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EVALUATION OF VAGINOSCOPY VERSUS TRADITIONAL APPROACH TO HYSTEROSCOPY IN AUB PATIENTS IN A TERTIARY CARE CENTRE: A RETROSPECTIVE OBSERVATIONAL STUDY

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ABSTRACT **Introduction:** Hysteroscopy allows direct visualization of the uterine cavity [1]. Hysteroscopy is the preferred technique for the assessment of various conditions like abnormal uterine bleeding (AUB), postmenopausal bleeding, intracavitary lesions lesions , removal of foreign bodies, mullerian anomaly, infertility and for managing intrauterine pathology [2].Worldwide, the number of diagnostic hysteroscopies are rapidly rising [3,4] along with change in trend of entry approach to hysteroscopy. This study was done to evaluate the techniques of hysteroscopic entry and highlight the advantages and need towards the advanced approach to hysteroscopy among patients and healthcare providers. **Aims & Objectives:** To evaluate the various determinants and outcomes of vaginoscopy and traditional approach to hysteroscopy. **Material & Methods:** The Retrospective Observational study was conducted in SRN hospital, Department of Obstetrics and Gynaecology, MLN Medical College, Prayagraj, India for a period of 1 year. Study was started after ethical clearance from IEC. A total of 240 subjects who underwent hysteroscopy for assessment of AUB during specified period were recruited for the study, fulfilling the inclusion and exclusion criteria, using random sampling technique. The data were collected and analysed retrospectively. **Results:** Out of total 240 cases of AUB, 97% underwent successful diagnostic/ operative hysteroscopy via both vaginoscopy and traditional technique. The time required for the completion of procedure depends upon the indication and type of hysteroscopy performed not on the approach to entry to the uterus.There was almost no difference in the surgical outcome between vaginoscopy and traditional hysteroscopy. **Conclusion:** Vaginoscopy requires a shorter time for the completion of the diagnostic procedure and involved lesser pain in less number of patients than the traditional hysteroscopy. The success rates are comparable between the two techniques. Traditional hysteroscopic method should be reserved for challenging cases or for certain pathologies. Consequently, we advise using vaginoscopic approach as the preferred method for diagnostic hysteroscopies.

KEYWORDS : Hysteroscopy, Vaginoscopy, AUB, Traditional approach

INTRODUCTION

A minimally invasive procedure introduced into clinical practice in the early 1980s, hysteroscopy, allows direct visualization of the uterine cavity [1]. Today, with the development of bipolar energy, various instruments, safe and effective distending media, optics, and smaller scope sizes, hysteroscopy is the preferred technique for managing intrauterine pathology. It is indicated for the assessment of various conditions like abnormal uterine bleeding, postmenopausal bleeding, intracavitary lesions lesions , removal of foreign bodies, mullerian anomaly, infertility, and postoperative follow-up [2].

Worldwide, the number of diagnostic hysteroscopies are rapidly rising, due to its safety and feasibility [3,4]. Vaginoscopy , is as a “no-touch” technique, without the need of introducing a vaginal speculum or cervical grasper, where endoscope can smoothly traverse the vaginal and cervical canal without need of anesthesia or sedation. This technique exhibits a similar efficacy to standard and traditional method of hysteroscopy [3,4,5].

A few recent studies concluded that vaginoscopy resulted in significantly reduced pain, reduced time to complete procedure, and vasovagal response compared with the traditional approach [6]. Even in today's era, most physicians are unfamiliar with the vaginoscopic approach to hysteroscopy [5]. Therefore, the aim of this study was to evaluate the techniques of hysteroscopic entry and highlight the advantages and need towards the advanced approach to hysteroscopy among patients and healthcare providers.

AIMS AND OBJECTIVES

To evaluate the various determinants and outcomes of vaginoscopy and traditional approach to hysteroscopy.

METHODOLOGY

Place of study: Swaroop Rani Nehru hospital and Kamla Nehru hospital, Department of Obstetrics and Gynaecology, Motilal Nehru Medical College, Prayagraj, India.

Duration of study: 1 year

Type of Study: Retrospective Observational study

Sample size: 240 sexually active women in age group 20-45 year

Study methodology: Study was started after ethical clearance from Institutional Ethical Committee.

