

# Hysteroscopy: An Analysis of 2-years' Experience

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## ABSTRACT

**Background:** Over the years, hysteroscopy has been increasingly performed for various gynecological disorders. In this study, we present a review of hysteroscopic procedures performed over a 2-year period analyzing the complications associated with it.

**Methods:** Seven hundred twenty-six hysteroscopic procedures performed at the Department of Gynecology and Obstetrics, University of Kiel over a period of 2 years were reviewed retrospectively using the GynReg database in the department. Indications, intraoperative diagnoses, and complications were particularly highlighted.

**Results:** The most common indications for the procedure were abnormal vaginal bleeding, endometrial ablation, polypectomy, and myomectomy. The most common findings were uterine polyps, submucous myoma, and hyperplastic endometrium. The complication rate was 1.65% of total hysteroscopies. False passage and uterine perforation were the most common acute complications. No late complications occurred.

**Conclusions:** Correlating our data with that found elsewhere, we find hysteroscopy to be a safe, minimally invasive procedure with a very low rate of complications.

**Key Words:** Hysteroscopy, GynReg (German Endoscopic Complications Register), Uterine Bleeding.

## INTRODUCTION

Many gynecological operations can be performed with the endoscopic technique. The use of minimally invasive techniques, such as hysteroscopy, has increased with time. During the 1970s, hysteroscopy began to increasingly attract the attention of physicians as a diagnostic and therapeutic alternative due to its greater accuracy in diagnosis and treatment, reduced morbidity, and reduced health care costs.<sup>1,2</sup>

A recent review<sup>3</sup> has shown that hysteroscopy can replace hysterectomy as a therapeutic procedure in specific cases of heavy menstrual bleeding and menorrhagia, thus offering the patient a reduced hospital stay, reduced morbidity along with a shorter convalescence period, and lower costs.<sup>2-4</sup>

In this study, we present a review of hysteroscopic procedures performed in the Department of Obstetrics and Gynaecology, University of Kiel, Germany over a period of 2 years from 1998 to 1999 particularly highlighting the complications associated with the procedure.

## MATERIAL AND METHODS

The data stored in the GynReg database of the Department of Obstetrics and Gynaecology pertaining to all patients who underwent hysteroscopy—diagnostic or therapeutic—during the period from January 1998 to December 1999 were analyzed (N = 726). Particular attention was given to the indication for the procedure, diagnoses, and the associated complications.

GynReg is the German Endoscopic Complications Register for quality control established by the Institute of Artificial Intelligence, University of Bremen and the Diakonissen Hospital in Bremen, Germany. All gynecological endoscopic procedures and their complications are recorded in this computer database and are evaluated annually. The program has a graphics-orientated user interface based on "Windows." Forty-two centers in Germany performing endoscopic procedures enter their data into this registry. GynReg can be used for individual and collective quality assessment.

Therapeutic hysteroscopy was performed after dilatation

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of the cervix to Hegar 9. A 9-mm rigid Storz resectoscope was inserted into the uterine cavity using Purisol (sorbitol and mannitol). Pressure (150 mm Hg) and volume (350 mL/mm) during the Purisol infusion were controlled by the Storz Hamou Endomat.

**RESULTS**

Over the 2-year period from January 1998 to December 1999, 726 hysteroscopic procedures were performed comprising 34.08% of all endoscopic procedures carried out in the university department. Of the 726 hysteroscopic procedures, 356 (49.04%) were diagnostic hysteroscopies and 370 (50.96%) were therapeutic hysteroscopies. The mean age of the patients was 47.84 years (range 18 to 87 years).

The most common indication for diagnostic hysteroscopy was abnormal bleeding in the perimenopausal period or bleeding in the postmenopausal period. The second most common indication was to discover the true nature of uterine pathology in cases where ultrasonography revealed an endometrial thickness greater than 10 mm.

The most common diagnoses at operative hysteroscopy were uterine polyps, uterine submucous myoma, and hyperplastic endometrium. In 49.31% of cases, no obvious pathology was detected.

The most common indications for operative (therapeutic) hysteroscopy (370 procedures) were endometrial ablation, polypectomy, and myomectomy.

Acute complications occurred in 12 (1.65%) of 726 patients who underwent hysteroscopy (Table 1). The majority of complications occurred during dilatation of the cervix or during curettage. No case of fluid overload was noted. No late complications were reported.

**DISCUSSION**

Hysteroscopy is a minimally invasive procedure, the use of which has increased over time due to its various advantages. In the present study, as in that of Hulka<sup>6</sup> and Hidlebaugh<sup>7</sup>, the most common indication for performing this procedure was a complaint of abnormal uterine bleeding. A comparison of our data and that of complications in other centers is given in Table 2.

