

Hysteroscopy as Evaluating Tool in Women with AUB a Prospective Study

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Abstract

Objectives: 1) To study clinical profile of women presenting with abnormal uterine bleeding who underwent hysteroscopy for evaluation 2) To correlate its observations with ultrasonographic findings and histopathology 3) To assess sensitivity and specificity of hysteroscopy to detect various intrauterine pathology.

Methods: This was a prospective study conducted at the Department of Obstetrics and Gynaecology, Sir Sayajirao General Hospital, Vadodara over a period of 1 year. A total of 31 women were enrolled. Study was conducted over a period of one year from 16th April, 2009 to 15th April, 2010. Complete biodata and clinical history were elicited. Women were thoroughly examined and investigations were carried out. Hysteroscopy with 5mm, 30° hysteroscope was used. Histopathological confirmation was done. Women were followed up after six weeks and at six months.

Results: The specificity of hysteroscopy was 77.77%, its positive predictive value was 84.6%, its negative predictive value was 77.77% and its overall efficacy was 81.81% with abnormality detection rate of 48.78% for AUB.

Conclusion: Hysteroscopy has become the tool of choice for the evaluation of the endometrial cavity, including for assessment of abnormal uterine bleeding. It is a reliable method for evaluation of AUB, especially in benign lesions like endometrial polyp and submucous myoma, as well as in diagnosing endometrial cancer or hyperplasia. Thus, it can be used as first line diagnostic method in these abnormalities with dual advantage of possibility of operative interventions also.

Keywords: Hysteroscopy, Laparoscopy, Abnormal Uterine Bleeding.

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Introduction

AUB is a common and chronic clinical presentation accounting about 35% of gynecology OPD visits and 25% of gynaecological surgeries and this incidence rises to 69% in peri and postmenopausal age [1,2,3]. The FIGO PALM-COEIN classification system

facilitates understanding of possible AUB aetiology.

Traditionally, Ultrasonography and Dilatation and Curettage was mainstay of investigations for diagnosis of AUB. Accuracy in diagnosis is the constant aim of all clinicians. Endoscopic visualization of

internal genital organs has opened a new field in Diagnostic Gynaecology.

Blind exploration of the uterine cavity with either a uterine sound or curette at the time of curettage may sometimes suggest the diagnosis of a uterine malformation. But this carries with it the risk of perforation, and has to be supplemented by further investigative procedures.

Hysteroscopy can be a relatively minor outpatient procedure that may be done under no anesthesia or a combination of local anesthesia with sedation. The risks of complications are minimal and total time taken in competent hands should not exceed five or ten minutes.

Hysteroscopy is better than TVS in detecting submucous fibroid. Diagnostic accuracy of hysteroscopy is high for carcinoma endometrium. Thus, hysteroscopy allows an efficient and accurate diagnosis of intrauterine pathology, including submucous fibroids, endometrial polyps and potentially hyperplasia and cancer.[4, 5]

Aims

- To study clinical profile of women who needed hysteroscopy for AUB evaluation
- To correlate hysteroscopic observations with ultrasonographic findings and histopathology.

- To assess sensitivity and specificity of hysteroscopy to detect various intrauterine pathology.

Material and Method

This was a prospective study conducted at the Department of Obstetrics and Gynaecology, Sir Sayajirao General Hospital, Baroda Medical College. A total of 31 women were enrolled. Study was conducted over a period of one year from 16th April, 2009 to 15th April, 2010. Complete biodata and clinical history, specifically, were elicited. Women were examined for general condition and vitals. Thorough systemic examination, per speculum and per vaginum examination was carried out. Investigations like hemogram, blood group, urine analysis, blood urea, serum creatinine, S. LFT were carried out.

Women, after informed written consent, were then posted for hysteroscopy. 5mm, 30° hysteroscope of Karl Storz no 26163 was used for the purpose. Hysteroscopy guided D & C, polypectomy was done as per indication. Histopathological confirmation was done. Women were followed at 6 weeks and 6 months.

Results

Table 1 shows the age distribution. Maximum numbers of women were in age group of 36-40 years (10 women). Mean age was 39.45 years, with a range of 15-60 years.

Table 1: Age distribution of study population

Age	N (%)
< 20	01 (3.2)
21-25	01 (3.2)
26-30	04 (12.9)
31-35	03 (9.6)
36-40	10 (32.2)
41-45	06 (19.3)
46-50	02 (6.4)
>50	04 (12.9)

Most common presenting complaint was menorrhagia seen in 14 out of 31 women,

comprising 45.16% (Table 2), followed by polymenorrhoea, 7 out of 31 (22.58%). One

patient presented with metrorrhagia. Five women had postmenopausal bleeding (16.12%) and 4 had amenorrhoea (12.9%).

