ISSN: 0975-3583,0976-2833 VOL14, ISSUE2, 2023

Original Research Article

ROLE OF HYSTEROSCOPY IN THE DIAGNOSIS OF ENDOMETRIAL CANCER

Dr. Nishat Fatima[1] (MBBS, MS OBGY, DGO, Ex Senior Resident),
Dr. Gayatree Bharti[2] (MBBS, MS Asst. Prof) & Dr. Nishi Mishra[3] (MBBS, MS Senior Resident)
Dept. of OBGY, Govt. Medical College, Bhopal, M.P.[1]
Dept. of OBGY, Govt. Medical College, Vidisha, M.P.[2&3]
Corresponding Author: Dr. Nishi Mishra

Abstract:
Background & Method: The aim of this study is to study role of hysteroscopy in the diagnosis of endometrial cancer. The patients coming to the outpatient department with complaint of postmenopausal bleeding were selected for the study. Each patient underwent TVS to define endometrial thickness. In a sagittal scan, the operator calculated the maximum distance between the two lines of the endometrium/myometrium interface. The cutoff used to suspect the presence of endometrial pathology was a maximum thickness >5. Those patients with endometrial thickness more than or equal to 5mm were admitted one day before the procedure after they each signed informed consent forms. Under appropriate anaesthesia,cervical dilatation upto at least 8mm was achieved.
Result: The women's he mean age was 62.5 as against 61.2+_5.2 years found in the study. The most frequent endometrial lesion was endometrial polyp which was consistent.
Conclusion: Hysteroscopy is an additional tool in the diagnosis of endometrial cancer. However, its use in the initial workup is still controversial. In order to minimize the small risk of cancer dissemination, hysteroscopy should be performed with an intrauterine pressure of less than 80 mmHg, and the duration of the procedure should be as short as possible.
In order to rule out endometrial hyperplasia and cancer in postmenopausal women with bleeding or asymptomatic women with endometrial thickness more than or equal to 5mm, performing hysteroscopy and taking endometrial biopsies is recommended even if no lesion has been found.
Hysteroscopy is highly sensitive and clinically useful in diagnosing endometrial cancer in women with abnormal uterine bleeding. Its high sensitivity relates to diagnosing cancer rather than excluding it. Recent advances in iinstrumentation have allowed hysteroscopy to be performed in an ambulatory setting, further increasing it's use. However, further studies with more no. of participants are needed to find the optimum endometrial thickness in asymptomatic postmenopausal women.

Keywords: hysteroscopy, diagnosis, endometrial & cancer.

Study Designed: Observational Study.

1. INTRODUCTION

95% of patients with endometrial cancer present with vaginal bleeding as the first symptom. For many years, dilatation and curettage has been the first method of choice for diagnosing endometrial pathology in women with abnormal uterine bleeding[1]. In 60% of

ISSN: 0975-3583,0976-2833 VOL14, ISSUE2, 2023

the D&C procedures,less than half of the uterine cavity is curetted, even by experienced surgeons,which can make the diagnosis difficult, especially in cases of focal uterine lesions. Now there is a trend towards minimally invasive investigations using outpatient endometrial biopsy,ultrasound scan and hysteroscopy[2].

In postmenopausal women, it is very important to do detail pelvic scan and to measure endometrial thickness and to identify those who are more likely to have underlying endometrial cancer. It is observed that if endometrial thickness is less than 4mm chance of cancer is 0.8%. Adding colour doppler gives clue about the abnormal blood flow in case of carcinoma endometrium[3&4].

In diagnosing hyperplasia with the help of hysteroscopy, we may get varied patterns.

The following are commonly found hysteroscopic aspects:

1) Focal or diffuse endometrial thickness-

Benign endometrial hyperplasia includes both simple and complex forms and it is apt to be associated with dysfunctional bleeding and hyperestrogenic states

The plasticity of the mucosa makes it possible to estimate its thickness by means of pressure of the endoscope on the uterine wall resulting in an indentation.

2) homogenous endometrial degeneration

3) Cystic glandular hyperplasia

4) Increased vascularization

5) Increased bleeding

6) Irregular arrangement and concentration of the glandular orifices

7) Presence of ciliate images

If one or more of these elements are found, the endoscopist can suspect the presence of endometrial hyperplasia and a directed biopsy should be performed.

But still sometimes the abnormal discoveries raise the probability of finding graver endometrial pathology like polypoid formations,necrotic areas,friable excresences and synechiae in the cavity with abnormal endometrium[5].

