International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Ndoua CCN et al. Int J Reprod Contracept Obstet Gynecol. 2024 Feb;13(2):229-233
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20240114

Original Research Article

Practice of hysteroscopy at the Hospital for Applied Research, Endoscopic Surgery, and Human Reproduction, Yaounde Cameroon

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Received: 08 November 2023
Accepted: 05 December 2023

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ABSTRACT

Background: This study was done to describe the practice of hysteroscopy at the Hospital Centre for Applied Research, Endoscopy, Surgery and Human Reproduction (CRACERH).
Methods: It was a descriptive retrospective cross section study between January 2015 to December 2020.All patients who underwent either an operative or diagnostic hysteroscopy during the study period were included. Data was collected from postoperative reports, patients medical files and registered on a pre-established data collection form. The indications for surgery, the operative findings were also noted. Any unexpected incident during the procedure or postoperative was considered a complication.
Results: During the study period, 1876 patients underwent a surgical procedure, of which 287 had a hysteroscopy making a percentage of 15.29%. The average age of the 287 patients was 39.38±6.36 years. Majority of the patients were still menstruating with only 3.8% (n=11/287) were menopaused. The most frequent pathology found during diagnostic hysteroscopy was the polyp with a ratio of 65.6%, and uterine myoma with a ratio of 43.7% (87).
Conclusions: Our study highlights the fact that hysteroscopy occupies a preponderant role in the diagnosis of intra uterine pathology especially in the context of infertility.

Keywords: Chracerh, Hysteroscopy, Myomas, Polyps

INTRODUCTION

Hysteroscopy is a procedure during which a gynecologist examines the uterine cavity using a telescopic instrument (hysteroscope) inserted into the vagina and the cervix.[1] L'hysteroscopy is carried out in order to evaluate or treat pathologies of the uterine cavity, tubal orifices and the endocervical canal. Some indications of hysteroscopy include abnormal uterine bleeding (AUB), retention of intrauterine devices or other foreign bodies, malformations of the uterus (uterine septum), retained products of conception, repeated early pregnancy loss, hypofertility. Many drugs used to facilitate cervical dilatation are available. Misoprostol is of great interest in this indication.[1,2] The development of hysteroscopy has paved the way to a less invasive approach to frequent gynecologic problems. Hysteroscopy can either be diagnostic or therapeutic.

METHODS

A retrospective transversal study of 5-year period, from January 2015 to December 2020 was done at CHRACERH.

Data (age, past medical history, indications for hysteroscopies and complications) were collected from medical files of patients undergoing a hysteroscopy for various indications at CHRACERH. An authorisation was obtained from the ethical committee of CHRACERH. Statistical analysis was done using the software, SPSS 20.0.

RESULTS

During the study period, 1876 patients were operated among which 287 underwent hysteroscopy making a frequency of 15.29%. The average age was 39.38±6.36 with extremes ranging from 22 to 60 years.

62.7% had a pertinent past surgical gynecologic history, 8/10 soit 51.2% of patients underwent a gynecologic surgery, 33.1% had undergone myomectomy by laparotomy.

98.8% of the patients benefitted from imaging studies with pelvic ultrasonography being the most frequent at 97.9%, followed by hysterosonography at 88.5%. 98.8% of the patients realised either a hysterosonography or a hysterosalpingography (HSG).

Table 1: Distribution of patients according to symptoms.

Symptoms		Effective	%
AUB (22.3%)	Post menopausal metrorrhagia	2	0.7
	Metrorrhagia	16	5.6
	Menorrhagia/ hypomenorrhea	20	7
	Menometrorrhagia	9	3.1
	Oligomenorrhea/ spaniomenorrhea	9	3.1
	Hypomenorrhea	8	2.8
Secondary amenorrhea		17	5.9
Infertility (84.4%)	Primary infertility	94	32.8
	Secondary infertility	148	51.6
Repeated early pregnancy loss		12	4.2
Sequestrated intrauterine device		1	0.3
Pelvic pain		10	3.5

Table 2: Distribution according to past gynecologic history.

Past gynecologic history	Effective	%
Myomectomy by laparotomy	95	33.1
Myomectomy by hysteroscopy	8	2.8
Endometrial polyp	14	4.9
Endouterine aspiration	13	4.5
Treatment for intrauterine adhesions	14	4.9
Treatment for uterine septum	1	0.3

Table 3: Imaging study modalities.

	Pelvic ultrasonography	Hysterosalpingography	Hysterosalpingography
Pelvic ultrasonography	-	251 (89.3%)	112 (39.9%)
Hysterosonography	251 (98.8%)	_	106 (41.7%)
Hysterosalpingography	112 (98.2%)	106 (93.0%)	-

Table 4: Indications and hysteroscopic findings.