The procedure was performed under Local anesthesia in all women.

Table 2: Menstruation related complaints in study population

Menstrual irregularities	N (%)
Menorrhagia	14 (45.2)
Metrorrhagia	01 (3.2)
Menometrorrhagia	00 (0)
Polymenorrhoea	07 (22.58)
Postmenopausal Bleeding	05 (16.1)
Amenorrhoea	04 (12.9)

Table 3 shows correlation between hysteroscopic, ultrasonographic and histopathological findings. Out of 31 patients, 3 patients were diagnosed with misplaced IUCD, 2 had Sub-septate uterus and 1 was of Asherman syndrome and thus, were not subjected to Dilatation and Curettage. Histopathological diagnosis of our rest 25 cases showed normal endometrium in 12 cases (48%). An endometrial pathology was found in 13 women (52%). An abnormal endometrial echotexture on TVS was found in 7 of the 13 cases with endometrial pathology

(sensitivity 53.84%). Thus, the specificity of TVS was 87.5%, its predictive value as positive test was 87.5%, its predictive value as a negative test was 53.84% and overall efficacy was 66.66%. Hysteroscopy had diagnosed 11 cases from the 13 lesions that had been diagnosed by histopathology (sensitivity 84.6%). Case of endometrial carcinoma was correctly diagnosed by hysteroscopy. Thus, the specificity of hysteroscopy was 77.77%, its positive predictive value was 84.6%, its negative predictive value was 77.77% and its overall efficacy was 81.81%.

Table 3: Findings in the study group by the 3 different methods

Histopathology	TVS	Hysteroscopy
Normal (n = 12)	Normal(7)	Normal (7)
	Polyp(0)	Polyp (1)
	Myoma(1)	Myoma (3)
	Hyperplasia(4)	Hyperplasia (2)
Hyperplasia (n = 5)	Normal (2)	Normal (2)
	Hyperplasia (3)	Hyperplasia (3)
Polyp (n = 7)	Polyp (3)	Polyp (4)
	Normal (4)	Hyperplasia (2)
Carcinoma (n = 1)	Carcinoma (1)	Carcinoma (1)

Fig. 1 Depicts in how many patients presenting with different significant complaints, hysteroscopy could pick up endometrial abnormalities. Hysteroscopy could pick up abnormalities in 64.5% (20 out of 31 cases).

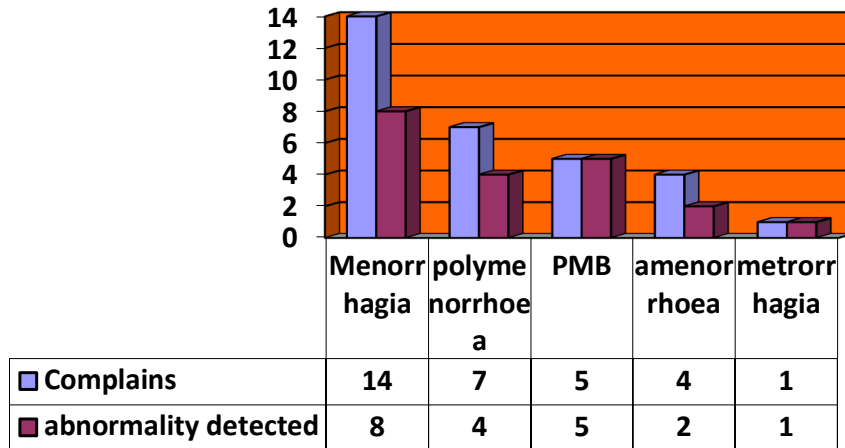


Figure 1: Abnormalities picked up by hysteroscopy

Table 4 shows various hysteroscopic findings. Seven out of 31 patients had findings of hyperplastic endometrium seen in 21.42% patients presenting with menorrhagia (3 out of 14). Polyp and myoma were the other common findings found seen in eight out of 31, 25.8% cases.

Three out of five patients of postmenopausal bleeding had polyp, one had evidence of endometrial carcinoma and hyperplasia each which was confirmed by histopathology. Three patients had neglected IUCD in utero.

