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Original Research Article

A clinical audit of hysteroscopy in a tertiary care teaching. What challenges did we face?

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ABSTRACT

Background: The aim of the study was to evaluate indications, operative findings and complications in patients undergoing hysteroscopy.

Methods: The data of all patients who underwent hysteroscopy in the department of obstetrics and gynecology in a tertiary care teaching hospital were included retrospectively from November 2017 to October 2018.

Results: There were 59 patients who had hysteroscopy for various indications. Twelve patients and forty-seven patients were subjected to diagnostic and operative hysteroscopy respectively. Indications for diagnostic hysteroscopy were for postmenopausal bleed (3), carcinoma of the breast on tamoxifen with bleeding PV (3), recurrent implantation failure (6). Operative hysteroscopy was performed for endometrial polyp (30), myomectomy (9), septal resection (7), copper T removal (1). Complications of hysteroscopy were: media efflux and poor visualization in 10 (17%), minor hemorrhage (9) 15.1%, perforation 2 (3.3%). Minor hemorrhage was managed with tranexamic acid. The perforation in two patients happened during the dilatation of the cervix with metal dilators.

Conclusions: One of the major challenges encountered was the efflux of the distension media due to excessive cervical dilatation, which did not provide satisfactory hysteroscopic view. Another complication was perforation during cervical dilatation using Hegars dilator. Use of misoprostol and the use of small sheath hysteroscopes have minimized the need for cervical dilatation.

Keywords: Hysteroscopy, Complications, Perforation

INTRODUCTION

Hysteroscopy is a procedure which is minimally invasive and is used in the diagnosis and management of cervical canal and uterine cavity disorders.¹ The two types of hysteroscopic procedures include diagnostic and operative hysteroscopy.¹

Hysteroscopy has replaced and overcome the short coming of dilatation and curettage. With the advancement of technology and miniaturization of tools, the concept of 'see and treat' hysteroscopy is becoming popular.^{2,3} The endometrial cavity needs to be distended for optimal

visualization to diagnose and perform surgical procedures.⁵ The media commonly used are CO₂ gas, high-viscosity 32% dextran 70, and several low-viscosity fluids, including non-electrolytic solutions like glycine, sorbitol, mannitol, and dextrose in water, and electrolyte-containing isotonic solutions such as normal saline.⁵ This study focused to find out the indications, nuances and complications with hysteroscopy.

Aim

The aim of the study was to evaluate the indications and complications of women undergoing hysteroscopy.

METHODS

This was a retrospective study done in the department of obstetrics and Gynaecology in a tertiary care teaching hospital in Kasturba Medical College, Manipal from November 2017 to October 2018. All the patients who underwent hysteroscopy (diagnostic as well as operative) were taken for the study. This was an audit of hysteroscopy, so there were no inclusion or exclusion criteria. The patient's history, physical and gynecological examination, followed by a transvaginal ultrasound was done. Patients were then subjected to diagnostic hysteroscopy on OPD basis. If patient experienced discomfort or satisfactory views were not obtained, patients were subjected to diagnostic hysteroscopy under anesthesia. All operative hysteroscopies were performed under general anesthesia. Operative findings were noted. In cases of operative hysteroscopy for polyps and sub mucous fibroid polyp excision, the products were sent for

histopathological examination. The data of the patients were recorded in excel sheet.

RESULTS

There were total of 59 patients who were subjected to hysteroscopy. There were twelve patients who underwent diagnostic hysteroscopy and forty-seven of them had operative hysteroscopy. Age of patients ranged from 22-67 years. The indications for diagnostic and operative hysteroscopy are mentioned in Table 1. Indications for diagnostic hysteroscopy were as follows. Evaluation of post-menopausal bleeding 3 (25%), carcinoma of breast on tamoxifen therapy with bleeding per vagina 3 (25%) and recurrent implantation failure 6 (50%). Indications for operative hysteroscopy were for endometrial polyps 30 (63.8%), sub mucous fibroid 9 (19.1%) and septal resection 7 (14.8%) and retrieval of embedded Cu-T 1 (2.1%).

Table 1: Depicting the indications for diagnostic and operative hysteroscopy.

