

A Two-Year Review of Hysteroscopic Practice at Queen Alia Military Hospital

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ABSTRACT

Objective: To present a review of all hysteroscopic procedures performed over a two years period.

Methods: During the study period, 890 hysteroscopic procedures were performed at the Department of Gynecology and Obstetrics, Queen Alia Military Hospital Jordan between September 2009 to November 2011. Indications, intraoperative diagnoses, and complications were reviewed. Simple descriptive statistics, (frequency and percentage) were used to describe the variables.

Results: The most common indications for diagnostic hysteroscopy were abnormal uterine bleeding (45%), abnormal ultrasound findings (27%), infertility (15%), recurrent abortions (12%), and missed intrauterine contraceptive device (1%). The most common diagnostic findings were submucous fibroid (19%), hyperplastic endometrium (17.8%), uterine polyps (16.7%), uterine septum (4.8 %), endometrial carcinoma and atrophy (1.7%). The most common pathologies to operative hysteroscopy were endometrial polyps (39.5%), missed intrauterine contraceptive device (16.3%), uterine septum (14.6%) submucous myomas (12.45%), and Asherman's syndrome (9%). The complication rate was 1.2 % of the total hysteroscopies. Cervical laceration and uterine perforation were the most common acute complications.

Conclusion: Hysteroscopy is an easy, inexpensive and effective procedure for the diagnosis and treatment of intrauterine pathology. It is minimally invasive and can be used with a high degree of safety. Hysteroscopy must take its place as one of the basic diagnostic methods in gynaecology.

Key words: Hysteroscopy, Uterine Bleeding, Endometrial polyp, Sub-mucous myoma.

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Introduction

The first hysteroscopic inspection of the uterine cavity, was performed by Bozzini in 1807.⁽¹⁾ However, the beginning of modern diagnostic hysteroscopy was marked in 1970, when Edstrom and Fernstrom described a modified hysteroscopic technique using 32% dextran for uterine distension.⁽²⁾ This permitted clear

visualisation of the uterine cavity and enabled directed endometrial biopsies. Since then diagnostic hysteroscopy has become standard practice in diagnosis and treatment of endometrial pathology.⁽³⁾ Recent studies have shown that hysteroscopy is a reliable procedure that is effective in controlling abnormal uterine bleeding. It is a good alternative to hysterectomy as a therapeutic procedure in specific cases of

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heavy menstrual bleeding, the single most common reason for gynaecologic referrals thus offering the patient a reduced hospital stay, and lower costs.⁽⁴⁻⁹⁾ In this study, we present a review of hysteroscopic procedures performed at the Department of Obstetrics and Gynecology, Queen Alia Military Hospital over a period of two years from 2009 to 2011 particularly highlighting the preoperative indications, postoperative diagnoses and complications associated with the procedure.

Methods

The medical records of all the hysteroscopic procedures, (diagnostic or therapeutic), performed between September 2009 to November 2011 in the Department of Obstetrics and Gynecology at Queen Alia Military Hospital were reviewed. There were 890 hysteroscopy procedures, of which 713 (80.1%) were primarily diagnostic and 177 (19.9%) were considered therapeutic. Simple descriptive statistics (frequency and percentage) were used to describe the variables. A specially designed medical record form was used to collect the relevant data. The demographic characteristics indications, and intra-operative complications, were recorded. All of the diagnostic procedures were performed by specialists under the supervision of clinical consultants. When an operative procedure was necessary the clinical consultants performed the operation. Hysteroscopy procedures were performed during the follicular phase of the menstrual cycle. Diagnostic hysteroscopy was performed by no touch approach' vaginoscopic without speculum and tenaculum. Analgesia or anesthesia was given only on patient's request. The patient was placed in dorsolithotomy position, and the vagina was cleansed with a non iodide disinfectant using a small swab on a thin forceps. The hysteroscopy was then inserted into the vagina, distending it by the flowing saline. The hysteroscope was further advanced into the uterine cavity through the cervical canal. Diagnostic hysteroscopy was performed with a Karl Storz hysteroscope (4.5mm hysteroscope, with a 30° lens and a 5.4mm diagnostic sheath). The uterine cavity was distended with sodium chloride which introduced into the cavity with a Karl Storz Hamou Endomat bomb, using 250 to

300 ml/minute flow, 80 to 100mmHg perfusion pressure, and 10 to 20mmHg aspiration pressure. Illumination was provided by a Storz cold light source via a fibre-optic cable. The procedure was monitored and recorded with video equipment. The hysteroscope was guided through the endocervical canal into the uterine cavity under visual control. The cavity and endometrial surface was inspected systematically, and the tubal ostia identified. Hysteroscopy was defined as completed when the entire uterine cavity was visualized. Hysteroscopy is considered normal if it showed uniform nonvascular endometrium. If a lesion was detected biopsy was performed. Guided biopsies were performed in all the patients with suspected alterations using a 3mm stainless steel curette after removal of the scope. The biopsy material was placed immediately in 10% formaldehyde and sent to the pathology laboratory. Therapeutic hysteroscopy was performed under general anaesthesia after dilatation of the cervix to Hegar 9. A 9-mm rigid Storz resectoscope was inserted into the uterine cavity using Glycine solution (1.5%) to distend the cavity. The electric generator used was an autocon II 400 (Karl Storz). MODEL 205352 20-1. The monopolar setting for cutting was 80–100W and 50W for clotting; the bipolar setting for cutting was 40–60W power. We began the intervention with low cutting energy. Later, we adjusted it according to the tissue consistency.