Table 4: Hysteroscopy findings (n = 31)

Types of abnormal uterine bleeding Types(n)	Hysteroscopy						
	Hyperplastic endometrium	Endometrial Carcinoma	Polyp	Myoma	Intrauterine Adhesions	Subseptate uterus	IUCD
Menorrhagia (14)	3	--	2	2	--	--	2
Metrorrhagia(2)	--	--	--	--	--	1	1
Polymenorrhoea(7)	2	--	--	1	--	1	--
Postmenopausal Bleeding(5)	1	1	3	--	--	--	--
Amenorrhoea(4)	1	--	--	--	1	--	--
Tota,1 n=31	7	1	5	3	1	2	3

Discussion

The prevalence of AUB varies between 9-14% among menarche and menopausal women [6]. In India, prevalence of AUB is reported to be 17.9 % [7]. This was a prospective study conducted in the department of Obstetrics & Gynaecology, SSGH, Vadodara over a period of one year. Though the prevalence of AUB during study period was 15.4% (1554 AUB cases out of 10,054 patients attending

Gynecology OPD), only 31 women with AUB without any contraindication were subjected to hysteroscopy as the procedure was recently introduced as diagnostic tool during that period. Traditional methods were preferred more due to limited exposure and experience with the new method. The mean age of patients in our study is 39.45 with a range of 15-60 years. In a study conducted by Parul et al, the age of patients ranged from 20 to 50 with a mean age of 36.4 ± 7.6. (8) Age group of

patients in study conducted by Naik M et al ranged from 20-70 years with a mean age of 45 yrs. Majority of patients 68.2% were in 40-50 year age group followed by 14.84% in 30-40 year age group and 10.5% in 50-60 year age group. 4.5% patients were in 20-30 year age group and 1.7% was above 60 yrs. (9)

In present study, 45.16% women presented with menorrhagia, 22.58% presented with polymenorrhoea, 16.12% women had postmenopausal bleeding and 12.9% had amenorrhoea. Menorrhagia was considered when patients presented with regular heavy bleeding during periods, metrorrhagia for intermenstrual bleeding with regular cycles. Menometrorrhagia was considered for irregular heavy bleeding. Polymenorrhoea was considered when patient complained of short cycles with loss of regular cycles with or without heavy bleeding. Post-menopausal bleeding was considered for women presenting with an episode of bleeding after one year of amenorrhoea. Our findings were consistent with the study conducted by Gita Guin and Surpreet (10), who reported menorrhagia (30%) as the most frequent indication for hysteroscopy in their study, followed by menometrorrhagia and oligomenorrhoea, 16% each. Only 2% patients presented with post-menopausal bleeding.

In our study histopathological diagnosis of 25 cases showed normal endometrium in 12 cases (48%). An endometrial pathology was found in 13 women (52%). An abnormal endometrial echotexture on TVS was found in 7 of the 13 cases with endometrial pathology (sensitivity 53.84%). Thus, the specificity of TVS was 87.5%, its predictive value as positive test was 87.5%, its predictive value as a negative test was 53.84% and overall efficacy was 66.66%. Hysteroscopy had diagnosed 11 cases from the 13 lesions that had been diagnosed by histopathology (sensitivity 84.6%). Case of endometrial carcinoma was correctly diagnosed by hysteroscopy. Thus, the specificity of

hysteroscopy was 77.77%, its positive predictive value was 84.6%, its negative predictive value was 77.77% and its overall efficacy was 81.81%. El-Khayat et al.(11) found that hysteroscopy was able to diagnose fibroids, normal findings and polyps in 100% cases, hyperplasia in 66.66% of cases and hyperplasia with polyps in 85.17% cases. Amruta Gadge et al. (12) in a study concluded that hysteroscopy was able to diagnose fibroids, hyperplasia, and hyperplasia with a polyp in 100% cases each while polyps were diagnosed in 83.33% each and normal findings in 73.33%.(10)

In the present study, hysteroscopy as a diagnostic tool was found to have abnormality detection rate of 48.78% for AUB. With such findings, Hysteroscopy can be considered as the tool of choice for the evaluation of the endometrial cavity, including assessment of abnormal uterine bleeding.

Conclusion

Upto one third of women will experience abnormal uterine bleeding in their life, with irregularities most commonly occurring at menarche and menopause. In such scenario, thorough evaluation of AUB becomes necessary to initiate appropriate treatment. Direct visualization of endometrial cavity by hysteroscopy is a promising and a reliable method for diagnosing etiology of AUB, both in benign lesions like endometrial polyp, submucous myoma as well as in endometrial hyperplasia and cancer, along with the advantage of giving the opportunity of therapeutic or operative measures in the same sitting in expert hands. Hence, now- a- days hysteroscopy is used as first line diagnostic method in AUB evaluation.

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