Print ISSN: 2321-6379
Online ISSN: 2321-595X

Original Article

Hysteroscopic Evaluation of Abnormal Uterine Bleeding In Peri and Post Menopausal Women

Pooja Shinde[1], Poonam Lal[2]*

[1]MBBS, DGO, secondary DNB obstetrics and gynaecology, Kurji holy family hospital, Patna, Senior resident Narayan Medical College and Hospital Sasaram, Bihar, [2]Senior consultant, Department of Obstetrics & Gynaecology, Kurji Holy Family Hospital, Patna

Abstract

Background: Peri and Postmenopausal abnormal Uterine bleeding (AUB) is a cause of worry for the patients as well as the Clinician. This condition has enormous consequences with regard to social life, morbidity and clinical work load. Hence this study has been taken up to analyse the place of hysteroscopy in the evaluation of Abnormal Uterine Bleeding.

Material and Methods: The patients attending OPD of dept of obstetrics & gynaecology at Kurji Holy Family Hospital, Patna, India from November 2018 to October 2019 were evaluated.

Results: This is prospective non randomised observational comparative clinico-pathological study, carried out in 50 patients attended GOPD for AUB and underwent hysteroscopy. Mean age of presentation is 41.5years. Most of the patients are multiparous, belong to middle SE group. Menorrhagia is major clinical presentation, with mean duration of symptoms is 7 month. According to study results hysteroscopy is highly sensitive & specific for diagnosis of proliferative endometrium, atrophic endometrium, and focal endometrial lesions like polyp, submucous myoma. It has high specificity for diagnosis of secretary endometrium and endometrial hyperplasia.

Conclusion: Hysteroscopy is simple, safe, valuable procedure for the endometrial evaluation in patients with AUB. The magnified visualisation of endometrium on hysteroscopy is its main advantage and thereby it solves many of diagnostic confusion of AUB. Hysteroscopy offers a speedy diagnosis and treatment of AUB and avoids unnecessary hysterectomy for AUB in perimenopausal age group.

Key words: Abnormal uterine bleeding (AUB), Hysteroscopy

INTRODUCTION

Peri and Post menopausal abnormal Uterine bleeding (AUB) is a cause of worry for the patients as well as the Clinician. Up to 33 % of women referred to gynecological outpatient clinics have this problem and the proportion raises more in peri and post menopausal women. This condition has enormous consequences with regard to social life, morbidity and clinical work load.[1-3] Inconsistency in nomenclature and lack of standardized methods of classification have hampered investigation and management of abnormal Uterine bleeding. In an effort to bring improvement, Federation of International Gynecology and Obstetrics (FIGO) have approved a classification system for abnormal uterine bleeding.

Access this article online

www.ijss-sn.com

Month of Submission : 10-2023
Month of Peer Review : 10-2023
Month of Acceptance : 11-2023
Month of Publishing : 12-2023

Hysteroscopy has added a new dimension in work up of patients with peri and post menopausal bleeding. This technique has replaced the procedure of Dilatation and Curettage (D& C), which is a blind procedure with high Diagnostic failure rate.[4-5] With the help of hysteroscopy the entire uterine cavity can be visualized directly and any abnormal area identified precisely and sample taken for histopathological examination.

Hysteroscopy can also be undertaken as an office procedure which can save valuable time for the patient and relatives. It is highly accurate for diagnosing endouterine lesions such as Polyps, Submucosal myomas, Endometrial adenocarcinoma and Hyperplasia.[6]

Trans-vaginal sonography (TVS) has been studied as an alternative to hysteroscopy in investigation of

Corresponding Author: Dr Poonam Lal, Kurji holy family hospital, Patna, Bihar.

abnormal uterine bleeding(AUB), but was found to have a significantly lower sensitivity compared with Hysteroscopy and comparable specificity in Premenopausal patients.[7] TVS also can miss small polyp and submucosal fibroid. More information is available with regard to TVS in investigation of post menopausal bleeding.[8,9]

Hysteroscopy with endometrial sampling is considered as the Gold standard for evaluating the uterine cavity. However risk associated with Hysteroscopy includes perforation, infections, cervical laceration and fluid overload.

