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Original Research Article

## Hysteroscopy today: is it yet a conventional diagnostic technique in abnormal uterine bleeding?

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### ABSTRACT

**Background:** To assess the efficacy of hysteroscopy over dilatation and curettage in diagnosis of abnormal uterine bleeding.

**Methods:** A total of 51 women in reproductive and peri- menopausal age group (19-55 years) with complaints of abnormal uterine bleeding were enrolled in the study. All the patients underwent hysteroscopic examination followed by D&C/histopathological evaluation. Hysteroscopic findings were compared against histopathological findings.

**Results:** Majority of patients belonged to 36-40 years of age group. Majority (40%) presented within 6 months of complaints. Hysteroscopically, 46% had abnormal findings 12% had cervical polyps, 12% fibroid polyps, 18% endometrial polyps, 2% had adhesions (Ashermann's syndrome) and 2% had a forgotten intrauterine contraceptive device. On histopathology (D&C) 64% cases had normal/proliferative/atrophic endometrium, 12% had hyperplasia and 6% had polyp.

**Conclusions:** Hysteroscopy provided additional information for some of the pathologies which would otherwise be undiagnosed by HPE.

**Keywords:** Abnormal uterine bleeding, Hysteroscopy, Dilatation and curettage

### INTRODUCTION

The term "hysteroscopy" is derived from the fusion of two ancient Greek words "histeros" (uterus) and "scopeo" (to see). It involves the visualization of the endometrial cavity with the aid of a hysteroscope (Telescope) inserted through the cervix.<sup>1</sup> Dilation and curettage (D&C) and ultrasonography (USG) were the only diagnostic modalities available for a long time. D&C was a blind procedure but provided means for tissue diagnosis whereas USG demonstrated uterine and ovarian details but lacked histological diagnosis.<sup>7</sup> This is where hysteroscopy trumps both gives visual as well as histological diagnosis and is today the gold standard in our diagnostic arsenal for abnormal uterine bleeding (AUB).<sup>2</sup> Use of hysteroscopy in abnormal uterine

bleeding is almost replacing blind curettage, as it "sees" and "decides" the cause. This is because the uterine cavity can be observed and the area in question can be curetted. In fact, it is an eye in the uterus.<sup>2</sup> Nearly 30% of all gynaecological outpatient attendants are for AUB.<sup>3</sup> This proportion rises to more than 65% when peri & post-menopausal women are considered.<sup>4</sup> Abnormal uterine bleeding (AUB) is a common medical problem, with a direct influence on women's quality of life (negative impact on quality with decrease in their efficiency) and health care resources.<sup>5</sup> Hysteroscopy is a precise, easy, and quick method to assess and identify any intrauterine pathology, with which we are able to observe the whole endometrial cavity and take adequate biopsies of any suspicious lesions.<sup>6</sup> This study was designed to investigate and compare the histologic and hysteroscopic

findings of peri- and post- menopausal women with AUB and asymptomatic women with increased endometrial thickness.<sup>6</sup> It accounts for nearly 11% of total hysterectomies.<sup>7</sup>

### Aim and objectives

Aim and objectives of current study was to investigate the accuracy of hysteroscopy in evaluation of abnormal uterine bleeding and to correlate hysteroscopic findings with histopathologic findings.

### METHODS

A prospective, randomized controlled study was carried out in the department of obstetrics and gynecology at the Government hospital (Sir T), Bhavnagar, over the period of 2 years and 4 months starting from May 2017 up till September 2019.

Fifty-one female patients between the age group of 19 years to 55 years with a history of abnormal uterine bleeding were enrolled for the study.

The patients coming to outpatient department in their reproductive, peri-menopausal, post-menopausal age group, with the history of abnormal uterine bleeding were included in the study. Those with grossly irregular menstrual cycles or continuous vaginal bleeding, those with bleeding dyscrasias, on anti-coagulants/anti-platelets and significant co-morbidities were excluded. The patients underwent hysteroscopic evaluation in minor operation room under sedation followed by curettage. The endometrium was sent for histopathologic examination. The correlation between findings on hysteroscopy and histopathologic examination was tabulated.

All the patients were well informed about the study in every aspect and an informed written consent was obtained in each case.

### RESULTS

It was observed that maximum number i.e., 35% of patients belonged to 36-40 years of age group. Minimum number belonged to 25-30 years i.e., 4%. No abnormal finding was found in 64%. About 12% had cervical and fibroid polyp, respectively. And 18% had endometrial polyp. Ashermann's syndrome i.e. adhesions were found in just 2% of cases. A forgotten intrauterine contraceptive device was found in another 2%.

