal steroid therapy, intrauterine systems or devices, systemic agents that interfere with dopamine metabolism, or anticoagulant drugs.

Not yet classified causes include rare or ill defined conditions: Chronic endometritis, arteriovenous malformations, and myometrial hypertrophy.

Hysteroscopy has ushered a new era in the evaluation of abnormal uterine bleeding. Hysteroscopy allows direct visualization of the endometrial cavity and, importantly, directed endometrial sampling of any suspicious areas⁸. Hysteroscopy should ideally be done in all cases where a transvaginal ultrasound reveals a thickened endometrium.⁹ Hysteroscopy can also be therapeutic, allowing the removal of endometrial polyps, submucous fibroids or the endometrium.⁸ Diagnostic hysteroscopy should be performed in the proliferative phase of the menstrual cycle after cessation of menstrual flow.

Aims and Objectives

1. To study various hysteroscopic abnormalities in patients presenting with Abnormal Uterine Bleeding.
2. To determine most common anomalies in different forms of abnormal uterine bleeding.

Material and Methods

The present study “Hysteroscopy as a tool in Evaluation of Abnormal Uterine Bleeding” was an observational study and was carried out in the Postgraduate Department of Obstetrics and Gynaecology, Government Lalla Ded Hospital of Government Medical college, Srinagar after obtaining the clearance from the institutional ethical committee. 200 consecutive cases of Abnormal Uterine Bleeding were taken up for the study. All the patients in this study underwent Hysteroscopy. Hysteroscopic findings in different forms of abnormal uterine bleeding were recorded and analysed.

Inclusion Criteria

1. All patients between 25-60 years with Abnormal Uterine Bleeding.
2. Both parous and nulliparous women.
3. Patients who did not require any emergency management.

Exclusion Criteria

1. Patients with severe anaemia due to menorrhagia.
2. Patients with profuse bleeding.
3. Patients with large or multiple fibroids.
4. Patients with infection in the uterine tract.
5. Pregnant women.

In this study hysteroscopy was performed in elective theatre under short General anesthesia. Distension medium used was Normal Saline (0.9%) or Glycine.

Procedure: Under anaesthesia, the patients were placed in the lithotomy position. The cervix was cleaned with betadine solution, Sim’s speculum introduced, and the anterior lip of Cervix held with vulsellum. A uterine sound was passed to confirm the axis of the uterus, the internal os dilated using Hegar’s dilator. The Hysteroscope was connected to the distention medium which was Normal Saline or Glycine. The Hysteroscope was introduced into the cervical canal under direct vision until the whole uterine cavity and fundus was seen to be well distended. Each uterine cornua was identified and the cavity inspected for nature of endometrium or any pathological lesions. Hysteroscopic guided biopsy or polypectomy was performed or a full Dilatation and Curettage was done. The specimens were sent to the Department of Pathology, Government Medical College for Histopathological examination.

Observations and results

In the present study, hysteroscopy was performed in 200 patients presenting with complaints of abnormal uterine bleeding followed by hysteroscopic biopsy or curettage. The specimen were sent for histopathologic examination and the results analysed.

Age (years)	No. of patients	Percentage
25-30	28	14
31-40	74	37
41-50	65	32.5
51-60	33	16.5
Total	200	100

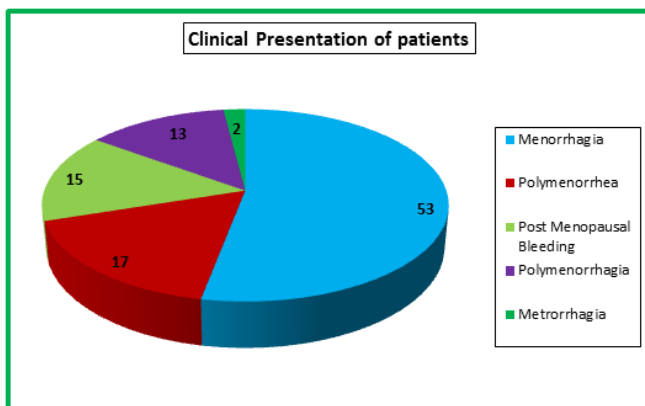
In the present study, age group included was 25-60 years. Maximum age incidence was between 31-40 years (37%). Youngest patient included in the study was 26 years of age and oldest was of 60 years of age.

Parity	No. of patients	Percentage
Nulliparous	4	2
Primiparous	30	15
Multiparous	126	63
Grand Multiparous	40	20

Major group of patients were multiparous (63%). Grand multiparous group comprised about 20% of the patients,

Presentation	No. of Patients	Percentage
Menorrhagia	106	53
Polymenorrhea	34	17
Post Menopausal Bleeding	30	15
Polymenorrhagia	26	13
Metrorrhagia	4	2

Majority of the patients (106 cases, 53%) presented with complaints of menorrhagia, followed by Polymenorrhea (34 cases, 17%). Postmenopausal bleeding was present in 30 cases (15%).