Hysteroscopy is now widely recognized as a valuable diagnostic tool in evaluating peri and postmenopausal abnormal uterine bleeding.[10-12]

This study has been taken up to analyse the place of hysteroscopy in the evaluation of Abnormal Uterine Bleeding in terms of accuracy of hysteroscopic findings and the contribution of procedure to clinical diagnosis. It also help to correlate hysteroscopic findings with histopathological results.

MATERIAL AND METHODS

The study protocol was approved by the ethical review committee of our institute and informed written consent was taken from all the participants.

Study Area

We Included all peri and post menopausal women with abnormal uterine bleeding, who were treated by Hysteroscopic procedure in department of OBGY at Kurji Holy Family Hospital, Patna.

Study Population

Patients attending OPD of dept of Obstetrics & Gynaecology at Kurji Holy Family Hospital, Patna.

Study Duration

November 2018 to October 2019 (12 months).

Study Design

Prospective observational study and result will be analysed statistically.

An average we take 50 patients as sample size.

Inclusion Criteria

All cases of Pre and Post menopausal women with abnormal uterine bleeding.

Exclusion Criteria

All cases with local lesion like vaginal/vulval growths and ovarian pathology (By ultrasonogram).

Study Tools

- 4mm Diagnostic hysteroscope
- Resectoscope with Loop,Ball electrode, scissors as accessories
- Distension Media- Normal saline
- Optic cable with Video monitor
- Endometrial Curette
- Hegar dilator set.

Methods

After taking detailed history and physical examination patients were investigated to rule out causes of AUB with CBC, RFT, LFT, Blood grouping and typing, Coagulation profile, Thyroid function test, USG pelvis and UPT to rule out pregnancy. After getting informed written consent for procedure, hysteroscopy was performed.

Pre Procedure

Patients were kept nil orally for 6 hours before procedure.

Procedure of the Study

This study was carried out over 1 year of time period. Peri menopausal and Post menopausal women were included in the study. The patients with adnexal masses, cervical & local vaginal/vulval lesion were excluded from the study. The patients were seen in outpatient department, a detail Menstrual history were taken with detailed systemic and gynecological examination. USG Pelvis was done to rule out any structural abnormality and to see the endometrial thickness(ET). In asymptomatic perimenopausal women with ET >12mm and postmenopausal women with ET>5mm was considered as significant and were included in study for hysteroscopic evaluation. Patients were admitted between D7 to D10 of their menstrual cycle. In case of post menopausal women, they were admitted and prepared when bleeding decreased or stopped. Hysteroscopy was performed with 4 mm rigid scope with normal saline as distending media under general anaesthesia. The endometrium was described as proliferative,secretory, atrophic, hyperplastic or atypical based on appearance of endometrium. All the intracavitatory lesions like endometrial polyps, submucosal myoma were documented under same sitting, a biopsy from abnormal area and therapeutic procedures like polypectomy was done and sample was sent for histopathological examination and results were analysed statistically.

Post Procedure

Patient's general condition and vitals were checked. Any bleeding per vaginum was watched for.

RESULTS

The study included 50 patients who attended in GOPD in our hospital with Abnormal uterine bleeding who

fulfilled the predefined inclusion and exclusion criteria. All patients underwent thorough clinical and laboratory investigations as pre-defined for study. Patients were admitted as day care or in previous evening of scheduled day for hysteroscopy. The hysteroscopic findings were recorded in proforma and endometrial curette at end of hysteroscopy were sent for histopathology which were studied and reported later. All Data were maintained in tabulated form in MS Excel sheet and results of the study were statistically analysed.