On comparison, 26 cases were hysteroscopically and 24 were histopathologically diagnosed as hormonal. 6 cervical polyps were seen on hysteroscope, out of which only 2 were diagnosed on histopathology.

Out of 9 endometrial polyps noted on hysteroscopy, 7 were confirmed on histopathology. One fibroid polyp was confirmed on histopathology which was observed on hysteroscopy. Hyperplasia of the endometrium was diagnosed in 5 cases in histopathology but not noted in hysteroscopy. Out of the 51 patients taken up for hysteroscopy, 15 still required hysterectomy. Out of 26 patients, those with structural defect benefited with biopsy excision. Those with hormonal derangements, benefited with hormonal regulation. Yet, 9 patients fell lost to follow up. Hence, we conclude that hysterectomy could be avoided in almost 51% of patients, that too after losing about 17% of patient to follow-up.

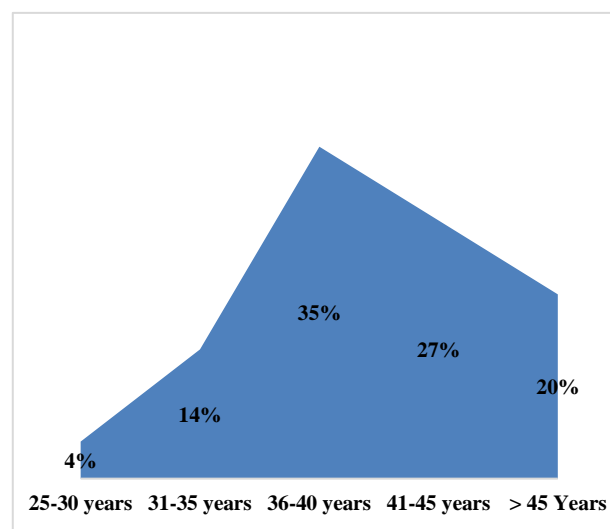


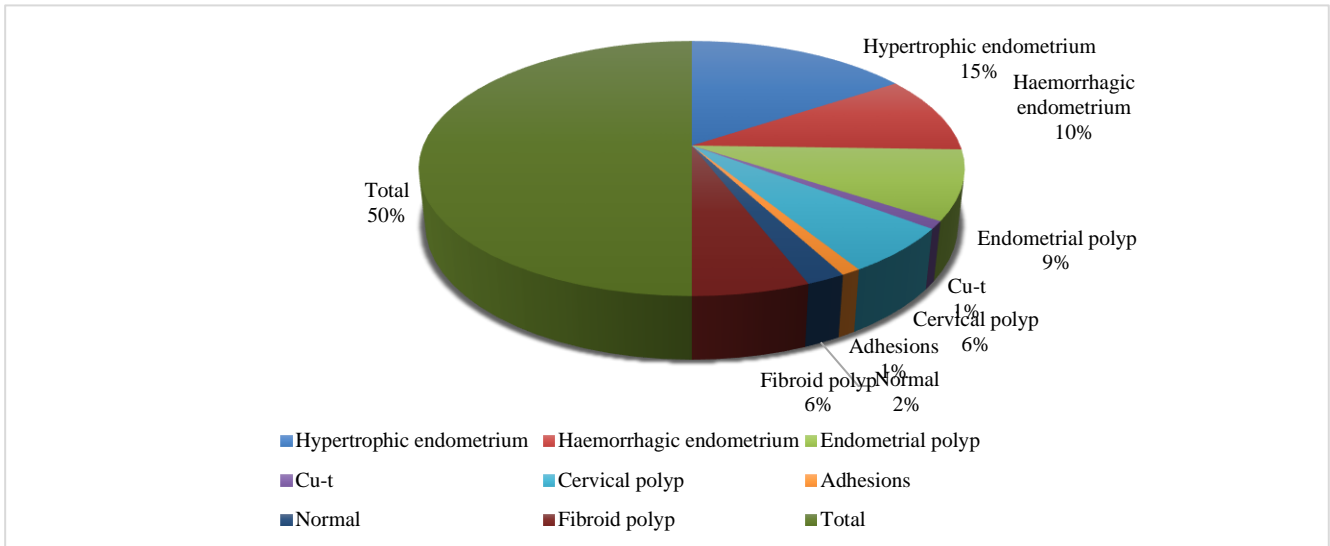
Figure 1: Age distribution.

Table 1: Age distribution.

Age (years)	N	%
25-30	2	4
31-35	7	14
36-40	18	35
41-45	14	27
> 45	10	20
<b>Total</b>	<b>51</b>	<b>100</b>

Table 2: Hysteroscopic findings.

