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Original Research Article

Hysteroscopy in evaluation of intrauterine causes of abnormal uterine bleeding

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ABSTRACT

Background: Various endometrial pathologies contribute to a large proportion of cases of abnormal uterine bleeding (AUB) during the reproductive years as well as after menopause.
Methods: This is a retrospective observational study conducted in department of Obstetrics and Gynaecology at SMGS Hospital, Jammu. 200 patients between 20-70 years age presenting to gynaecology OPD with abnormal uterine bleeding between January 2019 to December 2019 were studied. All patients were subjected to thorough clinical evaluation followed by hysteroscopy. Data collected from medical records, analysed and various intrauterine causes of AUB were studied. Hysteroscopy directed biopsies were taken in the same sitting and sent for histopathology and culture.
Results: Mean age of patients in our study was 45 years with majority of patients in 40-50-year age group (69%). Most common symptom reported was menorrhagia (48%) followed by menometrorrhagia (18%) and polymenorrhea (10%). Hysteroscopy detected intrauterine abnormality in 59% cases. Most common being hyperplastic endometrium in 52 patients (26%) followed by polyp (20%). 14 (7%) had sub mucous fibroid, 8 (4%) had atrophic endometrium and 2 (1%) had intrauterine adhesions.
Conclusion: Hysteroscopy provides a simple & easy method for visualization of the cervical canal & uterine cavity for the evaluation of AUB. Hysteroscopic pattern recognition is a useful concept to triage women who require sampling for histopathological diagnosis.

Keywords: AUB, Hysteroscopy, Endometrium

INTRODUCTION

AUB is a common clinical presentation accounting about 35% of gynaecology OPD visits and 25% of gynaecological surgeries and this incidence rises to 69% in peri and postmenopausal age.[1]

Hysteroscopy permits direct visualization of the cervical canal and uterine cavity, enabling observation of the shape and vascular pattern of any abnormality. Hysteroscopy can detect fibroids, endometrial polyps, Ashermans syndrome, foreign bodies, uterine anomalies like septate uterus, bicornuate uterus, arcuate uterus, unicornuate uterus. It also helps in detecting abnormalities of cervix like cervical stenosis or polyps and aids in the visualization of tubal ostia thereby detecting lesions of uterotubal junction. In addition, hysteroscopic approach offers the possibility of obtaining endometrial biopsies under visual control.[2,3]

Pattern recognition of various phases of normal endometrium and endometrial pathologies during hysteroscopy has many advantages. It would help to triage women with AUB, so as to be selective with

biopsies and curettages. Recognition of normal variant or benign lesion would reduce burden to the pathologist by decreasing the number of unnecessary sampling. It also decreases anxiety of the patient as the report can be instant in many cases.[4]

Diagnostic hysteroscopy and simple operative hysteroscopy can usually be done in an office setting. The sensitive innervations in the uterus start from the myometrium out, whereas the endometrium and any fibrotic tissue present are not sensitive. This is the rationale ensuring that the hysteroscopic procedure can be performed without any analgesia or anaesthesia .[5]

This study was done to evaluate role of hysteroscopy in diagnosing intrauterine causes of AUB.

METHODS

This is a Retrospective observational study conducted in department of Obstetrics and Gynaecology, SMGS Hospital, Jammu. 200 patients presenting to general gynaecology OPD with abnormal uterine bleeding from January 2019 to December 2019 were studied. All patients selected for study had a thorough evaluation with detailed history, clinical examination, laboratory tests and sonography followed by hysteroscopy and endometrial biopsy. Data collected from medical records, analysed and various intrauterine causes of AUB were studied.

Inclusion criteria

All women of age group from 20-70 years presenting to OPD with abnormal uterine bleeding who did not require emergency management.

Exclusion criteria

Women with known or suspected pregnancy, genital prolapses, uterine and cervical infections and PID, STD's and vaginitis, lower genital tract malignancies and medical contraindications to any invasive procedures were excluded.

Instruments used

Hysteroscope: Karl Storz (30^0)

Camera, light source, Insufflator, Distention media (normal saline), Endomat, Monitor

Patient was put in lithotomy position and under all aseptic precautions part was draped. A preoperative bimanual examination was performed to ascertain the position and mobility of the uterus. A Sims speculum was used to bring the cervix into view. The cervix was cleaned with antiseptic solution. Vulsellum forceps was applied to the anterior lip of cervix. The hysteroscope was introduced slowly through the cervix and into the uterine cavity under video monitoring, avoiding contact with the mucosa with the aid of saline distension. The initial step at hysteroscopy was to identify the uterine cavity and the ostia and to evaluate the right and left cornua, fundus, anterior and posterior walls and lateral walls for specific lesions, as well as to evaluate the overall contour of the uterine cavity.

A biopsy was taken and sent for HPE and AFB culture. When diagnostic survey was complete, the hysteroscope was slowly withdrawn while carefully inspecting the endocervical canal. Results were tabulated.

RESULTS

Age group of patients in our study ranged from 20-70 years with a mean age of 45 years. Majority of patients 69% were in 40-50 years age group followed by 15% in 50-60 years age group and 9.5 in 30-40 years age group. 4 % patients were in 20-30 years age group and 2.5% were above 60 years. (Table 1)

Table 1: Distribution of patients according to age.