2. MATERIAL & METHOD

Present study was conducted at Department of Obstetrics and Gynecology, MGM Medical College and M. Y. Hospital, Indore (M.P), Duration of research: 12 months (june 2018 to may 2019). Study was done according to the regulations of the Institutional Ethical Committee. Sample size: 50, Menopause is defined as absence of menses for a period of 12 or more months.

Inclusion criteria:

1. Postmenopausal women(between 40 -85 years) who present with postmenopausal bleeding and in whom endometrial thickness on TVS is =>5mm

Exclusion criteria:

1. Any demonstrable pelvic pathology like cancer cervix,vagina or vulva

2) acute pelvic infection

3) pt. on hormones,Selective estrogen receptor modulators,or anticoagulants.

4) having any adnexal abnormality in TVS.

5) being menopausal because of ovarian surgery.

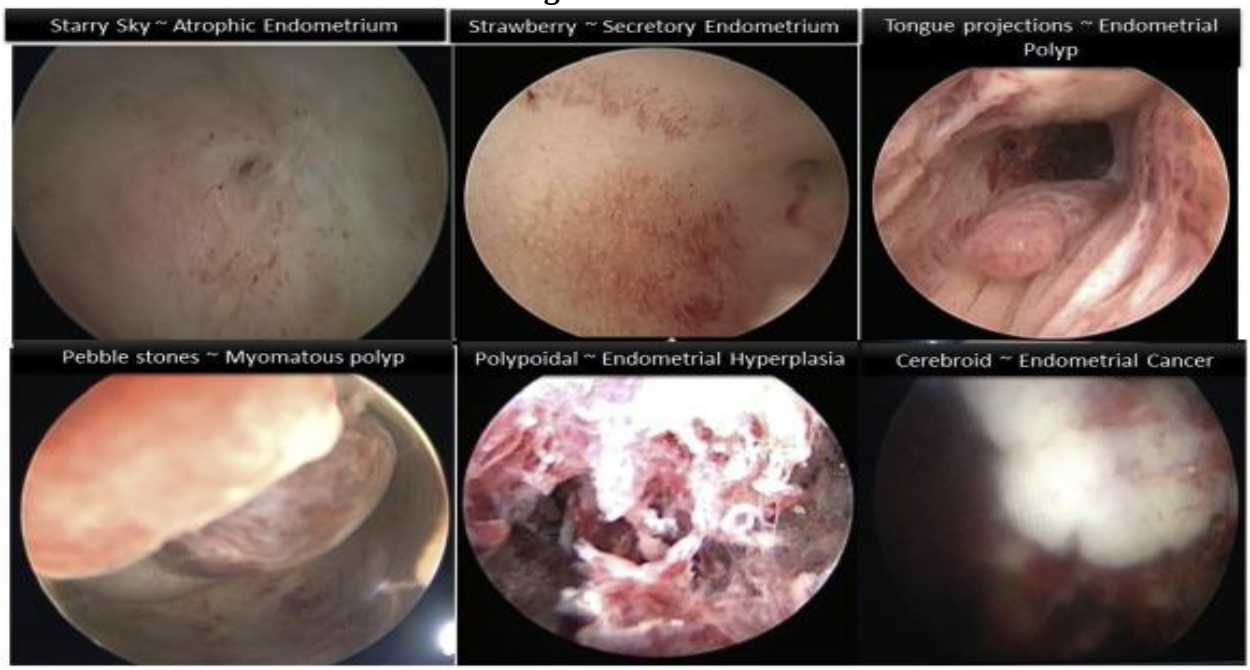
The patients coming to the outpatient department with complaint of postmenopausal bleeding were selected for the study. Each patient underwent TVS to define endometrial thickness. In a sagittal scan, the operator calculated the maximum distance between the two lines of the endometrium/myometrium interface. The cutoff used to suspect the presence of

ISSN: 0975-3583,0976-2833 VOL14, ISSUE2, 2023

endometrial pathology was a maximum thickness >5. Those patients with endometrial thickness more than or equal to 5mm were admitted one day before the procedure after they each signed informed consent forms. Under appropriate anaesthesia,cervical dilatation upto at least 8mm was achieved.

