

Research Article

Outpatient Hysteroscopy in Women Who Have Undergone Surgery to the Cervix

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Submitted: 20 August 2020

Accepted: 31 August 2020

Published: 31 August 2020

ISSN: 2333-6439

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OPEN ACCESS**Keywords**

- Cervical surgery
- Outpatient hysteroscopy

Abstract

Objective: To access if cervical surgery is affecting the success of the outpatient diagnostic hysteroscopy.

Materials and Methods: We compared the success of hysteroscopy between the group who had a history of cervical operation and the rest of the patients (control group).

Results: The 52 women in our study group were similar to the controls in terms of age, parity, indication for hysteroscopy and uterine size. Seven (13.4%), of the hysteroscopies could not be completed in the study group compared with 156 (7.7%), in the control group. The main reason for not carrying or failing with hysteroscopy was pain (3/7 cases in the study group and 35/156 in the control group), and cervical stenosis (1/7 in the study group and 41/156 in the control group). None of these differences were statistically significant.

Conclusions: Our study shows that women with a history of cervical surgery are good candidates for hysteroscopy.

INTRODUCTION

Hysteroscopy is regarded as the best method for visualization of the uterine cavity and investigation for intrauterine pathology [1,2]. The procedure can be done under general or local anaesthesia, however outpatient diagnostic (“office”) hysteroscopy has become the gold standard for evaluating the uterine cavity and there is now a considerable volume of evidence that using a vaginoscopic (“no touch”) technique is associated with less discomfort, compared with the traditional technique and the use of vaginal speculum and tenaculum to hold the cervix [3].

Successful hysteroscopy requires a cervical canal sufficiently dilated to allow passage of the hysteroscope. Many of the complications related to hysteroscopy, including creation of a false passage, uterine perforation, vasovagal reaction, pain and inability to complete the procedure, are caused by inadequate cervical dilation and an inability to insert the hysteroscope. Recent technical advances, such as the introduction of small-diameter and flexible hysteroscopes, have made it possible to perform hysteroscopy in the outpatient setting, causing less discomfort to the patients and been well tolerated by them [4,5]. For scopes with diameter less than 5mm, it is possible to perform a diagnostic hysteroscopy without anaesthesia in the majority of cases [6].

There are a number of women who have undergone biopsy or treatment to the cervix, mainly as management for abnormal cervical smears and cervical intraepithelial neoplasia (CIN). The most popular treatment methods include large loop excision of the transformation zone (LLETZ), laser cone and knife cone biopsies, interventions which are known to lead to cervical stenosis in a considerable proportion of cases.

We are not aware of any study which addressed the effect of previous cervical surgery on the success of outpatient hysteroscopy.

MATERIALS AND METHODS

We reviewed the medical notes of 2069 consecutive patients who underwent Outpatient Hysteroscopy in our clinic between October 2007 and May 2017. Among them, we identified 52 (2.5%), who had a history of cervical surgery.

All hysteroscopies were done using a rigid 2.9 mm 30° fore-oblique hysteroscope under video control (Karl Storz, Tuttlingen Germany), normal saline as the uterine distension medium at a maximum pressure of 150 mmHg, and a “no touch” (vagoscopic), technique [7]. The hysteroscope was inserted into the lower vagina, the vagina was “stretched” with the distention medium, allowing identification of the external cervical os and then the hysteroscope was guided into the uterine cavity under direct vision. Intracervical local anesthesia and cervical dilatation

up to Hegar 4-5 were carried out only if the procedure proved too uncomfortable or in case of cervical stenosis respectively. If indicated, endometrial biopsy was taken using an H Pipelle [8].

The hysteroscopies were carried out both by experienced operators and trainees under supervision [9]. Success of the investigation was defined as adequate inspection of the cervical canal and endometrial cavity. We compared the outcome of hysteroscopy in the study group with the rest of the patients (control group). Statistical analyses were done using GraphPad Prism (GraphPad Software Inc, California, USA).

RESULTS AND DISCUSSION

During the study period, 2069 patients underwent Outpatient Hysteroscopy in our clinic including 52 who had a history of cervical pathology and surgery. The study group was similar to the 2017 in the control group in terms of age, parity, uterine size and indication of hysteroscopy (Tables 1 & 2).