Indications Findings hysteroscopy n=287	AUB 22.2% n=64 (%)	Uterine polyp 52.6% n=151 (%)	Uterine myoma 68.9% n=198 (%)	Synechia 10.8% n=31 (%)	Amenorrhea 5.9% n=17 (%)	Infertility 84.4% n=242 (%)	Adenomyosis 1% n=3 (%)	Endometrial hypertrophy 6.3% n=18 (%)
Endometrial polyp	20 (31.3)	99 (65.6)	87 (43.9)	5 (16.1)	5 (29.5)	112 (46.3)	2 (66.7)	15 (83.3)
Uterin myoma	26 (40.6)	47 (31.1)	87 (43.9)	3 (9.6)	1 (5.9)	82 (33.8)	1 (33.3)	5 (27.8)
Synechia	10 (15.6)	16 (10.6)	33 (16.7)	18 (58)	9 (52.9)	43 (17.7)	-	1 (5.6)
Adenomyosis	-	-	2 (1)	-	-	1 (0.4)	-	-
Normal uterine cavity	7 (10.9)	11 (7.3)	14 (7)	3 (9.6)	2 (11.7)	24 (9.9)	-	1 (5.6)

Table 5: Types of hysteroscopy and indications.

	AUB n=64	Myomas n=198	Polyps n=151	Synechia n=31	Amenorhea n=17	Infertility n=190
Dg HSK	20 (31.3%)	34 (17.2%)	24 (15.9%)	8 (25.8%)	3 (17.6%)	52 (27.4%)
Op HSK	44 (68.7%)	164 (82.8%)	127 (84.1%)	23 (74.2%)	14 (82.4%)	190 (72.6%)

Table 6: Surgical acts done in operative hysteroscopy.

Surgical acts	N	%
Polypectomy	174	44.6
Myomectomy	102	30.7
Adhesiolysis	64	19.2
Endometrial ablation	1	0.3
Section of a uterine septum	4	1.4
Extraction of a foreign body	1	0.3

Endometrial polyp was the most frequent finding during diagnostic hysteroscopy with a frequency of 65.6% (99) followed by uterine myomas with a frequency of 43.7% (87). The indications for hysteroscopy and the peroperative findings are shown in Table 4.

The most frequent indication for diagnostic hysteroscopy was abnormal uterine bleeding such as metrorrhagia, menorrhagia, menometrorrhagia, polymenorrhea. In 20 (31.6%) of cases. The second most frequent indication was the evaluation of infertile patients in 52 (27.4%) of cases. For operative hysteroscopy uterine myomas was the most frequent indication with 164 (82.8%) of cases, followed by polyps in 127 (84.1%).

The principal surgical acts done during operative hysteroscopy was: polypectomy, myomectomy, adhesoilysis which represented 174 (44.6%), 102 (30.7%), and 64 (19.2%) respectively (Table 6).

During this study complications occurred in 9 (3.1%) of the 287 patients. The most frequent complication was bleeding. The percentage of bleeding in diagnostic hysteroscopy was 1.7% (1 case out of 59). While the bleeding in operative hysteroscopy was 3 cases of 228. Other complications observed during operative hysteroscopy was uterine perforation in two cases and an infection in one case (Table 4). The procedure was stopped whenever there was a complication. The incidents of bleeding occurred during sub mucous myomectomy There was no case of fluid overload, injury to the urinary tract or digestive organs. The experience of the surgeon was not evaluated as regards to the complications observed.

Table 7: Complications of hysteroscopy.

Complications		N	%	Age	Parity	Indication	HSK	Acts
Per op/ acute	Bleeding	4	1.4	39	G1P0	Polyp	Dg	Endometrial biopsy
				34	G4P2	Myomas/polyp	Op	myomectomy
				38	G1P1	Intrauterine adhesions	Op	Adhesiolysis
				40	G5P1	Myoma	Op	Myomectomy
	Uterine perforation	2	0.7	32	G2P0	Infertility	Dg	Normal hysteroscopic findings
	perforation of the pouch of Douglas			34	G1P1	infertility/ hypomenorrhea	Dg	Normal hysteroscopic findings
	Dyspnea	1	0.3	40	G2P1	Infertility	Dg	HSK normal
Early	Infection	1	0.3	43	G3P1	Myomas	Op	Myomectomy