Inclusion Criteria: All sexually active patients presenting with complains of AUB in the age group 20-45 years, who underwent hysteroscopy by either of the above mentioned techniques for assessment of AUB during specified period.

Exclusion Criteria:

- Postmenopausal women with bleeding per vaginum
- Patients with diagnosed genital cancers
- Patients with active pelvic inflammatory disease

Patients <20 and >45 years of age Therefore, a total of 240 subjects who underwent hysteroscopy by either of the above mentioned techniques for assessment of AUB during specified period were recruited for the study, fulfilling the inclusion and exclusion criteria, using random sampling technique. The data were collected and analysed retrospectively.

Study Procedure:

A detailed history regarding patient's various demographic factors, menstrual history, obstetric history, personal and family history was taken and complaints were noted. Her pelvic examination done and patient assessed for the need of diagnostic hysteroscopy. Then an informed written consent was obtained, and counselling of women was done in the outpatient department before the procedure.

Hysteroscopy was then scheduled in the early proliferative phase of the menstrual cycle at a subsequent visit. Hysteroscopy was performed with a 30 degree rigid hysteroscope and diagnostic sheath of 5 mm outer diameter with a fiberoptic light source, the procedure was performed under direct video monitoring. 0.9% Normal Saline (Isotonic solution) was used for distending the uterine cavity.

Vaginoscopy was the preferred entry technique but in patients where vaginoscopic approach failed or was difficult there traditional approach to hysteroscopy was used. A fluid deficit of 2500 ml (upper limit) was observed for while using the distending media.The patient was positioned in the dorsal lithotomy position then before the start of procedure bimanual examination was performed and a straight urinary catheter was used to drain the urinary bladder.

Then the hysteroscope was set, with vaginoscopic approach, the scope introduced into the vagina by just separating the labia majora with only gentle touch, the cervix and external os were located by advancing the hysteroscope gently and identifying the posterior fornix. Once the external os was located, the hysteroscope was inserted and passed carefully through the internal os (without any prior dilatation) into the uterine cavity. The cervical canal was examined for any abnormality.

With the traditional techniques, first a speculum was first inserted, then the cervix was visualized and anterior lip of cervix was grasped with a vulsellum. The cervix was then dilated to the diameter of the hysteroscope using a cervical dilator, after which the hysteroscope was inserted gently. At the same time, counter traction is applied with the vulsellum to reduce anteflexion and anteversion of the uterus.

Once inside the uterus, bilateral tubal ostia were identified and the entire uterine cavity (panoramic view) was examined systematically, starting from its anterior wall followed by posterior wall and the fundus. Examination was considered complete when both the tubal ostia were visualised.

During the procedure, a nurse or a resident provided support to the patient and the surgeon also got the patient involved into the procedure by offering her to look at the monitor (while simultaneously explaining any abnormalities if present) to further alleviate her anxiety.

Any pathology when detected was evaluated and treated accordingly based on the nature of the pathology. Backup anaesthetic help and emergency medication were kept ready to manage any emergency. Following the procedure, the patient was observed for any pain or discomfort or any other complications.

RESULTS

Table 1: Baseline Characteristics Of The Vaginoscopy And Traditional Hysteroscopy Groups

	Vaginoscopy n=144 (%)	Traditional Hysteroscopy n=96 (%)
Age-		
20-25	16 (11.2)	13 (13.5)
26-30	40 (27.7)	20 (20.8)
31-35	27 (18.7)	18 (18.7)
36-40	35 (24.3)	21 (21.8)
41-45	26 (18.1)	24 (25.0)
BMI-		
<30	132 (91.6)	76 (79.2)
>30	12 (8.30)	20 (20.8)
Habitat-		
Rural	85 (59.0)	63 (65.6)
Urban	59 (41.0)	33 (34.4)
Parity-		
Nulliparous	43 (29.8)	11 (11.5)
Parous	101 (70.2)	85 (88.5)
Previous vaginal delivery		
Yes	119 (82.6)	30 (31.3)
No	25 (17.4)	66 (68.7)

Table 2:miscellaneous Characteristics Of The Vaginoscopy And Traditional Hysteroscopy Groups