Most of the patients presenting with AUB had perimenopausal status (90%) and only 10% patients had postmenopausal status.

Most of the patients were multiparous (80% having ≥2 parity) and only 3 case was nulliparous. Parity 2 was found in major group of patients (42%).

The pattern of bleeding varied among the patients as depicted in Table 3. Menorrhagia was the major complain found in 36% patients followed by irregular spotting in 26% women. Menometrorrhagic pattern was present in 16% cases, postmenopausal spotting/bleeding was present in 10% patients while ploymenorrhagia, oligomenorrhagia and continuous bleeding was present in 8%, 2% and 2% cases respectively.

In our study most of the patients (70%) reported in 1-6 months of abnormal bleeding. The distribution of duration of symptoms is as shown in Table 4. The mean duration of symptoms were 7 months.

In our study, 70% of the women revealed normal cervix found **o**n speculum examination. Remaining 22% were hypertrohied cervix and 8% cervical polyp [Table 5].

Distribution of hysteroscopic findings are depicted in Table 11 and Figure 11. In our study on hysteroscopy proliferative endometrial picture was the most frequent finding found in 16 cases This was followed by endometrial polyp in 9 cases. Endometrium looked atrophic in 8 cases and 7 cases appeared secretary. We found 3 cases of submucous myoma. One case of endometrial cancer was suspected on hysteroscopy, but biopsy showed it to be complex endometrial hyperplasia with atypia, a premalignant condition. Endometrial hyperplasia was found in 6 cases [Table 6].

- Distribution of histopathology findings are depicted in Table 12 and Figure 12. In this study proliferative endometrium was the most reported finding in histopathology in 17 cases followed by endometrial polyp in 9 cases, atrophic in 8 cases. There were 8 cases of endometrial hyperplasia, out of which 7 cases were simple hyperplasia without atypia and

Table 1: Distribution of menstrual status among patients (n=50)

Menstrual status	Frequency	Percentage
Perimenopausal	45	90
Postmenopausal	05	10

Table 2: Distribution of patients according to parity (n=50)

Parity	Frequency	Percentage	Median
Nullipara	3	6	2
1	7	14	
2	21	42	
2+	19	38	

Table 3: Distribution of bleeding pattern among patients (n=50)

Bleeding pattern	Frequency	Percentage
Menorrhagia	18	36
Menometrorrhagia	8	16
Polymenorrhagia	5	8
Irregular spotting	13	26
Continuous	1	2
Oligomenorrhagia	1	2
Postmenopausal spotting	5	10

Table 4: Distribution of duration of symptoms (n=50)

Duration of symptom (months)	Frequency	Percentage	Mean
<1	3	6	7.31
1-3	18	36	
3-6	17	34	
>6	12	24	

Table 5: Per speculum finding. (n=50)

P/S CERVIX	Frequency	Percentage
Normal	35	70
hypertrophy	11	22
Cx polyp	4	8

Table 6: Distribution of hysteroscopic findings. (n=50)

Hysteroscopic visual diagnosis	Frequency	Percentage %
Proliferative Endometrium	16	32
Secretory endometrium	7	14
Atrophic endometrium	8	16
Endometrial Hyperplasia	6	12
Endometrial Polyp	9	18
Submucous Myoma	3	6
Endometrial Carcinoma	1	2
TOTAL	50	100

Some patients had more than one hysteroscopic finding but only predominant single finding is taken into consideration for ease of statistical analysis

one case of complex hyperplasia with atypia. Secretary endometrium was confirmed in 8 cases [Table 7].

Statistical Interpretations of all Groups

Proliferative endometrium

Total 18 cases were diagnosed as Proliferative endometrium on hysteroscopy. Out of which 16 cases were confirmed by histology, among rest 2 cases 1 turned out to be Hyperplastic endometrium and one case Endometrial polyp on histology. Hysteroscopy missed 2 cases of Proliferative endometrium, confirmed by histology [Table 8 and 9].