Findings	No. of Patients	Percentage
Normal	90	45
Endometrial Hyperplasia	52	26
Endometrial Polyps	38	19
Submucous Myoma	15	7.5
Retained Products of conception	4	2
Endometrial Carcinoma	1	0.5

On Hysteroscopy, abnormal findings were seen in 110 cases (55%), while in the remaining 90 cases, no abnormalities were detected on hysteroscopy. The most common abnormality was Endometrial Hyperplasia (52 cases, 26%) followed by endometrial polyps (38 cases, 19%) while Submucous myomas were detected in 15 cases (7.5%). Retained Products of conception and Endometrial Carcinoma comprised 2% and 0.5 % cases respectively.

Clinical Presentation	Findings at Hysteroscopy					Retained Products of Conception	Endometrial Ca	Total
	Normal	Endometrial Hyperplasia	Endometrial Polyps	Submucous Myoma				
Menorrhagia	54	26	18	8	0	0	106	
Polymenorrhea	24	3	5	2	0	0	34	
Post Menopausal Bleeding	3	18	8	0	0	1	30	
Polymenorrhagia	8	7	10	0	1	0	26	
Metrorrhagia	1	0	0	0	3	0	4	
Total	90	54	41	10	4	1	200	

As per our study, most common pathology in menorrhagia is endometrial hyperplasia followed by endometrial polyps and submucous myomas.

Endometrial polyps were the most common anomaly in Polymenorrhea.

Most common anomaly in postmenopausal bleeding was endometrial hyperplasia and endometrial carcinoma was detected in one case.

Endometrial polyps were the most common finding in Polymenorrhagia.

Old Retained Products of conception were found n 3 out of 4 cases of metrorrhagia.

Discussion

In our study, maximum incidence was found between 31-40 years (37%) while 32.5% cases were in age group 41-50 years, 10% patients between ages 25-30 years and 8% in age group 51-60 years; these findings being supported by Sangeeta Series¹⁰ in which maximum age incidence was between 31-40 years (56%) and 36% patients were in age group greater than

40 years. Dirgha¹¹ series had similar results with maximum age incidence between 31-40 years (42.7%) and 37.8% patients between age 21-30 years.

In this study, 63% of the patients were multiparous, 20% were grand multiparous, 15% were primiparous and 2% were nulliparous; these findings are corresponding with Phalak Rajesh¹² Series in which 73.33% were multiparous, 13.11% were grandmultiparous, 11.11% were primiparous and 2.22% were nulliparous while in Aisha Razzaq¹³ series, 57% were of parity 1-5, 33% were of parity > 5 and 10% were nulliparous.

The commonest presenting complaint in this series was menorrhagia (53%) followed by polymenorrhea (17%) followed by Postmenopausal bleeding (15%). Polymenorrhagia comprised 13% of the cases and metrorrhagia 2% of the cases. These findings are supported by Phalak Rajesh¹² series in which 60% of the cases had menorrhagia, while Polymenorrhea, menometrorrhagia and postmenopausal bleeding

comprised 8% each and Dirgha¹¹ series in which Menorrhagia formed the largest group comprising about 52.4% of the cases and polymenorrhea was present in 9.8% cases. In Sangeeta¹⁰ series, Menorrhagia was found in 36% patients, postmenopausal bleeding in 20% patients and menometrorrhagia in 16% patients.

In our study, normal endometrium was found in 45 % cases while pathological endometrium was found in 55% cases

Results of different studies:

	Normal (%)	Abnormal (%)
Aisha Razaq ¹³	37.5	62.5
Swati Singh ¹⁴	48	52
Phalak Rajesh ¹²	49.98	51.02
Dirgha Pamnani ¹¹	50	50
Gimpleson and Rappold ¹⁵	60	40
Present study	45	55

Of the 55% cases with abnormal findings on hysteroscopy, commonest seen was Endometrial hyperplasia (26%) followed by endometrial polyps (19%) and submucous myomas were seen in 7.5% of the cases, old Retained products of conception in 2 % and endometrial carcinoma in 0.5%; these findings are being supported by Phalak Rajesh⁷⁰ series in which hyperplasia was found in 40% cases, Polyps were found in 32% cases and submucous fibroids were seen in 8% cases and Gita Guin⁶³ series in which hyperplasia was seen in 30% cases and submucous polyps in 28% cases. In Aisha Razzak⁶² series, endometrial hyperplasia was seen in 17.5% cases, polyps in 18.8% cases and submucous fibroids were seen in 11.3% and in Dirgha Pamnani³ series, polyps were found in 17.1% patients, hyperplasia in 12.2% patients and Submucous fibroids in 11% patients.

As per our study, most common pathology in menorrhagia is endometrial hyperplasia followed by endometrial polyps and submucous myomas. Endometrial polyps were the most common anomaly in Polymenorrhea. Most common anomaly in postmenopausal bleeding was endometrial hyperplasia and endometrial carcinoma was detected in one case. Endometrial polyps were the most common finding in Polymenorrhea. Old Retained Products of conception were found in 3 out of 4 cases of metrorrhagia.

Conclusion

The study confirms that hysteroscopy has a definitive role in evaluating patients with Abnormal uterine bleeding. It allows an adequate exploration of the uterine cavity under visual control. It allows finding cause of bleeding, biopsy and immediate treatment in certain conditions. Hysteroscopy does not substitute other diagnostic procedures; rather, it complements them. Hysteroscopy is a safe, simple, quick and economic technique, well-accepted by the patient, with great potential in gynecology.

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