The acute complication rate associated with this procedure in this study is 1.65%, which is similar to that report-

**Table 1.**  
Acute Complications in Hysteroscopic Procedures

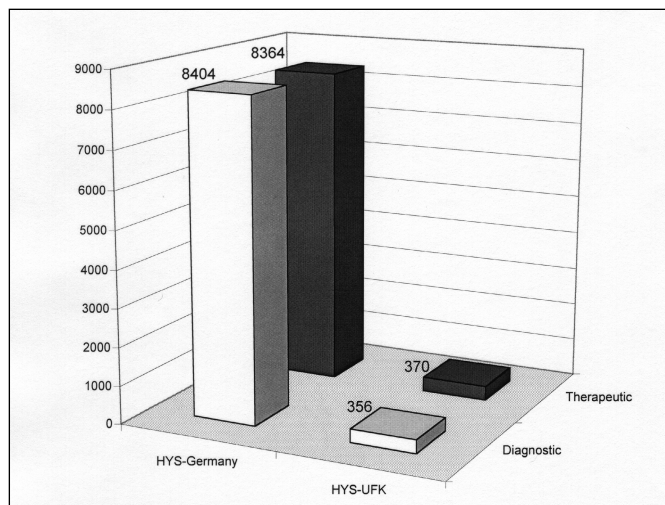
Complication	No. of Cases
False passage	6
Perforation of the uterine cavity	4
Other (intraoperative complication, not specified)	2

**Table 2.**  
Comparison of Different Complication Rates in Hysteroscopic Procedures in Different Centers

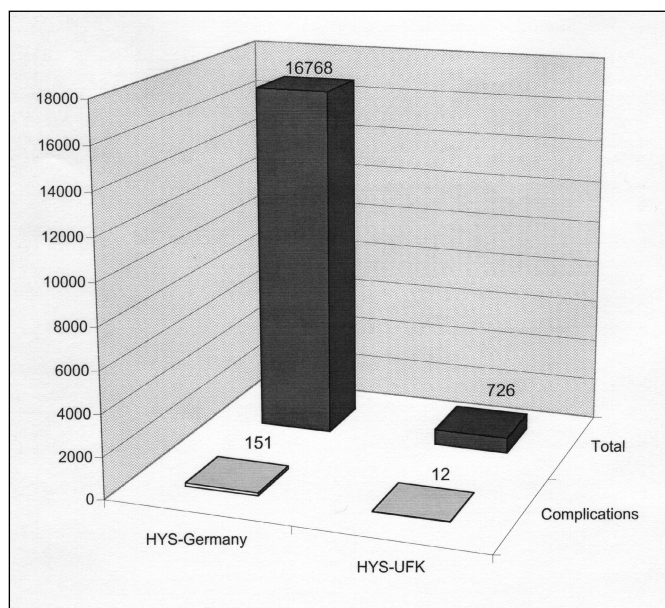
Author	Complication Rate		
	Operative	Diagnostic	Total
Cayuela, 1996	5.20%	-	-
Hidlebaugh, 1996	-	-	4.20%
Hulka, 1995	-	-	1.42%
Jansen, 2000	0.95%	0.13%	1.08%
Overton, 1997	0.77%	1.51%	2.23%
Propst, 2000	2.70%	-	-
Dept. of OB/GYN, University of Kiel, 2000	-	-	1.65%

ed elsewhere in the medical literature with rates varying between 0.28%<sup>8</sup> and 5.2%.<sup>9</sup> The complication rate has been reported to be higher with operative (therapeutic) hysteroscopy than with diagnostic hysteroscopy.<sup>6,8</sup> A lower complication rate has been reported when hysteroscopy is performed as an office procedure rather than in the hospital setting.<sup>7</sup>

The main acute complications in the present study were found to be false passage and uterine perforation (83% of all acute complications), which is similar to that reported by other authors.<sup>6,8,9</sup> Propst et al<sup>10</sup> report fluid overload as the most common complication. Correlating our data with that reported in other studies, we find hysteroscopy to be a safe and effective minimally invasive procedure with a low rate of complications.



**Figure 1.** Comparison of diagnostic and therapeutic hysteroscopies in 27 German endoscopy centers and in Kiel.



**Figure 2.** Comparison of hysteroscopies (HYS) and their complications in 27 German endoscopy centers and in Kiel (UFK).

**Figure 1** details the 1999 GynReg annual evaluation of data pertaining to diagnostic and therapeutic hysteroscopies from 27 German endoscopy centers. **Figure 2** compares the acute hysteroscopic complication rate in

Kiel (1.65% = 12 complications in 726 hysteroscopies) to that of 27 centers in Germany (0.9% = 151 complications in 16,768 hysteroscopies). Thus, our rate of acute hysteroscopic complications is well in line with that of other German centers and centers elsewhere (**Table 2**). Hysteroscopy should be applied as frequently as possible, as it provides new diagnostic and selective therapeutic options.

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