

## Original Article

# DIAGNOSTIC YIELD OF HYSTEROSCOPY IN PATIENTS WITH IRREGULAR UTERINE BLEEDING

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**Objective:** To find out the role of diagnostic hysteroscopy in accurate diagnosis of patients presenting with irregular uterine bleeding in our setup.

**Material & Methods:** All the patients who underwent hysteroscopy for irregular uterine bleeding during study period were included. Age, parity, marital status and LMP were noted. Hysteroscopic findings were determined and subsequent endometrial samples taken. A comparison was made between hysteroscopic impression and histological examination.

**Results:** Total 148 patients had hysteroscopy for irregular uterine bleeding. The age range of our patients was 20-70 years with the mean age of 38.3 years. 97.2% patients were married and 88.5% pre-menopausal. Hysteroscopically findings noted in 113 patients (76.3%) and confirmed on histopathology in 89 cases (60.1%). Four patients (2.7%) had a suspicion of carcinoma endometrium and histopathology confirmed this in 3 cases (2.02%). We failed to perform hysteroscopy in 3 cases (2%) due to cervical stenosis.

**Conclusion:** Hysteroscopy with a biopsy has a high diagnostic yield.

**Keywords:** Hysteroscopy, Endometrial Biopsy, Irregular Uterine Bleeding.

## Introduction

Irregular uterine bleeding is the chief complaint of women attending gynecology out patient clinics. One third of all consultations are because of abnormal uterine bleeding. Abnormal uterine bleeding can be the presentation of many gynecological disorders ranging from simple benign to malignant lesions. It is an indication of exploring the uterine cavity and determining underlying pathology. Diagnostic hysteroscopy is an effective method of evaluating the uterine cavity and visualizing the pathological conditions.<sup>1,2</sup> Hysteroscopy is used extensively in the evaluation of common gynecological problems such as menorrhagia and postmenopausal bleeding.<sup>3</sup> It has the advantage over a blind endometrial sampling that tissue samples of specific areas can be taken helping in clarifying hemorrhagic endometrial pathology.<sup>4</sup> More so, fibroids, polyps and structural abnormalities can be directly visualized.<sup>5</sup> When hysteroscopic impression is compared with histological findings obtained by D&C, a good correlation is seen.<sup>6</sup> This is what prompted us to carry out the study in our patients, presenting with irregular uterine bleeding.

## Material & Methods

The study was performed in the obstetrics and gynecology department of Shalamar Hospital Lahore from January 2006 to January 2007 and 1<sup>st</sup> February 2008 to 31 January 2009. The total duration is of 2 years. All the patients with irregular uterine bleeding

who underwent hysteroscopy during study period were included in the study. The age, parity and marital status was noted. The date of their last menstrual period was also noted. The reason for hysteroscopy was determined and the findings were recorded. All patients had endometrial sampling done. Each specimen was sent to a laboratory for histological examination. A comparison was made between hysteroscopy and histopathological examination. All this information was recorded on a pre designed proforma.

Data was analyzed by SPSS version 14. Student t test was used to compare significance of proportion between the findings noted on hysteroscopy and those which confirmed on histopathology.