Hysteroscopy was completed successfully in 45/52 (86.6%), of the study group and 1861/2017 (92.3%), in the control group, and failed in 7/52 (13.4%), and 156/2017 (7.7%), respectively (Fisher's exact test $p=0.1835$). The main reasons for not carrying or failing with hysteroscopy was pain (3/7 cases in the study group and 35/156 in the control group), and cervical stenosis (1/7 in the study group and 41/156 in the control group). None of these differences were statistically significant (Table 3).

Although the study was retrospective, we used a consecutive

	2017	Study group
Number of cases	2017	52
Age (years)	45.0 (SD 8.3)	43.0 (SD 7.9)
Height (cm)	155 (SD 29.2)	152 (SD 27.7)
Weight (kgr)	66.1 (SD 11.0)	63.8 (SD 10.9)
Parity	1.0 (SD 1.3)	1.0 (SD 1.2)
Duration of symptoms (months)	22.1 (SD 26.9)	20.5 (SD 27.2)

Laser cone biopsy	15
Knife cone biopsy	6
LLETZ	20
Cervical biopsy	4
Nature of surgery unascertained	7

	Study group (n=52)	Control group (n=2017)	p
Failed	7	156	0.2
Not done	5	92	
Total	12 (13.4%)	248 (7.7%)	
	Reason for failed/not done hysteroscopy		
Pain	3	35	0.36
Cervical stenosis	1	41	0.68

series of patients during a period of almost ten years and did not find a statistically significant difference in the success of the procedure between women with a history of cervical surgery and those without.

Cervical Intraepithelial Neoplasia (CIN), is a precancerous situation, common in women in reproductive age [10]. Effective treatment of high grade lesions is important to prevent cervical cancer. Several studies have shown an association between all types of cervical treatment and the risk for preterm delivery [11-13]. The risk of preterm delivery increases with the depth and volume of the excised cone [14]. Cervical stenosis is a recognized and relatively common complication of treatment for CIN whether by LLETZ, laser or knife cone, particularly among women who had long cones removed [15]. Cervical stenosis has several potential adverse effects, including cervical factor infertility [16]. One study concluded that all the patients with secondary cervical stenosis experienced post operative haemorrhage and need for suturing or cauterisation of the surgical wound [17].

Cervical stenosis could also be a factor affecting the success of diagnostic hysteroscopy, particularly in the outpatient/office setting, as it can make it difficult to insert the hysteroscope through the cervical canal into the uterine cavity. It is certainly recognized that cervical stenosis is a challenging situation for hysteroscopy and is one of the main reasons for incomplete or failed hysteroscopy only second to pain [18].

Various techniques have been described to achieve intrauterine access in women with a stenotic cervix including using microscissors, micrograspers or a cutting loop electrode to widen the calibre of the cervical canal. Partial cervical canal excision to aid in hysteroscopy access has been described, but should be reserved in women who are not interested in future pregnancy or those who are postmenopausal [19]. For outpatient hysteroscopy, the use of narrower calibre instruments is helpful. As cervical stenosis is associated with an increased risk of iatrogenic complications, it is important to keep this in mind when attempting to perform hysteroscopy in these patients [20].

Another strategy in cases that are expected to present difficulties in performing an office hysteroscopy is to prime the cervix with misoprostol. This approach has been found to be of benefit in nullipara in terms of less procedural pain but not in parous women who did not have any risk factors for cervical stenosis [21,22]. In another study, it was demonstrated that dinoprostone was more effective than misoprostol in nulliparous women undergoing hysteroscopy [23].

Whether or not the use of misoprostol or dinoprostone would be of any benefit in women with a history of cervical surgery undergoing outpatient hysteroscopy remains to be seen, but at least we know from our study that such patients are good candidates for this investigation.

CONCLUSION

Hysteroscopy is an important tool in the evaluation of endometrial cavity. Diagnostic hysteroscopy and simple operative hysteroscopy can usually be done in an office setting.

Although many studies have shown the association of cervical surgery and preterm delivery, there are no studies reporting

any possible association with the success or failure of office hysteroscopy in such patients. Our study shows that a history of cervical surgery should not be a contra-indication to outpatient diagnostic hysteroscopy.

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Cite this article

Michos G, Gkoutzioulis A, Pinto RM, Dacco MD, Magos A (2020) Outpatient Hysteroscopy in Women Who Have Undergone Surgery to the Cervix. *Med J Obstet Gynecol* 8(2): 1137.