Hysteroscopy	N	%
<b>Hypertrophic endometrium</b>	16	31
<b>Haemorrhagic endometrium</b>	10	20
<b>Endometrial polyp</b>	9	18
<b>IUCD</b>	1	2
<b>Cervical polyp</b>	6	12
<b>Adhesions</b>	1	2
<b>Normal</b>	2	4
<b>Fibroid polyp</b>	6	12
<b>Total</b>	<b>51</b>	<b>100</b>



**Figure 2: Hysteroscopic findings.**

**Table 3: Histopathological findings.**

Histopathological findings	N	%
<b>Proliferative phase</b>	15	29
Secretory phase	9	18
<b>Endometrial polyp</b>	8	16
<b>Simple endometrial hyperplasia without atypia</b>	4	8
Not adequate	2	4
<b>Menstrual phase</b>	2	4
<b>Cervical polyp</b>	2	4
<b>Normal</b>	1	2
<b>Simple endometrial hyperplasia with atypia</b>	1	2
<b>Distorted endometrium</b>	1	2
<b>Inactive endometrium</b>	1	2
<b>Fibroid with secretory phase</b>	1	2
<b>Inactive endometrium and fibroid polyp</b>	1	2
<b>Atrophic endometrium</b>	1	2
<b>Inadequate material</b>	1	2
<b>Cystic hyperplasia endometrium</b>	1	2
<b>Total</b>	51	100

**Table 4: Comparison of hysteroscopic and histopathological abnormality.**

Findings	Histopathological abnormality	Hysteroscopic abnormality
<b>Hormonal</b>	24	26
<b>Hyperplasia</b>	05	00
<b>Polyp</b>		
Cervical polyp	02	06
Endometrial polyp	07	09
<b>Submucous myoma</b>	01	04
<b>Normal endometrium</b>	03	02
<b>Fibroid polyp</b>	01	01
<b>Forgotten IUCD</b>	00	01
<b>Metaplasia</b>	01	00
<b>Adhesion</b>	00	01
<b>Distorted endometrium</b>	02	00
<b>Atrophic endometrium</b>	01	00

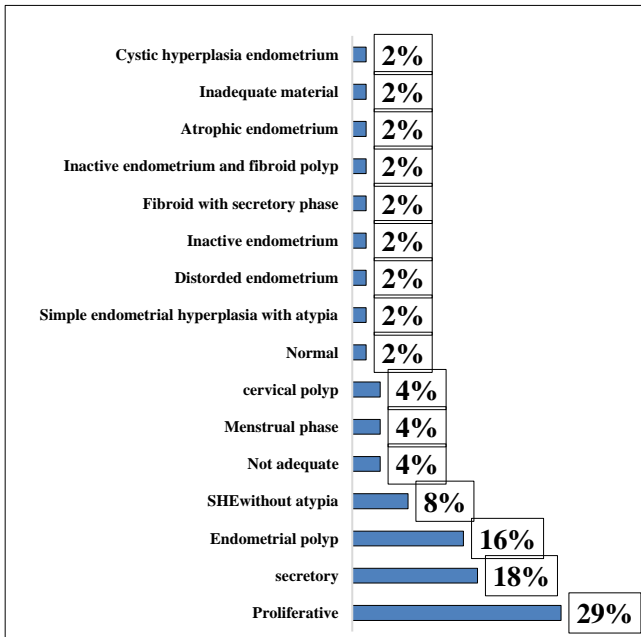


Figure 3: Histopathological findings.

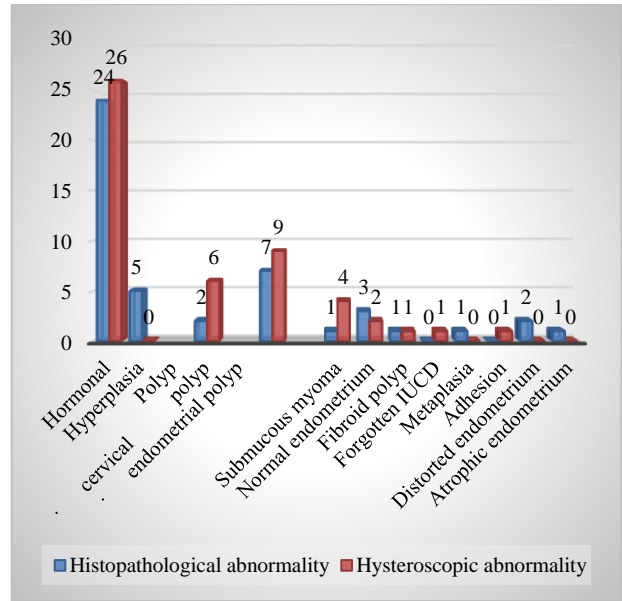


Figure 4: Comparison of hysteroscopic and histopathological abnormality.

Table 5: Age impact on hysteroscopy.