5mm hysteroscope was then inserted along with normal saline/glycine as the distending media. Endometrial biopsy was performed for all participants with intrauterine lesions. Punch biopsies were conducted in women with atrophic endometrium who had no pathology in hysteroscopy. In women with pre-malignant or malignant lesions, targeted and random biopsies were performed. In women with polyps or myomas, the lesions were all resected using scissors or resectoscope, respectively. The biopsies were immediately placed in 10% formaldehyde and sent to the pathology laboratory. The pathologist knew nothing of the hysteroscopic findings. Histologic findings were defined as the final exact diagnosis standard of the endometrial pathology. Hysteroscopic findings were defined precisely based on the specific findings detected during the procedure. Normal hysteroscopic findings included a normal, non-vascular smooth level. Abnormal findings included polyps, submucosal myomas, endometrial hyperplasia, and endometrial cancer.

Fig 1:



3. RESULTS

Table 1:

Age group	No.	%
40 -50	7	14
51-60	13	26

ISSN: 0975-3583,0976-2833 VOL14, ISSUE2, 2023

61-70	**22**	**44**
70-85	**8**	**16**

Table 2:

TVS findings	**No.**	**%**
Bulky uterus with thickened endometrium	**23**	**46**
Polypoid mass lesion	**13**	**26**
Intrauterine fluid collection	**9**	**18**
Frank myometrial invasion	**0**	**0**
Myoma	**5**	**10**

Table 3:

HYSTEROSCOPY FINDINGS	**No.**	**HISTOPATHOLOGY Polyp**	**Myoma**	**Simple hyperplasia**	**Complex/ atypical hyperplasia**	**Atrophic/not satisfactory**	**Carcinoma**
Normal/atrophic endometrium	**7(14%)**					**7**	
Endometrial polyp	**13(26%)**	**12**					**1**
Myoma	**5(10%)**		**4**				**1**

ISSN: 0975-3583,0976-2833 VOL14, ISSUE2, 2023

Table 4:

HYSTEROSCOPY FINDINGS	No.	Histopathology Polyp	Myoma	Simple hyperplasia	Complex/atypical hyperplasia	Atrophy/not satisfactory	Carcinoma
Focal/diffuse endometrial thickness	9(18 %)			4	5		
Homogenous endometrial degeneration	4(8 %)			1	3		
Cystic glandular hyperplasia	5(10 %)			2	3		

Table 5:

HYSTEROSCOPY FINDINGS	No.	Histopathology Polyp	Myoma	Simple hyperplasia	Complex/atypical hyperplasia	Atrophic/not satisfactory	Carcinoma
Increased vascularity	6(12 %)			1	5		
Irregular enlargement and concentration of glandular orifices	1(2 %)			0	1		

4. DISCUSSION

The women's he mean age was 62.5 as against 61.2+_5.2 years found in the study conducted by Elfayomy et al in 2012. The most frequent endometrial lesion was endometrial polyp which was consistent with the above mentioned study. But finding was inconsistent with the study conducted by P Singh etal in whose study atrophic/normal endometrium was found as the most common finding[6].

Fortunately, polyps were mostly not histologically malignant in our patients and this finding is in agreement with Loiacono et al. study. Elfayomy et al. showed that about 20% of polyps had malignant components hidden in their stem or center despite normal endometrial

ISSN: 0975-3583,0976-2833 VOL14, ISSUE2, 2023

pathology in endometrial biopsy. Therefore, the authors suggested performing polypectomy via hysteroscopy in such women[7].

The sensitivity of hysteroscopy for detecting endometrial cancer was 90.4 % while specificity was 83.7%. The same parameters in the study conducted by Elfayomy et al were50 and 94.2 respectively. The positive predictive value of hysteroscopy for malignancy was found to be 19.3 % while negative predictive value was found to be 88.5%

The uterine cavity can be thoroughly visualized and an endometrial biopsy can be taken under hysteroscopic view in the patients with recurrent uterine bleeding due to a small carcinoma which has escaped diagnosis by curettage[8]. During hysteroscopy biopsy forceps are used for focal endometrial lesions whereas curettes are preferred for diffuse lesions.

Lee et al. compared biopsies obtained by curettage and hysteroscopy in post-menopausal 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. If endometrial biopsy is performed blindly, the detection of endometrial polyps or submucosal myomas might be missed. This leads to under diagnosis of this pathology during menopause[9]. Therefore, the possibility of missing the underlying pathology will be eliminated by doing hysteroscopy.

In the study by Elfayomy et al. endometrial carcinoma was not reliably detected with hysteroscopy. In their study, 7 of 14 women (16.9%) with endometrial cancer had suspicious findings in hysteroscopy, and no abnormality was found in the other half. According to the authors, the specificity of hysteroscopy without biopsy was low in diagnosing endometrial cancer. This finding has been reported in other studies too[10&11]. Therefore, it is recommended to perform a biopsy even if hysteroscopy finds no abnormality to increase the validity of hysteroscopy in diagnosing endometrial hyperplasia and cancer in post-menopausal women with bleeding or with endometrial line thickness of 5 mm or more in TVS.