Indications of diagnostic hysteroscopy (N=12)	Number (%)	Indications of operative hysteroscopy (N= 47)	Number (%)
Post-menopausal bleeding	3 (25)	Endometrial polyps	30 (63.8)
Carcinoma of breast on tamoxifen therapy with bleeding per vagina	3 (25)	Submucous fibroid, underwent myomectomy	9 (19.1)
Recurrent implantation failure	6 (50)	Septal resection	7 (14.8)
		Copper- T removal	1 (2.1)

Most of the patients who were subjected to operative hysteroscopy were from infertility division of the department. In the thirty patients who were diagnosed and treated for endometrial polyps by hysteroscopy, transvaginal ultrasound could detect only twenty-two cases (74.4%) of polyps and eight cases (26.6%) were missed. All the thirty patients had an endometrial thickness of >13 mm. Among the nine patients who were diagnosed and treated for sub mucous fibroid, a diagnosis of fibroid was made in eleven cases. Transvaginal ultrasound over diagnosed sub mucous fibroid polyp in 2 patients.

The complications encountered in our series are listed in Table 2. The common complications noted were poor visualization due to media efflux 10 (17%), minor hemorrhage 9 (15.2%) and perforation 2 (3.3%).

Table 2: Depicting the complications encountered.

Complications noted	Number (%)
Media efflux and poor visualization	10 (17)
Minor hemorrhage	09 (15.2)
Perforation	02 (3.3)

DISCUSSION

In this audit, the numbers of patients are very small to make any conclusions. This study does throw light on indications and the complications. The common indication

for diagnostic hysteroscopy in our audit was recurrent implantation failure. In the study by Beukenholdt et al, the commonest indication was menorrhagia and intermenstrual bleeding.⁶ Uterine perforation was encountered in 3.3% of patients in our series. The perforation occurred during dilatation of the cervix with Hegar's dilator. The incidence of uterine perforation is 0.12-3%.⁷⁻⁹ Perforation may occur during dilatation of the cervix or as a result of hysteroscopic procedure⁵. When perforation occurs during cervical dilatation, there are no other associated injuries. Utilizing uterine probe, transabdominal or transvaginal ultrasound will help to delineate the cervical canal and its relationship with uterine axis.¹ Use of misoprostol may reduce the difficulty of hysteroscope into the uterine cavity.¹⁰ The use of small diameter flexible or rigid hysteroscope helps in visual control as the cervix is dilated with the tip of hysteroscope.¹¹ Transabdominal ultrasound offers the advantage of viewing the uterine cavity, which is filled by the distension media.

Minor hemorrhage was observed in 15.2% of patients in our series. This was managed by administering injection Tranexamic acid 500 mg intravenously. Hemorrhage is defined as any procedure which required blood transfusion or any hemostatic intervention.⁹ This complication has an incidence of 0.61%, in a study by Agostini et al.¹² Risk of hemorrhage depended on the type of operative intervention. It was five times higher in adhesiolysis, when compared with other operative hysteroscopic procedures.¹²

Managing postoperative bleeding include use of anti-fibrinolytic agents, balloon tamponade using Foley catheter, uterine artery embolization or hysterectomy in rare cases.^{1,13} One of the distressing problems encountered in our series was poor visualization due to media efflux. This was due to dilatation of the cervix, which led to efflux of the media. Misoprostol administration before hysteroscopy reduces the cervical resistance and hence the need for cervical dilatation. As stated earlier, the need for cervical dilatation is greatly reduced by the use of small diameter flexible or rigid hysteroscope. Another method of minimizing the media efflux is hold the anterior and posterior lips of the cervix using an Allis forceps and approximating the lips of the cervix. This helps in optimizing the visual field (personal communication: Dr. Vinayak Mahajan).

Limitations

The number of patients who underwent hysteroscopy were small, to make a definite conclusion. Secondly, hysteroscopy was performed by medical personnel of varying experience (senior resident to associate professor), which may not truly reflect the complication rates.

CONCLUSION

This audit helped us to identify the problems faced and how they were tackled. There is a learning curve to acquire hysteroscopy skills. The complications rate in this audit was similar to the those of other studies. Periodic audits help us to know if there have been improvements in the learning curve and minimizing the expected complications.

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