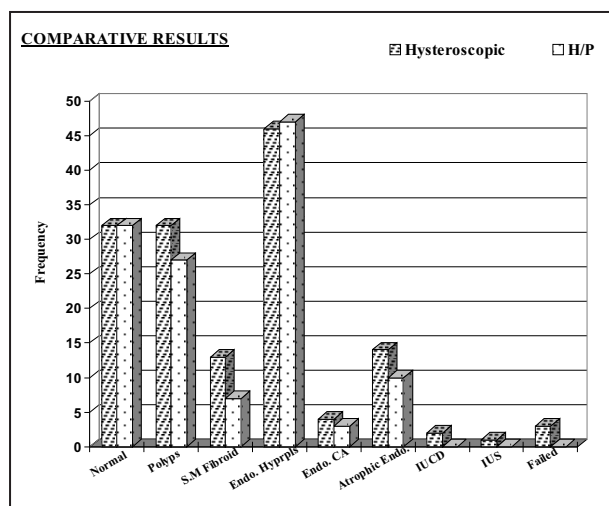
## Results

During the study period 148 patients had hysteroscopy due to abnormal or irregular uterine bleeding. The age of the patients ranged between 20-70 years with a mean age of 38.3 years. Out of these 144 patients (97.21%) were married and 4 (2.7%) were unmarried. The parity of patients ranged from 0 to 5 and mean parity was 3. One hundred & twenty four patients (83.7%) were parous and 24 (16.2%) were nulliparous. Regarding their menstrual status 131 patients (88.51%) had irregular menstrual periods and 17 (11.4%) patients were post-menopausal and they presented with post menopausal bleeding. The performed hysteroscopies found normal

endometrium in 32 patients (21.6%) and it was confirmed in all of 32 (21.6%) on histopathology. Polyps were seen in 32 (21.6%) patients and confirmed on histopathology in 27 (18.2%). Submucous (SM) fibroids were seen on hysteroscopy in 13 (8.7%) patients and confirmed on histopathology in 7 (4.7%). Endometrial hyperplasia was seen in 46 patients (31%) and confirmed in 47 patients (27.7%). We suspected endometrial carcinoma (Endo CA) in 4 patients (2.7%) and confirmed in 3 cases on biopsy results (2.0%).

**Table-1: Correlation of hysteroscopic findings and histopathological results.**

Findings	Hysteroscopic	Histopathological
Normal	32 (21.6%)	32 (21.6%)
Polyps	32 (21.6%)	27 (18.2%)
Submucous fibroids	13 (8.7%)	07 (4.7%)
Endometrial hyperplasia	46 (31%)	47 (27.7%)
Endometrial CA	04 (2.7)	03 (2.0%)
Atrophic endometrium	14 (9.4%)	10 (6.7%)
IUCD	02 (1.35%)	-
IUS	01 (0.7%)	-
Failed	03 (2.02%)	-



Atrophic endometrium was seen in 14 patients (9.4%) and confirmed in 10 cases (6.7%). Intrauterine synechiae (IUS) were seen in 1 patient (0.7%). Intrauterine contraceptive device (IUCD) was the cause of irregular bleeding in 2 patients (1.35%). We failed to perform hysteroscopy in 3 cases due to cervical stenosis (2.02%).

## Discussion

Diagnostic reliability of hysteroscopy is high and valuable in evaluating the patients with irregular uterine bleeding. A study was conducted in Military Hospital Shillong, where hysteroscopic evaluation was carried out in 120 patients with menstrual disorders. Abnormal findings noted on the hysteroscopy were in 58 cases (48.3%) and histological lesions were confirmed in 43 cases (35.8%).<sup>7</sup> Another study was conducted in Jammu Kashmir to evaluate the role of laparoscopy and hysteroscopy in 75 women with abnormal uterine bleeding and hysteroscopic findings were compared with histopathological results showing that hysteroscopy had abnormality detection rate of 66% as compared to 26.6% with traditional curettage alone. Diagnostic accuracy of hysteroscopy allows exclusion of intrauterine pathology.<sup>8</sup> Objective of our study was same as above two studies but our number of patients were more than both studies. If we compare the results of these studies with ours, we also had similar conclusion, i.e. we found abnormality on hysteroscopy in 113 cases (76.3%) and it was confirmed by histopathology in 89 patients (60.1%). A study was conducted in Turkey on 216 premenopausal and 114 post menopausal women who were admitted to endoscopic surgery department between January 2000 to March 2001 and visual diagnosis of endometrial hyperplasia with office hysteroscopy compared with histopathological results of the specimen. Pathology was confirmed in 50 of 70 hystero-scopically diagnosed cases.<sup>9</sup> In our study we also had similar results that hysteroscopy has shown hyperplasia in 39 patients and it was confirmed on hysteroscopy in 35 patients. Endometrial polyps are commonly seen pathology on hysteroscopy. One study conducted to determine whether hysteroscopy improves the detection and extraction of polyps included 83 post menopausal patients . Curettage alone diagnosed in 22 patients and hysteroscopically polyps were present in 51 patients. Results show curettage alone is not sufficient for detection and extraction of endometrial polyps. Hysteroscopically directed extraction is superior.<sup>10</sup> In our study we found that polyps are commonly seen pathology in both pre and post menopausal women with abnormal uterine bleeding. Hysteroscopy gives us the advantage to directly visualize them as some were so small in size that could be missed easily on blind endometrial