Secretary endometrium

Hysteroscopy diagnosed 7 cases as Secretary endometrium, all of which were confirmed on histology. However hysteroscopy missed 1 cases of Secretary which were reported by histology [Table 10 and 11].

Table 7: Distribution of histopathology findings. (n=50)

Histopathology report	Frequency	Percentage %
Proliferative Endometrium	17	34
Secretary endometrium	8	16
Atrophic endometrium	8	16
Endometrial hyperplasia :	7	16
Simple hyperplasia without atypia	1	
Complex hyperplasia with atypia		
Endometrial Polyp	9	18
TOTAL	50	100

Table 8

Hysteroscopy	Histology		Total
	Present	Absent	
Present	16	02	18
Absent	02	30	32
Total	18	32	50

Table 9

Sensitivity	88.88%
Specificity	93.75%
PPV	88.88%
NPV	93.75%
+ LR	14.22
-LR	0.12
Diagnostic effectiveness/Accuracy of test (95% CI)	0.92

Table 10

Hysteroscopy	Histology		Total
	Present	Absent	
Present	07	00	07
Absent	01	42	43
Total	08	42	50

Atrophic Endometrium

Hysteroscopy diagnosed 8 cases as atrophic endomrtrium, out of which 7 cases were confirmed on histology, rest one case was reported as Secretary endometrium. One case of Atrophic endometrium was missed by hysteroscopy, which was reported by histology [Table 12 and 13].

Endometrial hyperplasia

Total 6 cases of endometrial hyperplasia diagnosed by hysteroscopy were confirmed by histology. But it missed 02 cases reported by histology [Table 14 and 15].

Table 11

Sensitivity	87.5%
Specificity	100%
PPV	100%
NPV	97.67%
-LR	0.125
Diagnostic effectiveness/Accuracy of test (95% CI)	0.98

Table 12

Hysteroscopy	Histology		Total
	Present	Absent	
Present	07	01	08
Absent	01	41	42
Total	08	42	50

Table 13

Sensitivity	87.5%
Specificity	97.61%
PPV	87.5%
NPV	97.61%
+ LR	36.61
-LR	0.128
Diagnostic effectiveness/Accuracy of test (95% CI)	0.96

Table 14

Hysteroscopy	Histology		Total
	Present	Absent	
Present	06	00	06
Absent	02	42	44
Total	08	42	50

Table 15

Sensitivity	75%
Specificity	100%
PPV	100%
NPV	95.45%
-LR	0.25
Diagnostic effectiveness/Accuracy of test (95% CI)	0.96

Endometrial polyp

Hysteroscopy diagnosed total 9 cases of endometrial polyp. Histology confirmed 8 cases and missed 1 cases.(again may be due to failure to sample right areas) [Table 16 and 17].

Submucous myoma

Hysteroscopy diagnosed 3 cases of sumucous myoma, none were reported by histology. This may be because of endometrial curettage missed to sample myoma areas [Table 18 and 19].

Endometrial carcinoma

Hysteroscopy diagnosed one case as endometrial carcinoma, which was reported to be complex hyperplasia with atypia by histology [Table 20].

DISCUSSION

This study was carried out to evaluate the role of hysteroscopy in patients with abnormal uterine bleeding (AUB), and its contribution to clinical diagnosis and management of patients with AUB. It is a prospective non randomised observational comparative clinico-pathological study. This study amongst the 50 patients of AUB correlated different hysteroscopic findings with histological diagnosis. All Data's were maintained in tabulated form in MS Excel sheet and results of the study were statistically analyzed.