In addition to directed tissue biopsy, hysteroscopy is useful to assess cervical involvement in endometrial cancer. However, there have been concerns that endometrial cells could be flushed into the fallopian tubes and the peritoneal cavity[12]. Intrauterine pressure during hysteroscopy plays an important role in dissemination of cancer cells into peritoneal cavity.

5. CONCLUSION

Hysteroscopy is an additional tool in the diagnosis of endometrial cancer. However, its use in the initial workup is still controversial. In order to minimize the small risk of cancer dissemination, hysteroscopy should be performed with an intrauterine pressure of less than 80 mmHg, and the duration of the procedure should be as short as possible.

In order to rule out endometrial hyperplasia and cancer in postmenopausal women with bleeding or asymptomatic women with endometrial thickness more than or equal to 5mm, performing hysteroscopy and taking endometrial biopsies is recommended even if no lesion has been found.

Hysteroscopy is highly sensitive and clinically useful in diagnosing endometrial cancer in women with abnormal uterine bleeding. Its high sensitivity relates to diagnosing cancer rather than excluding it. Recent advances in iinstrumentation have allowed hysteroscopy to be performed in an ambulatory setting, further increasing it’s use. However, further studies with more no. of participants are needed to find the optimum endometrial thickness in asymptomatic postmenopausal women.

ISSN: 0975-3583,0976-2833 VOL14, ISSUE2, 2023

6. REFERENCES

1. Mazzon I, Corrado G, Morricone D, et al. Reproductive preservation for treatment of stage IA endometrial cancer in a young woman: hysteroscopic resection. Int J Gynecol Cancer 2005;15:974-8.
2. Zhang Q, Qi G, Kanis MJ, et al. Comparison among fertility-sparing therapies for well differentiated early-stage endometrial carcinoma and complex atypical hyperplasia. Oncotarget 2017;8:57642-53.
3. Mazzon I, Corrado G, Masciullo V, et al. Conservative surgical management of stage IA endometrial carcinoma for fertility preservation. Fertil Steril 2010;93:1286-9.
4. De Marzi P, Bergamini A, Luchini S, et al. Hysteroscopic Resection in Fertility-Sparing Surgery for Atypical Hyperplasia and Endometrial Cancer: Safety and Efficacy. J Minim Invasive Gynecol 2015;22:1178-82.
5. Laurelli G, Di Vagno G, Scaffa C, et al. Conservative treatment of early endometrial cancer: preliminary results of a pilot study. Gynecol Oncol 2011;120:43-6.
6. Casarin J, Bogani G, Serati M, et al. Presence of Glandular Cells at the Preoperative Cervical Cytology and Local Recurrence in Endometrial Cancer. Int J Gynecol Pathol 2020;39:522-8.
7. Liu H, Wang FL, Zhao YM, Yao YQ and Li YL: Comparison of Pipelle sampler with conventional dilatation and curettage (D&C) for Chinese endometrial biopsy. J Obstet Gynaecol 35: 508-511, 2015.
8. De Wilde RL: Offi ce Hysteroscopy: TROPHYscope CAMPO compact hysteroscope®: Manufacturer: KARL STORZ, Tuttlingen, Germany. J Obstet Gynaecol India 64: 301-303, 2014.
9. Thigpen JT, Brady MF, Homesley HD, Malfetano J, DuBeshter B, Burger RA and Liao S: Phase III trial of doxo- rubicin with or without cisplatin in advanced endometrial carcinoma: A gynecologic oncology group study. J Clin Oncol 22: 3902-3908, 2004.
10. Yen CF, Chou HH, Wu HM, Lee CL and Chang TC: Effectiveness and appropriateness in the application of offi ce hysteroscopy. J Formos Med Assoc 118: 1480-1487, 2019.
11. Ben-Arie A, Tamir S, Dubnik S, Gemer O, Ben Shushan A, Dgani R, Peer G, Barnett-Griness O and Lavie O: Does hyster- oscopy affect prognosis in apparent early-stage endometrial cancer? Int J Gynecol Cancer 18: 813-819, 2008.
12. Chen J, Clark LH, Kong WM, Yan Z, Han C, Zhao H, Liu TT, Zhang TQ, Song D, Jiao SM and Zhou C: Does hysteroscopy worsen prognosis in women with type II endometrial carcinoma? PLoS One 12: e0174226, 2017