Hysteroscopy	Age (years)					Total
	25-30	31-35	36-40	41-45	>45	
Hypertrophic endometrium	0	0	8	6	2	16
Haemorrhagic endometrium	1	2	5	0	2	10
Endometrial polyp	1	0	3	3	2	9
Cu-t	0	0	1	0	0	1
Cervical polyp	0	2	0	2	2	6
Ce and adhesion	0	0	0	0	1	1
Normal	0	0	1	1	0	2
Fibroid poly	0	3	0	2	1	6
Total	2	7	18	14	10	51
Pearson Chi-Square	32.033	df	28		Sig.	0.273

Table 6: Number of hysterectomies required.

Category	N (%)
Hysterectomy required	15 (29.41)
Hysterectomy not required	26 (50.98)
Loss of follow up	09 (17.65)

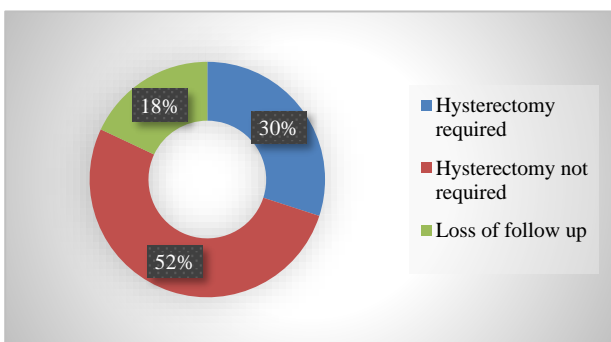


Figure 5: Number of hysterectomies required.

DISCUSSION

In the present study, we observed maximum number of patients with AUB attending the out patient department belonged to the age group of 36-40 years (35%) followed by 41-45 years (27%) and then >45 years (20%) being 27%. Mean age of patients in the study of Parul sinha et al was 36.4±7.6 years.<sup>6</sup> Abnormal uterine bleeding was most prevalent among women of two age groups, 26-30 years and 41-45 years (22%) in Patil et al.<sup>2</sup> In the present study, hysteroscopy showed the absence of any abnormal pathology in more than half i.e. 64% cases.

Among these, 15 were in proliferative phase, 9 in secretory phase, 2 in menstrual phase and 1 had atrophic endometrium. A normal hysteroscopic finding in the previous studies were 46.4% in Sinha et al, 34% in Sharma et al, 58% in Patil et al.<sup>2,6-8</sup> Brooks and Serdin in their hysteroscopic study on 29 patients of abnormal uterine bleeding, had negative curettage results in 20 such

patients.<sup>9</sup> No cases of cancer endometrium were diagnosed in the present study. Other studies reported endometrial cancer as the following: In Sharma et al 2 cases (4%), Sarvi et al reported 3 out of 67 patients, Valson et al reported 2% cases and Sinha et al reported none.<sup>6-8</sup> In the present study, we came across 5 cases of hyperplasia 4 cases without atypia and 1 with atypia; complex hyperplasia was not an entity in this present study. 1 case of cystic hyperplastic endometrium was encountered suggestive of metropathica haemorrhagica.

In Sarvi et al study, there was more endometrial hyperplasia in the AUB group than in the asymptomatic group (16% vs. 11.6%).<sup>6</sup> In Patil et al study, out of 20 cases of hyperplasia on histopathology, 13 cases were of simple hyperplasia without atypia, 3 cases were of simple hyperplasia with atypia, 3 cases were of complex hyperplasia without atypia and 1 case was of complex hyperplasia with atypia.<sup>2</sup> Valson et al. in their study also reported normal/atrophic findings in 72% of their patients of AUB and reported simple hyperplasia with/without atypia (12%).<sup>11-14</sup> Our study showed 12% had cervical polyps, 12% had fibroid polyps, 18% had endometrial polyps and 2% had adhesions. Valson et al reported polyp (8%) and submucous myomas (2%).<sup>14</sup> Sinha et al reported endometrial polyps (16.1%), fibroma (10.7%), necrotic mass (7.1%) and adhesions (5.4%).<sup>7</sup> In our study, 1 case had impacted intrauterine device (IUCD) as a cause for AUB which were 1.8% of cases in Sinha et al and 7.1% of cases in Guin et al.<sup>4,7</sup>

## CONCLUSION

It was concluded that hysterectomy could be avoided in almost 51% of patients, that too after losing about 17% of patient to follow-up. Lee et al compared biopsies obtained by curettage and hysteroscopy in postmenopausal women with bleeding. The authors concluded that performing curettage may not be reliable enough for evaluating endometrial pathology and suggested that endometrial biopsy with hysteroscopy must become the standard of diagnosis in these women.

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