Table 16

Hysteroscopy	Histology		Total
	Present	Absent	
Present	08	01	09
Absent	01	40	41
Total	09	41	50

Table 17

Sensitivity	88.88%
Specificity	97.56%
PPV	88.88%
NPV	97.56%
+ LR	36.42
-LR	0.11
Diagnostic effectiveness/Accuracy of test (95% CI)	0.96

Table 18

Hysteroscopy	Histology		Total
	Present	Absent	
Present	03	00	03
Absent	00	47	47
Total	03	47	50

Table 19

Sensitivity	100%
Specificity	100%
PPV	100%
NPV	100%
Diagnostic effectiveness/Accuracy of test (95% CI)	1.00

- In the study it was found that majority of the patients were in the age group between 30 – 50 yrs with a mean age of incidence of 41.5 yrs [Table 1]. Sonja Pop *et al*[12] 2011,found most common age group affected were above 45 yrs, Sheetal *et al*[13] 2009 in their study observed abnormal uterine bleeding most prevalent among women of two age groups, 26–30 years and 41–45 years.
- Most of the patients in our study presenting with AUB had perimenopausal status (90%).
- Most of the patients in our study were multiparous, (80% ≥2 parity), out of which parity 2 comprised major group (42%. Table 3). In the study of Sheetal et al[13] 2009 commonest affected patients were Para 3 or more,
- 58 % of our patients in this study belonged to Middle socio-economic (SE) status,where as 38% belonged to low SE. This is comparable to the study of Sheetal *et al*[13] 2009,where 59% of their cases belonged to Middle socioeconomic strata [Table 4].
- Menorrhagia was the major clinical presentation of AUB in our study (36%) where as Irregular spotting was observed in 26%. Menometrorrhagia in 16%, postmenopausal spotting in 10%, polymenorrhagia in 8%, oligomenorrhagia in 2% and 2% had continuous bleeding pattern. Menorrhagia as the primary indication for hysteroscopy was reported in 37.5% by Hamou[14].
- In our study maximum number of patients (70%) reported in 1-6 months of onset of symptoms. Mean duration of symptoms was 7 months. In similar study carried out by Sheetal *et al*[13] 2009, 55% of their patients had abnormal uterine bleeding for more than 3 months to 1 year duration.
- Due to the abnormal bleeding effect 60% of patients in our study had mild anemia, 22% had moderate anemia and 4% had severe anemia.
- During physical examination 70% of the women in this study revealed normal cervix and 22% were hypertrophied cervix on speculum examination. Similar observation was made by Sheetal *et al* 2009[13] where in 62% of the cases, cervix was found to be normal, in 21% cases cervix was hypertrophied.
- On vaginal examination, uterus was normal in size in 40 % and bulky in 60 % patients in this study. Sheetal *et al* 2009[13] also observed normal size uterus in 50% patients with AUB.
- Endometrial thickness (ET) measured on TVS was between 5-10 mm in majority (54%) of patients in our

study whereas 24% had ET of >10 mm and 22% had ET of <5 mm [Table-10].

