



HYSTEROSCOPY IN PATIENTS WITH ABNORMAL UTERINE BLEEDING – A DESCRIPTIVE STUDY

Obstetrics & Gynaecology

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ABSTRACT

Background: Abnormal uterine bleeding is responsible for one third of gynaecological consultations and almost two-thirds of hysterectomies. Study objective: To identify the cause of abnormal uterine bleeding, to identify any endometrial lesions like fibroid or polyp, to evaluate the endometrial surface for the presence of hyperplasia, to obtain endometrial curetting for histopathological evaluation and its correlation with the hysteroscopic findings. Methods: This is a descriptive study and has been conducted in the Department of Obstetrics and Gynaecology, tertiary care center from January 2019 to July 2020. Clinical assessment, local, systemic and hysteroscopic examination of 50 patients of AUB was done and relevant findings were recorded with informed consent. Results: 42 patients (84%) had menorrhagia as their complaint. 10 patients had submucous myoma and 4 patients had atrophic endometrium, 10 patients had hyperplastic features in hysteroscopy. 18 patients had proliferative and 8 patients had secretory endometrium in hysteroscopy which was confirmed in HPE. Hysteroscopy was found to be 100% sensitive and specific in diagnosis of endometrial lesion. **Conclusions:** diagnostic hysteroscopy is both accurate and a feasible investigation in evaluating various causes of abnormal uterine bleeding especially the endometrial pathologies.

KEYWORDS

hysteroscopy, aub, menorrhagia, endometrial hyperplasia, endometrial sampling.

INTRODUCTION

Abnormal uterine bleeding is defined as any type of bleeding in which the duration, frequency or amount is excessive for an individual patient. One third of gynaecological consultation is due to Abnormal uterine bleeding (AUB). It is responsible for almost two-thirds of hysterectomies.^{1-5,8-10} The prevalence of abnormal uterine bleeding (AUB) is estimated to be 11-13% in the general population. AUB affects 10-30% of reproductive age group women and upto 50% of women in perimenopausal age group.¹⁵ Incidence varies with age and reproductive status of the women. Incidence increases with age, reaching 24% in those aged 36-40 years.¹⁴ Endometrial sampling is considered essential in AUB to confirm the benign nature of the disease and excluding malignancy by histopathological examination. This is important to decide the treatment modality.

The problem is that uterine bleeding has a wide range of diagnostic possibilities and confusion is generated when review and reports fail to outline the diagnostic evaluation of the patient who presents with abnormal uterine bleeding. In normal to 12 week size uterus, the cause of abnormal bleeding often remains obscure.¹⁴ Goals of clinical management are primarily dependent upon attaining a correct etiological diagnosis. The history, physical examination and pelvic examination attempt to determine the site of the bleeding and its source.^{8,9,10} Information gathered from this will suggest what direction the investigation would take and the treatment modality.⁹⁻¹³

Traditionally Ultrasonography and Dilatation and Curettage were the most common investigations employed in the evaluation of the causes of abnormal uterine bleeding. Ultrasonography clearly depicts the uterine contour, any lesion in the myometrium like fibroid and the status of the ovary, but fails to provide adequate information regarding the endometrium. The endometrial pathology like small submucous fibroid, endometrial hyperplasia is missed sometimes by ultrasound. Dilatation and Curettage is a blind procedure done without knowing the exact location of the lesion or the pathology of the endometrium and the endometrium has to be sent to the pathologist to study histological patterns and for the report.

Hysteroscopy has ushered a new era in the evaluation of abnormal uterine bleeding.¹⁻¹⁰ By direct visualization of the uterine cavity it is able to pin point the etiology in majority of the cases. It can accurately detect endometrial hyperplasia and aids in the early diagnosis of endometrial carcinoma and uterine polyps. The judicious use of hysteroscopy to manage this medical entity adds a new dimension in handling this often perplexing problem. This study has been taken up to analyze the role of hysteroscopy in the evaluation of Abnormal Uterine Bleeding in terms of accuracy of hysteroscopic findings and

contribution of the procedure to clinical diagnosis. It also aims to correlate hysteroscopic findings with histopathological results.

METHODS

This is a descriptive study in the role of hysteroscopy in evaluation of AUB. This study has been conducted in the Department of Obstetrics and Gynaecology, tertiary care center. The duration of the study was from January 2019 to July 2020. Clinical assessment and thorough local and systemic examination of 50 patients of reproductive age group was done and relevant findings were recorded with informed consent. Pre operative investigations: Hemoglobin, Platelet count, White cell count, Blood sugar, Blood urea Serum creatinine, Blood grouping, Rh typing, HIV, HBsAg, VDRL, ECG, Chest X-ray, Ultrasound abdomen and pelvis was done. Anaesthetic fitness was obtained. Injection TT ½ cc given intramuscularly. Prophylactic antibiotics and tablet Misoprostol 400ug 6 hrs before procedure were given. STANDARD INDICATIONS: Women of any age group with