Results

During the period of this study, a total of 890 women underwent hysteroscopy. Of the 890 hysteroscopy procedures, 713 (80.1%) were primarily diagnostic and 177 (19.9%) were considered therapeutic hysteroscopies. The mean age of patients was 41.84 years, (range 21–75), 34.9% of the cases were Para 4-6 (n=314), 28.2% were para 1-3 (n= 251), 13.7% were nullipara (n=122) and 23.1% with Para>6 n=206. This can be seen in Table I and Table II. Table III presents the indications and diagnostic findings in the diagnostic hysteroscopy sub-group. The most common indications for diagnostic hysteroscopy among the study group were abnormal uterine bleeding (45%), abnormal ultrasound findings (27%), infertility (15%), recurrent abortions

Table I: Maternal age among women who underwent hysteroscopy

Age	Number	%
≤30	192	21.6
30-40	230	25.8
40-50	451	50.7
≥50	17	1.9
Total	890	100

Table II: Maternal parity among women who underwent hysteroscopy

Parity	Number	%
Nullipara	122	13.7
Para 1-3	251	28.2
Para 4-6	311	34.9
> Para 6	206	23.1
Total	890	100

Table III: Indications and diagnostic findings in 713 diagnostic hysteroscopy.

Indications	Normal	Endometrial polyps	Atrophy	Sub mucous fibroid	Hyperplastic endometrial	Uterine septum	Endometrial carcinoma	Total
Uterine bleeding	125 (39.2 %)	52 (16.3 %)	12 (3.8 %)	36 (11.3 %)	83 (26%)	-	11 (3.4 %)	319
Abnormal ultrasound findings	34 (17.5%)	44 (22.7 %)	-	78 (40.2%)	36 (18.6%)	1 (0.5%)	1 (0.5%)	194
Infertility	62 (56.4 %)	21 (19.1%)	---	16 (14.5%)	6 (5.5%)	5 (4.5%)	---	110
Recurrent abortions	52 (63.4%)	2 (2.4%)	----	6 (7.3%)	----	22 (26.8%)	----	82
Missed IUCD*	----	----	-----	---	2 (25%)	6 (75%)	---	8
Total	273 (38.3 %)	119 (16.7%)	12 (1.7 %)	136 (19.1 %)	127 (17.8%)	34 (4.8%)	12 (1.7 %)	713

* IUCD: Intrauterine contraceptive device

Table IV: Indications in 177 operative (therapeutic) hysteroscopy.

Indication	Number	%
Endometrial polyps	70	39.6
Missed IUCD	29	16.3
Uterine septum	26	14.7
Sub mucous myomas	24	13.6
Asherman's syndrome	16	9.0
Endometrial resection	12	6.8
Total	177	100

Table V: Acute Complications in Hysteroscopic Procedures

Complication	Number	%
Cervical laceration	9	1.0
Uterine perforation	2	0.23
Total	11	1.23

(12%), and missed intrauterine contraceptive device (IUCD) (1%). The most common diagnostic findings in diagnostic hysteroscopy were submucous fibroids (19%), hyperplastic endometrium (17.8%), uterine polyps (16.7%), uterine septum (4.8 %), endometrial carcinoma (1.7%) and atrophy (1.7 %). In 38.3% of cases no obvious pathology was detected. Table IV elaborates the indications for therapeutic hysteroscopy. The most common pathologies managed by therapeutic hysteroscopy procedures (n=177) were: endometrial polyps (39.5%) missed IUCD (16.3%), uterine septum (14.6%), submucous myomas (12.45%), Asherman's syndrome (9%) and other uterine anomalies.

Complications were experienced in 11 procedures (Table V). Cervical laceration and uterine perforation were acute complications. The majority of complications occurred during dilatation of the cervix or during curettage. No case of fluid overload was noted.

Discussion

Hysteroscopy is an effective procedure for the diagnosis and treatment of intrauterine pathology. It is minimally invasive and can be used with a high degree of safety^(10,11) In our study, as in those of Amr⁽¹²⁾ and Gezer,⁽¹³⁾ the most common indication for performing this procedure was abnormal uterine bleeding. Over

45% of women presented with abnormal bleeding. Other indications include abnormal ultrasound findings, infertility recurrent abortion and missed IUCD same as that reported elsewhere in the literature.^(14,15) Bettocchi *et al.* Sagiv *et al.* and Ngu *et al.*,⁽¹⁶⁻¹⁸⁾ reported their experience with more than 11,000 hysteroscopic procedures performed using the vaginoscopic technique eliminating the use of speculum and a tenaculum. They found that as many as 99.1% of patients reported no discomfort related to the procedure. In our study, the majority of diagnostic hysteroscopy procedures were performed using the vaginoscopic technique without anesthesia, and eliminating the use of speculum and a tenaculum. The acute complication rate associated with this procedure in our study is 1.24%, which is similar to that reported elsewhere in the medical literature with rates varying between 0.28% and 5.2%.⁽¹⁹⁾ Presuming that this is for both diagnostic and therapeutic hysteroscopy. The main acute complications in our study were found to be cervical laceration and uterine perforation which is similar to that reported by other studies.⁽²⁰⁾ Jansen *et al.* reported that the complication rate will be higher with operative (therapeutic) hysteroscopy than with diagnostic hysteroscopy.⁽²¹⁾

Conclusion

Hysteroscopy is an easy, inexpensive and effective procedure for the diagnosis and treatment of intrauterine pathology. It is minimally invasive and can be used with a high degree of safety, which must take its place as one of the basic diagnostic methods in gynaecology. This procedure has recently been introduced in Jordan and applied in Queen Alia Hospital for the first time two years ago. This research is a review of the cases that were carried out in our hospital during the study period. In our view, we encourage other clinics in our country to introduce hysteroscopy in their units as it is a simple, economical and useful procedure.

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