- The Proliferative endometrium was diagnosed on hysteroscopy as having smooth surface, pink and thin with poor superficial vascularisation with interrupted, punctate lines. Total 18 cases were diagnosed as Proliferative endometrium on hysteroscopy. Out of which 16 cases were confirmed by histology. Out of 2 remaining cases one turned out to be endometrial polyp and other case of endometrial hyperplasia on histology. Hysteroscopy missed 2 cases, confirmed by histology as proliferative endometrium in our study. Another study of Neeta nandan *et al* 2013[10] reported incidence of normal hysteroscopic findings in 14.3% of cases, which is lower than what we reported in our study. Therefore, our study found Sensitivity, specificity, PPV, NPV, +LR, -LR for Proliferative endometrium as 88.88%, 93.75%, 88.88%, 93.75%, 14.22%, 0.12% respectively. Diagnostic accuracy of hysteroscopy for proliferative endometrium in our study was 92%. Sheetal *et al* 2009[13] reported comparable results for PE, with sensitivity, specificity, PPV, NPV of 78.57%, 86.2%, 80.48%, 84.74% respectively.
- The Secretary endometrium is diagnosed on hysteroscopy as orange, undulating and thick endometrium with ring-type glandular openings showing maximum glandular secretion and well-developed varicose-like vessels. Hysteroscopy diagnosed 7 cases as Secretary Endometrium all of which were confirmed on histology. However hysteroscopy missed 1 case of Secretary Endometrium which were reported by histology. Sheetal *et al*[35] 2009 reported comparable figure of 16% secretary endometrium in their study. We found Sensitivity, specificity, PPV, NPV, negative LR as 87.5%, 100%, 100%, 97.67%, 0.125% respectively and the calculated diagnostic accuracy was 98%. Sheetal *et al*[13] 2009 reported comparable results for Secretary Endometrium with sensitivity, specificity, PPV, NPV of 54.54%, 93.58%, 70.58%, 87.95% respectively.
- The Atrophic endometrium seen as pale white or yellow, less than 1mm endometrium, with complete absence of glandular openings, superficial vasculature, &occasional completely obliterated tubal ostia. Hysteroscopy diagnosed 8 cases as atrophic endometrium, out of which 7 cases were confirmed on histology. The remaining one was reported as secretary endometrium on histology. One case of atrophic endometrium diagnosed on histology was missed by hysteroscopy. Incidence of atrophic endometrium diagnosed on hysteroscopy in the present study are comparable with 15% of incidence reported by Aisha razzaq *et al*[11] 2011Other studies by sheetal *et al* 2009[13], Neeta nandan *et al* 2013[10], Sonja pop *et al*[12] 2011 reported a incidence of 8%, 9.1%, 7.7% respectively. Diagnostic accuracy was 96% in our study. Results are compared with other studies in Table 27.
- The Endometrial Hyperplasia is diagnosed by thickened, edematous and undulating appearance of endometrium with presence of cystic dilatation, increased bleeding, polypoid formation with irregular arrangement of the glandular openings. Total 6 cases of endometrial hyperplasia diagnosed by hysteroscopy were confirmed by histology. But it missed 02 cases reported by histology. The incidence of hysteroscopic diagnosis of endometrial hyperplasia in our study are comparable with study done by Sonja pop *et al* 2011[12] 8.84%. However other studies mentioned below reported higher incidence. The diagnostic accuracy was found to be 96% in our study. Results compared with other studies in Table 28.
- Endometrial polyps are small growths in the uterine cavity seen magnified on hysteroscopy with soft, oval, pedunculated with a smooth vascular surface. Hysteroscopy diagnosed total 9 cases of endometrial polyp, out of which histology confirmed 8 cases and missed 1 cases. This failure to detect on histology may be due to failure to prepare the tissue block of the sample on endometrial curettage. Incidences of present study of 9% are comparable with studies done by by sheetal et al 2009[13] 9%,and Neeta nandan *et al* 2013[10] 7.4%. However incidence reported Sonja pop *et al* 2011[12] of 20.5%, and Aisha razzaq *et al* 2011[11] of 18.8% is much more than what we reported. In our study diagnostic accuracy was 96%. Results are compared with other studies in Table 29.
- Submucous myoma on hysteroscopy look like a white-colored bulge, round in shape, with a smooth surface bulging partially or completely within the uterine cavity. Hysteroscopy diagnosed 3 cases of submucous myoma, none were reported by histology. We did not remove the myomas hysteroscopically and hysteroscopy proves superior in diagnosis over endometrial curettage when visual diagnosis of Myoma is enough to explain the cause of menometrorrhagia in these cases. Endometrial curettage missed to sample myoma areas.Hysteroscopy showed diagnostic accuracy of 100% for submucuos myomas in this study. Incidence of Submucous myoma is 3% in the present study whereas with study conducted by Sonja pop *et al* 2011[12] identified 7.7% and others like Sheetal *et al* 2009[13], Aisha *et al*[11] 2011 reported 11%,15% respectively, which is higher than what we reported. Results of our study compared with other studies in Table 30.
- On hysteroscopy Endometrial carcinoma appears as polypoidal growth, papillary appearance with irregular polylobate excrescences which are friable and partly