Age group (years)	Number	Percentage (%)
20-30	8	4
30-40	19	9.5
40-50	138	69
50-60	30	15
>60	5	2.5
Total	200	100

In the present study, menorrhagia (48%) was the most frequent indication for hysteroscopy. 18% of patients presented with menometrorrhagia and 10% of patients presented with polymenorrhoea. Postmenopausal bleeding was seen in 9% of patients. Oligomenorrhoea was seen in 4% of patients followed by Metrorrhagia in 3% patients (Table 2).

Table 2: Distribution of patients according to symptoms.

Symptoms	No.	Percentage (%)
Menorrhagia	96	48
Metrorrhagia	6	3
Menometrorrhagia	36	18
Poly-menorrhea	20	10
Polymenorrhagia	12	6
Pos-menopausal bleeding	18	9
Oligomenorrhoea	8	4
Hypomenorrhea	4	2
Total	200	100

Positive findings on hysteroscopy were seen in 59% of patients. Hysteroscopy showed normal cavity in 41% of our patients. Most common finding on hysteroscopy was hyperplastic endometrium in 26% patients followed by polyp in 20% of patients. 7% patients had submucous

fibroid on hysteroscopy which was seen as bulge in the wall of uterus. Atrophic endometrium was seen in 4% cases followed by intrauterine adhesions and copper T in 1% each. (Table 3)

Table 3: Hysteroscopic findings in the patients.

Findings	N	Percentage (%)
Hyperplastic endometrium	52	26
Polyp	40	20
Submucous myoma	14	7
Atrophic endometrium	8	4
Adhesions	2	1
Cu T	2	1
Normal	82	41
Total	200	100

Table 4: Histopathological findings of endometrium.

HPE	Patients	
	No.	Percentage (%)
Secretory endometrium	112	56
Proliferative endometrium	38	19
Atrophic endometrium	4	2
Hyperplastic endometrium	44	22
Chronic granulomatous inflammation with Giant cells (TB)	2	1
Total		100

The samples of endometrium were sent for histopathology and AFB culture before treatment Majority of patients had secretory endometrium (56%) followed by hyperplastic endometrium (22%) and proliferative endometrium in about 19% patients. Atrophic endometrium was seen in 2% patients while 2 patients had chronic granulomatous inflammation with giant cells on histopathology (TB). (Table 4)

Table 5: AFB culture of patients.

AFB culture	Number	Percentage (%)
Positive	1	0.5
Negative	99	99.5

Out of all the samples sent, AFB culture was positive in 1 patient (0.5%) in our study. (Table 5)

DISCUSSION

The need for hysteroscopic assessment of endometrium is being emphasized more and more in evidence-based medicine.[5-9]

Age group of patients in our study ranged from 20-70 years with a mean age of 45 years. Majority of patients 69% were in 40-50 years age group similar to study conducted by Naik et al.[10] 15% in 50-60 years age group and 9.5% in 30-40 years age group. 4 % patients were in 20-30 years age group and 2.5% were above 60 years.

In our study, we found that hysteroscopic pattern recognition can be used detect secretory endometrium, polyps and malignancy with good efficacy. Endometrial biopsy can be taken and sent for histopathology and culture in the same sitting aiding in the treatment.[11]

In present study, most common symptom reported was menorrhagia (49%) followed by menometrorrhagia (18%) and polymenorrhoea (10%). 9% patients had postmenopausal bleeding and 4% patients presented with oligomenorrhea. Menorrhagia was also the most common symptom in studies conducted by Naik M et al and Guin Gita et al. [10,12]

In present study 59% of patients had positive findings on hysteroscopy. Positive findings on hysteroscopy were 52% in study conducted by Schwarzler et al and Baggish MS et al 74% had positive findings in study conducted by Guin G et al.[12-14] This incidence depends on the selection criteria of the author for their study population and also on the criteria for a positive hysteroscopy finding.

Most common finding on hysteroscopy in our study was hyperplastic endometrium in 26% patients followed by polyp in 20% of patients. Most common finding on hysteroscopy was hyperplastic endometrium (30%) in the study conducted by Guin et al and polyp (26.8%) was most common finding seen in study conducted by Naik M et al [10,12]

Atrophic endometrium was seen in 4% of patients in our study. It was reported as 18% by Guin et al 11, 6% by Sciarra et al**,** 14.6%, by Hamou et al.[15,16] Finding of atrophic endometrium in patients with postmenopausal bleeding reassures the patient. As most of these patients otherwise are unnecessary subjected to hysterectomy for no pathology.

CuT was seen in 2 patients on hysteroscopy, probably the practice of inserting IUCD's in women undergoing MTP or post-delivery who are not willing for any contraception is prevalent in many hospitals in this area and could be a fallout of the target-oriented approach to family planning.

Hysteroscopic guided biopsy of hypertrophic endometrium provided accurate diagnosis and helped in planning further management. Majority of patients had secretory endometrium (56%) followed by hyperplastic endometrium (22%) and proliferative endometrium in about 19% patients. Atrophic endometrium was seen in 2% patients while 2 patients had chronic granulomatous inflammation with giant cells on histopathology (TB). This helped in aiding in the treatment of various pathologies according to age.

CONCLUSION

Hysteroscopy is an important tool in the evaluation of AUB. Hysteroscopic pattern recognition is a useful concept to triage women who require sampling for histopathological diagnosis. Diagnosis based on pattern recognition can reduce the unnecessary burden on the pathologist and also the anxiety for the patient during the waiting period to get the final histopathology report.

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