	Vaginoscopy n=144 (%)	Traditional Hysteroscopy n=96 (%)
Indication-		
AUB with Infertility	58 (40.3)	36 (37.5)
AUB without Infertility	86 (59.7)	60 (62.5)
Cervical pathology-		
Present	31 (21.5)	58 (60.4)
Absent	113 (78.5)	38 (39.6)
Type of procedure		
Diagnostic	90 (62.5)	62 (64.6)
Operative	54 (37.5)	34 (35.4)

Table 3: Surgical Outcomes Of The Vaginoscopy And Traditional Hysteroscopy Groups

	Vaginoscopy n=144 (%)	Traditional Hysteroscopy n=96 (%)
Procedure success-		
Successful	140 (97.2)	93 (96.8)
Failed	04 (2.80)	03 (3.20)
Time required for procedure		
Less than average time	09 (06.2)	04 (04.3)
Average time (5-7 min)	81 (56.3)	58 (40.3)
More than average time	54 (37.5)	34 (35.4)
Post Procedure Pain		
None	125 (86.8)	75 (78.2)
Present	19 (13.2)	21 (21.8)
Follow up complains		
None	139 (96.5)	89 (92.7)
Bleeding	0	1
UTI/ Pelvic pain	0	3
Vaginal discharge	2	3
Fever	1	0

DISCUSSION

In total, 240 patients underwent hysteroscopy during the 1 year study period. 60% (144) and 40% (96) patients were included in the vaginoscopy and traditional hysteroscopy groups, respectively. The patient's baseline characteristics for both groups are shown in Table 1. Both the groups had a higher number of cases presenting in age 26-40 years of age as may be influenced by the flow of patients in our tertiary care centre. In relation to BMI, those who had obesity had to undergo traditional method of hysteroscopy in higher numbers. The relation between parity and approach to hysteroscopy was found to be significant with a p value of < 0.001. Out of the 54 nulliparous patients in our study, a large proportion of them (79.6%) were benefitted by the vaginoscopic approach than those with one or more child (54.3%). The vaginoscopic approach was more frequently used in parous women suggesting that the primary choice to begin with is vaginoscopic approach but it may be influenced by parity.

Patients presenting with AUB without infertility were preferably entered by vaginoscopy (58.9%) as it may relate to their comparatively parous condition of the external os. This is almost similar to the patients that presented with AUB with infertility who had a vaginoscopic hysteroscopy done in 61.7% cases representing the fact that due to vaginoscopic approach patient who do not have a parous os do not need cervical dilatation in most cases for undergoing diagnostic hysteroscopy. In the absence of any cervical pathology, 74.8% cases underwent vaginoscopic hysteroscopy for either diagnostic or operative purposes while in remaining they had to proceed via traditional technique. 61.4% of operative cases were done with vaginoscopic approach while remaining required use of traditional methods. Majority of the diagnostic hysteroscopy (59.2%) could be done via vaginoscopic method which means these characters are almost comparable for both the groups.

Out of total 240 cases, 97% underwent successful diagnostic/ operative hysteroscopy depending on their indication. Out of total 144 cases of vaginoscpic approach and 96 cases with traditional approach, small proportion of failures of 2.8% and 3.2% were seen respectively, which are comparable and do not have any statistical significance, thus reinforcing the fact that newer vaginoscopic approach has similar efficacy in completing the procedure. In a retrospective cohort analysis, Tein found that, compared to traditional hysteroscopy, vaginoscopy resulted in decreased discomfort [7].

The total time required for the completion of procedure also depends upon the indication for which it was done and the type of hysteroscopy performed. Hysteroscopy being minimally invasive procedure, lead to a large number of patients (>80%) who had almost no post procedural pain or any follow up complains. According to Gupta, hysteroscopy in the vaginoscopic group was performed more quickly. Thirty two

patients (6.19%), finished the vaginoscopic operation in three to five minutes, according to the diagnostic study conducted during the treatment. 34 patients (77.27%) required 5 to 7 minutes for a traditional hysteroscopy procedure [8]. During diagnostic hysteroscopy, there is a substantial difference in procedure time ($p < 0.05$) between the two procedures [9].

CONCLUSION

Vaginoscopy requires a shorter time for the completion of the diagnostic procedure and involved lesser pain in less number of patients than the traditional hysteroscopy. The success rates are comparable between the two techniques. Traditional hysteroscopic method should be reserved for challenging cases or for certain pathologies. Consequently, we advise using vaginoscopic approach as the preferred method for diagnostic hysteroscopies.

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