- Menorrhagia
- Metrorrhagia
- Polymenorrhea.
- Menometrorrhagia
- Oligomenorrhea
- Post menopausal per vaginal bleeding

EXCLUSION CRITERIA:

- 1) Pregnancy
- 2) IUCD (Intrauterine contraceptive devices)
- 3) Hormone producing Ovarian tumors in USG
- 4) Endocrine disorders like hyper- or hypothyroidism, Diabetes, adrenal disease, prolactin disorders
- 5) Coagulation disorders, liver/renal diseases
- 6) Known Cervical or uterine malignancy
- 7) On medications like steroids, neuroleptics, anticoagulants and cytotoxic agents.
- 8) Recent uterine perforation

HYSTEROSCOPIC PROCEDURE:

Hysteroscopy was done in the proliferative phase of the cycle. The procedure was done with administration of short intravenous anesthesia. In a few cases para cervical block was used. Patient's bladder was emptied before the procedure. Patient was put in dorsal lithotomy position and perineum and vagina are gently swabbed with povidone iodine. Bimanual examination of pelvis was done. Sim's bivalve speculum introduced into the vagina gently and the posterior

vaginal wall retracted backwards. The anterior lip of cervix comes to view and is held with the vulsellum. The hysteroscope used was a 30 degree hysteroscope of diameter 5 mm outer sheath. the hysteroscope was introduced into the vagina, ectocervix, endocervix and uterine cavity. Normal saline was used as the distension medium. The uterine cavity was examined in a systematic manner. The hysteroscope was guided through the endocervical canal into the uterine cavity under vision. The ostia of the tubes examined. Then the endometrial surface was examined. All the surfaces of uterine cavity, that is the anterior wall, posterior wall, and lateral walls were examined. The appearance of the endometrium, colour, any polyps, fibroid, hyperplasia and vascularity noted. During withdrawing the hysteroscope cervical canal visualized. Endometrial sampling was done and sent for histopathological examination. The examination was considered complete when all the parts were visualized. If any difficulty in visualization due to blood clot occurs then the procedure is considered as incomplete and failed. The hysteroscopic findings correlated with the histopathology reports.



Figure.1 showing the hysteroscope with assembly

RESULTS AND OBSERVATION

50 patients of any age group with AUB were selected for the study. All the patients with AUB were subjected to hysteroscopy and biopsy and histopathological confirmation obtained for all. Hysteroscopy It was successful in 100% of cases and concluded satisfactory in almost all cases. There was no failure and no complication.

1. Menorrhagia was the most common complaint in our study which was seen in 42 patients (84 %). 6 patients (12%) presented with polymenorrhoea. 2 patients (4%) presented with intermenstrual bleeding.

Table.1 showing complaints of patients in our study.

Symptom	No. of patients
Menorrhagia	42(84%)
Polymenorrhoea	6(12%)
Intermenstrual bleeding	2(4%)

2. 44 out of 50 patients (88%) in the study group are multiparous and 6 patients (12%) were nulliparous. There was no difficulty in insertion of hysteroscope in any of the nulliparous patients.

Table.2 showing distribution of gravidous women in our study.

No. of patients	Parity status
Multiparous	44(88%)
Nulliparous	6(12%)

3. Menorrhagia was found in 4 patients (8%) in 20–22 years age group. 20 patients (40%) were in 30–39 years age group. 16 patients (32%) were in 42–49 years age group. 2 patients (4%) were greater than 50 years.

Table 3–Age distribution of patients with abnormal uterine bleeding

Category	20-29	30-39	40-49	>50	Total
Menorrhagia	4	20	16	2	42 (84%)
Intermenstrual bleeding	1	1	0	0	2 (4%)
Polymenorrhoea	0	2	4	0	6 (12%)

4.6 (12%) of the patients in the study included are nulliparous. In those 6 patients, 1 patient (2%) had submucosal myoma. 4(8%) patients had proliferative endometrium. Endometrial hyperplasia was found in 1 patient (2%) of the 6 patients.

In multiparous patients 14 patients (28%) had proliferative endometrium. 8(16%) patients had secretory endometrium. Endometrial hyperplasia was found in 9 patients (18%), 9(18%) patients had myoma uterus and 4(8%) patients had atrophic endometrium.

Table .4 showing hysteroscopic findings.

Parity	nulliparous		Multiparous	
Finding	No.	%	No.	%
Proliferative endometrium	4	8	14	28
Secretory endometrium	0	0	8	16
Atrophic endometrium	0	0	4	8
Myoma	1	2	9	18
Hyperplastic endometrium	1	2	9	18
Carcinoma endometrium	0	0	0	0

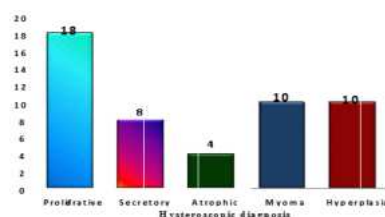


Figure No. 2 showing hysteroscopic diagnosis in 50 patients.