DISCUSSION

We carried out research on the indications of hysteroscopy. They operative findings and complications in a population of 287 women who underwent diagnostic or operative hysteroscopy at CHRACERH. The average age was 39.38±6.38 years similar to that found by Ndua and al in 2018.84.4% of the patients had infertility issues.[3] This is because our study population comprised mostly of aged women. Increasing age in reproduction is associated with a decrease in ovarian reserve, alteration of tubal function with an increased risk of chromosomal abnormalities which could explain the infertility problems of these patients.[4] Considering their past medical history, the main surgical intervention done in these patients was myomectomy (35.9%). 6.8% of the patients had a history of surgery endometrial infraction, even though the values are below those found in literature. These elements highlight the importance of the history of the patient facing infertility (84.4%). Actually, myomectomy by laparotomy with endometrial infraction is a risk factor for infertility in these women. Alteration of tubal function, intrauterine adhesions, and pelvic adhesions are also causes.[6,7] Infertility was present in 84.4% of the patients followed by abnormal uterine bleeding (22.3%) which were the most frequent symptoms in our study population This justifies

the indications for hysteroscopy which was uterine polyps (52.3%), uterine myomas (69%) and intra uterine adhesions (10.8%). Kayatas et al had similar results in a study of 5474 patients who had a diagnostic or operative hysteroscopy, abnormal uterine bleeding was the most frequent indication(40%).[8] Pato-Mosquera et al in a study of 904 patients found pelvic ultrasonographic suspicion of endometrial polyp to be the most frequent indication for hysteroscopy in both premenopausal and menopausal women, 75% and 72.1% respectively.[9] Considering the data obtained ,they agree to literature which indicates that abnormal uterine bleeding is probably the most frequent gynecologic problem especially in women above 45, affecting almost 25% of women of reproductive age.[10] The hysteroscopic findings corresponded to the indications. Nevertheless, we found a lower rate of polyps (45.5% against 52.3%) adenomyosis (32.8% against 69%) and a higher rate of intrauterine adhesions as compared to indications (18.5-10.8%). This suggest that polyps and myomas are over diagnosed by ultrasonography, while intrauterine adhesions are under-diagnosed. This could be explained by an increase in the uterine folds of the endometrial mucosa which could be mistaken for small polyps or myomas by the ultra Sound operator pointing out the operator dependent aspect of imaging studies.[11] Mild intrauterine adhesions are sometimes not visualised during radiologic imaging studies.[7] Alkhateeb and al obtained similar results in 245 infertile patients presenting with repeated failure after embryo transfer during invitro fertilisation (IVF) and concluded that these women need hysteroscopic re-evaluation before starting another cycle of embryo transfer by IVF.[12] Daniilidis and al, in summarising the hysteroscopic results of women presenting with AUB, found that the most frequent operative finding was sub mucous myomas, polyps and endometrial hyperplasia. Moreover, he declared that "diagnostic hysteroscopy as a tool, is very precious with higher success rates in identifying AUB in perimenopausal and postmenopausal women without a specific risk of progression to cancer.[10] The hysteroscopic findings in our population with a high rate of infertility highlights the crucial role of this procedure in the evaluation of infertility. Even though the WHO recommends hysterosalpingography for all infertile women in order to evaluate intra uterine abnormalities, hysteroscopy has imposed itself as a reference for evaluating the intrauterine cavity in the last decade. Barati et al studied presenting with unexplained infertility and women with infertility due to a uterine factor, by transvaginal ultrasonography, HSG and hysteroscopy, on one hand and by transvaginal ultrasonography and HSG on the other hand. Their results revealed 38.8% of positive results despite having normal results in transvaginal ultrasound and HSG. He concluded that office hysteroscopy has to be a routine practice in the evaluation of infertile women.[10] Koskas et al evaluated 556 infertile women by office hysteroscopy of first intention for infertility and found abnormal results ranging from 30% for women of 30 years old to more than 60% in women of more than 42 years old in their systematic revue of the efficacy of hysteroscopy in subfertile women with no other gynecologic symptoms.[13] The rate of complication in our population was low (7.6%), and the most frequent was post operative intrauterine adhesions. Kayatas et al had a complication rate of 27% in 5474 women. They also noticed as in other studies a higher rate of complications in operative hysteroscopy compared to diagnostic hysteroscopy. They found that the training and experience of the surgeon was not the only factors implicated in the security of the procedure.[8]

CONCLUSION

Our study suggest that hysteroscopy occupies an important place in the diagnostic evaluation of intrauterine pathologies notably in the context of infertility, given the fact that uterine polyps and myomas are over diagnosed during imaging studies, while intrauterine adhesions are underdiagnosed.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Ndoua CCN, Metogo JAN, Ngono XA, Mbeng S. Practice of hysteroscopy at the Hospital for Applied Research, Endoscopic Surgery, and Human Reproduction, Yaounde Cameroon. Int J Reprod Contracept Obstet Gynecol 2024;13:229-33.