Sampling. Post menopausal bleeding is the most common symptom of endometrial cancer. A retrospective study done at public tertiary level university hospital of Faculdade de Medicina de Ribeiro Sao Paulo, Brazil included 510 patients with mean age of  $61.2 \pm 2$  years. The results suggested that hysteroscopy is a valuable tool for malignant and hyperplastic lesions.<sup>11</sup> Another prospective study was conducted on 220 post menopausal patients with abnormal uterine bleeding who underwent ultrasound evaluation of endometrial thickness, out patient hysteroscopy and endometrial biopsy. Results showed that endometrial thickness of less than 4 mm could be mis-diagnosed but trans-vaginal ultrasound remains the first diagnostic procedure in post menopausal patients with abnormal uterine bleeding as it is non invasive and out patient hysteroscopy with biopsy is mandatory in all patients with abnormal uterine bleeding.<sup>12</sup> Another study was conducted in Gynae/obs department of college of Medicine Chosun University Korea. 105 patients with abnormal uterine bleeding underwent ultrasound evaluation of endometrium thickness & hysteroscopy with biopsy. They also concluded that hysteroscopy is mandatory in post menopausal patients with abnormal uterine bleeding.<sup>13</sup> Another prospective study was done between January 1999 to June 2006 where the objective of the study was to report the value of hysteroscopy and endometrial biopsy for detection of complex atypical hyperplasia or cancer in asymptomatic human non polyposis colon cancer patients and the secondary objective was to evaluate the accuracy of hysteroscopy using endometrial biopsy as a gold standard. Hysteroscopy showed normal mucosa in 46 cases, non malignant lesion in 65 cases and possibly malignant lesion in 3 cases with abnormal uterine bleeding. Endometrial biopsy was attempted in 3 cases of cancer endometrium diagnosis and they found sensitivity of hysteroscopy was 100% for detection of hyperplasia and cancer endometrium.<sup>14</sup> In our study we suspected suspicious hyperplasia in 11 patients and carcinoma

of endometrium was suspected in 4 cases. Histo pathology confirmed carcinoma in 3 cases. So we can say that hysteroscopy directed biopsy for detection of carcinoma of endometrium is more accurate in diagnosis of women with post menopausal bleeding. During our study we came across some interesting cases. One young unmarried girl presented with irregular intractable bleeding. On hysteroscopy we found multiple small fibroids hanging in the form of polyps, which were not detected on ultrasound. They were removed and patient was relieved symptomatically. In our follow up clinic now the patient is married and expecting her first child. In another case of primary infertility with irregular uterine bleeding to our surprise we found an IUCD Lippes loop in place and the patient was unaware of it. It was removed and she conceived after 2 months. The studies that are done world wide also show the diagnostic importance of hysteroscopy in the case of infertility.<sup>15,16</sup> A study was done in Erne hospital UK on 112 pre and post menopausal women with abnormal uterine bleeding and they concluded that hysteroscopy is a feasible technique in identifying abnormal uterine bleeding. Out of 112 cases they failed to perform hysteroscopy in 6 cases and most common cause was cervical stenosis.<sup>17</sup> In this study we failed to perform hysteroscopy in 3 patients (2.0%) due to severe cervical stenosis.

### Conclusion

Hysteroscopy with directed biopsy has a high diagnostic yield. In view of its safety, diagnostic accuracy and patient acceptability, diagnostic hysteroscopy should be considered a procedure of choice for cases of irregular uterine bleeding.

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