Table 20: Composite findings on hysteroscopy with kappa, Diagnostic accuracy and other values

S.no	Hysteroscopy finding	Diagnostic accuracy %	Sensitivity %	Specificity%	PPV %	NPV %
1	Proliferative endometrium	92	88.88	93.75	88.88	93.75
2	Secretary endometrium	98	87.5	100	100	97.67
3	Endometrial hyperplasia	96	75	100	100	95.45
4	Atrophic endometrium	96	87.5	97.61	87.5	97.61
5	Endometrial polyp	96	88.88	97.56	88.88	97.56
6	Submucous myoma	100	100	100	100	100

Table 21: Correlation Between Hysteroscopic Finding and Histopathology Report

		Histopathology					
		Atrophic Endometrium	Endometrial Hyperplasia	Endometrial Polyp	Proliferative Endometrium	Secretory Endometrium	Grand Total
Hysteroscopy	Atrophic Endometrium	07	00	00	00	01	08
	Endometrial Carcinoma	00	01	00	00	00	01
	Endometrial Hyperplasia	00	06	00	01	00	07
	Endometrial Polyp	00	00	09	00	00	09
	Proliferative Endometrium	00	01	00	14	00	15
	Secretory Endometrium	00	00	00	00	07	07
	Submucous Myoma	01	00	00	02	00	03
	Grand Total	08	08	09	17	08	50

Table 27: Comparison of Atrophic endometrium results with other studies

S. No	Author	Year	Sensitivity %	Specificity %	PPV %	NPV %	Incidence %
1	Sheetal *et al*	2009	100	96.84	62.5	100	08
2	Aisha *et al*	2011	75	91.7	50	97.1	15
3	Sonja pop *et al*	2011	100	98	88	100	7.7
4	Neeta nandan *et al*	2013	68.8	96.9	68.8	96.9	9.1
5	Present study	2019	87.5	97.61	87.5	97.61	08

Table 28: Comparison of Endometrial Hyperplasia results with other studies

S.no	Author	Year	Sensitivity %	Specificity %	PPV %	NPV %	Incidence %
1	Sheetal *et al*	2009	75	92.5	71.4	93.67	18
2	Aisha *et al*	2011	75	96.9	85.7	93.9	17
3	Sonja pop *et al*	2011	100	98	80	100	8.84
4	Neeta *et al*	2013	84.9	48.4	41.7	88.1	61.7
5	Present study	2019	75	100	100	95.45	06

Table 29: Comparison of Results of Endometrial Polyp with other Studies

S. No	Author	Year	Sensitivity %	Specificity %	PPV %	NPV %	Incidence %
1	Sheetal *et al*	2009	100	95.78	55.55	100	09
2	Aisha *et al*	2011	93.3	98.5	93.3	98.5	18.8
3	Sonja pop *et al*	2011	94	100	100	97	20.5
4	Neeta nandan *et al*	2013	100	95.9	46.2	100	7.4
5	Present study	2019	88.88	97.56	88.88	97.56	9

Table 30: Comparison of submucous myoma results with other studies

S. No	Author	Year	Sensitivity %	Specificity %	PPV %	NPV %	Incidence %
1	Sheetal *et al*	2009	100	89.89	9.09	100	11
2	Aisha *et al*	2011	100	100	100	100	15
3	Sonja pop *et al*	2011	100	98	83	100	7.7
4	Present study	2019	100	100	100	100	03

necrotic or haemorrhagic, with increased vascularity. Often there is a clear dividing line between cancerous and normal endometrium. In the present study Hysteroscopy diagnosed one case as endometrial carcinoma, which was reported to be complex hyperplasia with atypia by histology. In similar studies done by Neeta nandan *et al* 2013[10], Sheetal *et al* 2009[13], Aisha *et al* 2011[11] reported incidence of endometrial carcinoma as 1.28%, 3%, 0% respectively.