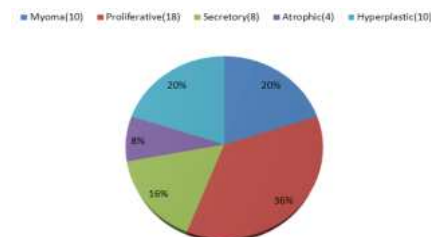


Figure.3 showing hysteroscopic findings in our patients

5. Diagnostic hysteroscopy was performed in 100% of patients with success and the histopathological findings were:

Myoma was seen in 10 patients (20%) in hysteroscopy. Proliferative type of endometrium was seen in 18 patients (36%). Secretory endometrium was seen in 8 patients (16%). Atrophic endometrium was seen in 4 patients (8%). Hyperplastic endometrium was observed in 10 patients (20%).

Table.5 showing histopathology findings in our patients.

Hysteroscopy	Histopathology findings					
Hysteroscopy	No. of patient	proliferative	secretory	atrophic	hyperplasia	Submucous
Proliferative	18	19				
Secretory	8		9			
Atrophic	4			4		
Hyperplasia	10				8	
Myoma	10					10

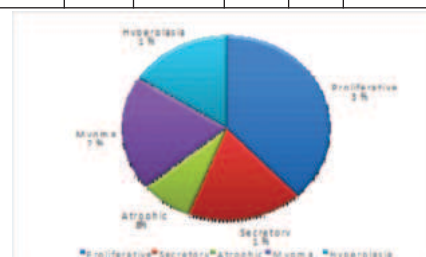


Figure.9 showing histopathological findings in our patients.

Table.6 showing Sensitivity, specificity, predictive value and negative predictive value of Hysteroscopy with HPE

Variable	Sensitivity%	Specificity%	PPV%	NPV%
Proliferative	94.73	100	100	96.87
Secretory	88.88	100	100	97.61
Atrophic	100	100	100	100
Myoma	100	100	100	100
Hyperplastic	100	95.23	80	100

6. The sensitivity of hysteroscopy in detecting myoma and hyperplasia was 100%. For hyperplasia the positive predictive value was 80%. For atrophic endometrium it hysteroscope was 100% sensitive and specific. For proliferative endometrium sensitivity was 94.73% and sensitivity for secretory endometrium was 88.88%.

DISCUSSION:

- 44 patients (88%) are multiparous and 6 patients (12%) are nulliparous.
- 42 patients (84%) had menorrhagia as their complaint.
- No patient in the study had any complication during or after the procedure.
- 10 patients had submucous myoma in hysteroscopy which was proved by the HPE report.
- 4 patients had atrophic endometrium in hysteroscopy confirmed in HPE.
- 10 patients had hyperplastic features in hysteroscopy. In that 8 confirmed to have hyperplasia, 2 had complex hyperplasia and 6 had simple hyperplasia.
- 18 patients had proliferative endometrium in hysteroscopy. In HPE 19 patients had proliferative endometrium.
- 8 patients had secretory endometrium in hysteroscopy. In HPE 9 patients had secretory endometrium.
- Hysteroscopy was found to be 100% sensitive and specific in diagnosis of endometrial lesion.
- No patient included in the study had endometrial carcinoma or endometrial polyp.

CONCLUSION:

Analysis of the above data shows that diagnostic hysteroscopy as an in patient procedure is a most reliable method in assessing the intrauterine pathology in patients of abnormal uterine bleeding. It also has higher patient acceptable rate. It is now used as an office procedure for the patients with menstrual irregularities and excessive bleeding. It also provides the treating gynecologist with more information regarding the endometrial pathology than the conventional dilatation and curettage.

CLINICAL SIGNIFICANCE:

Hysteroscopy can allow a surgeon to diagnose and treat conditions with a single surgery. In addition, a hysteroscopy enables surgery that's both minimally invasive and precise. Hysteroscopy can allow us surgeons to locate abnormalities and remove them without damaging surrounding tissue. It plays a key role in the diagnosis of abnormal uterine bleeding and would be a primary investigation tool for the infertile woman, as well as the ideal screening method for endometrial changes in patients taking hormone replacement therapy or anti-oestrogens as adjuvant treatment. Furthermore, it would be helpful in the interpretation of uncertain findings in other indirect diagnostic techniques such as ultrasound, magnetic resonance imaging, blind biopsy or hystero-salpingography. Hysteroscopy allows us to make a correct and complete diagnosis before entering the operation room and will avoid unnecessary surgery, such as dilatation and curettage (D&C), for a significant number of patients

LIMITATIONS

The number of patients enrolled in the study was less and so statistically significant inferences could not be made with regard to various factors. There are also errors and subjective variation in the assessment and characterization of lesions observed during the procedure. This study cannot be generalized to all socio economic groups, since this study is undertaken in lower socio economic group. Also the histological correlation between the diagnosis of

hysteroscopy and the histopathological findings was studied and it showed a good correlation which concluded that hysteroscopy is more accurate. The significance of the small lesions which was missed by ultrasound and other investigations but diagnosed by ultrasound was doubtful.

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