CONCLUSION

Hysteroscopy is simple, safe, valuable procedure for the endometrial evaluation in patients with AUB. The magnified visualisation of endometrium on hysteroscopy is its main advantage and thereby it solves many of diagnostic confusion of AUB. Hysteroscopy offers a speedy diagnosis and treatment of AUB in peri and postmenopausal age group and avoids unnecessary hysterectomy for AUB.

- Hysteroscopy has been proved in this study as the best method of choice for diagnosis of focal endometrial pathology like endometrial polyp, submucous myoma, as these are usually missed by blind endometrial curettage.
- Hysteroscopy and hysteroscopy guided biopsy again has been proved as GOLD STANDARD for endometrial evaluation of Abnormal uterine bleeding in peri and postmenopausal women, as hysteroscopy guided biopsy increases diagnostic accuracy of the procedure.

REFERENCES

1. Meocaglia L, Perino A, Hamous J. Hysteroscopy in perimenopausal & post menopausal women with abnormal uterine bleeding. J Reprod Med 1987;32:577-582.
2. Bradlow J. coulter A, Brooks P. Patterns of referral. A study of referrals to out patient clinics from general practitioners in the oxford region. Oxford: Oxford Health Service Research unit,1992.
3. Brill A what is role of hysteroscopy in management of abnormal uterine bleeding? Clinical obstetrics and Gynecology 1995;38:319-45.
4. Epstein E, Ramirez A, skoog L, Valentin L. Dilatation and curettage fail to detect most lesion in the uterine cavity in women with postmenousal bleeding. Acta Obstet Gynecol 2001;12:1131-6.
5. Grimes D. Diagnostic dilatation and curettage of reappraisal.Am J Obstet Gynecol 1982;47:300-6.
6. Torrejon R, Fernandez-Alba JJ, Carnicer I, Martin A. The Value of hysteroscpic exploration for abnormal uterine bleeding. J.Am Assoc Gynecol Laparosc 1997;4(4):453-6.
7. Towbin N, Gviazda I, March C. Office hysteroscopy versus transvaginal ultrasonography in evaluation of patients with excessive uterine bleeding. Am J of Obstet Gynecol 1996;174:1678-82.
8. Karlsson B, Granberg S, Hellberg P, Wikland M. Comparative study of Transvaginal ultrasound and hysteroscopy for the detection of pathologic endometrial lesion in women with postmenopausal bleeding. J ultrasound Med 1994;13:757-62.
9. Karlsson B, Granberg S,Wikland M. Transvaginal ultrasound of the endometrium in women with postmenopausal bleeding-ma Nordic multicenter study.A J Obstet Gynecol 1995;172:1488-94.
10. Neetha Nandan.Diagnostic hysteroscopy in abnormal uterine bleeding & it's histopathologic correlation: our experience. *NUJHS*.June2013; Vol.3(No.2):2249-7110.
11. Aisha Razzaq, Shazia Shukar-ud-Din, Nargis Soomro. Role of diagnostic hysteroscopy in case of abnormal uterine Bleeding. Pak J Surg 2011; 27(4): 309-315
12. Sonja Pop Trajković Dinić. Scientific Journal of the Faculty of Medicine in Niš 2011;28(3):177-181.
13. Sheetal G patil. journal of gynaecological endoscopy and surgery. july-dec 2009; vol-1,issue 2:98-104.
14. Hamou JE. Microhysteroscopy: a new procedure and its original applications in gynecology. J Reprod Med. 1981; 26:375–82.

How to cite this article: Shinde P, Lal P. Hysteroscopic Evaluation of Abnormal Uterine Bleeding In Peri and Post Menopausal Women.Int J Sci Stud 2023;11(9):48-55.

Source of Support: Nil, **Conflicts of Interest:** None declared.