Experience with Hysteroscopy in a Private Specialist Hospital in Nigeria

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Abstract

Background: Hysteroscopy is a standard method for the evaluation and treatment of various gynecological disorders. Its availability and accessibility are limited in our setting owing to resource constraints. Nevertheless, the utilization is on the increase mostly in private health institutions in Nigeria and as an adjunct in infertility management. Objectives: The objective is to document the experience and outcome of hysteroscopy surgeries at a private specialist-assisted reproduction and endoscopy unit. Materials and Methods: A retrospective review of all hysteroscopic procedures conducted at the unit was undertaken. Relevant sociodemographic and clinical information were extracted for analysis. In addition, outcomes of the procedure and outcome for those who eventually had in vitro fertilization (IVF) treatment were documented for analysis. Results: A total of 106 patients had hysteroscopy over the study period. The age of patients ranged from 24 to 55 years. The most common indication for hysteroscopy was uterine synechiae (50%) others were preparatory for IVF (30.2%), uterine fibroid/polyp (10.4%), and abnormal uterine bleeding (9.4%), respectively. The major findings at hysteroscopy were intrauterine adhesions 68.9%. Therapeutic adhesiolysis was done using the scissors in most cases (83%) while two patients (1.9%) had adhesiolysis and resection of uterine polyp. A complication of noncardiogenic pulmonary edema was recorded from fluid overload. Overall most had return to normal menses (65.1%). Thirty-nine (38.8%) women had IVF treatment after hysteroscopy of which outcome was successful in 16 (41%) women. Conclusion: The utilization of hysteroscopic surgeries in management of endometrial pathologies is increasing. It offers a safe and effective treatment and is a useful adjunct for improving IVF outcome especially for those with repeated failed treatment.

Keywords: Adhesiolysis, hysteroscopy, infertility, intrauterine adhesions, in vitro fertilization

Introduction

The utilization of endoscopy in gynecology such as hysteroscopy has improved even in resource constraint regions of Sub-Saharan Africa. Hysteroscopy has attracted the attention of gynecologist as a reliable diagnostic and therapeutic alternative due to the fact that it offers the client minimal invasion, reduced morbidity, a shorter hospital stay as well as a shorter recuperation period.1-3 Hysteroscopy is a procedure that allows exploration of the uterine cavity using the hysteroscope, for the purpose of diagnosing and/or treating abnormal conditions.

Hysteroscopy can either be diagnostic or operative; operative hysteroscopy is used to correct an abnormal condition that has been detected during a diagnostic hysteroscopy. If a uterine problem was detected during the diagnostic procedure, an operative hysteroscopy can be performed at the same time, avoiding the need for a second surgery.2-4 Notable abnormalities that can be diagnosed or treated by hysteroscopy include: intrauterine adhesions (IUAs), abnormal bleeding, polyps, fibroids, or uterine septum.1,3,4 IUAs are frequently detected abnormalities on hysteroscopy. IUAs are bands of fibrous or scar tissue that form in the endometrial cavity, often in response to a uterine procedure, trauma and/or infection of the uterine endometrium.4,5 The European Society for Hysteroscopy grades IUAs into...
mild (thin or filmy adhesion), moderate (singular firm adhesions), and severe (multiple extensive firm adhesions with agglutination of uterine walls). Adhesiolysis describes the surgery that is performed to remove or divide adhesions so that normal anatomy and organ function can be restored and symptoms relieved. Historically, the removal of IUAs involved the performance of a simple D and C, a laparotomy/hysterotomy, or blind adhesiolysis with the uterine sound albeit with poor outcome. The treatment of IUAs improved dramatically with the emergence of the hysteroscopy procedure. Hysteroscopy is the current method of choice for diagnosing, treating, and following patients with IUAs. Hysteroscopy has also assumed a vital role in preparation for assisted reproduction, where a diagnostic or interventionary look at the uterine cavity is conducted. This is done with a view to improving implantation rate following in vitro fertilization and embryo transfer (IVF-ET).

Despite these potential benefits, the uptake and availability of the procedure is still limited in our setting owing to resource constraints. Ours is a private specialist gynecologic center, one of the few facilities offering comprehensive endoscopic services in a resource limited setting. We present a documentation of hysteroscopy procedures performed at the gynecology endoscopy unit.

**Materials and Methods**

We undertook a retrospective review of all hysteroscopy procedures conducted at Graceland Medical Centre, Benin-city, Nigeria, over a 24 months (between July 2016 and June 2018) period. The case notes of all the patients who had hysteroscopy at the center were retrieved for analysis. Sociodemographic and clinical information extracted from the case notes included age, parity, menstrual pattern, indication for hysteroscopy, method of diagnosis, treatment method, outcome, and complications. In addition, outcomes of those who had IVF treatment were documented as appropriate. The data extracted were analyzed using IBM SPSS Statistics for Windows, Version 20.0. (Armonk, NY: IBM Corp.), and presented in the form of frequency tables and descriptive statistics. Chi-square test was used to test for statistical difference where appropriate. P < 0.05 was considered statistically significant.

**Results**

A total of 106 patients had hysteroscopy over the study period of 24 months. The age of patients ranged from 24 to 55 years with mean of 38.6 years. Over 80% were nulliparous and 42.5% (45/106) have never been pregnant. The most common indication for hysteroscopy was IUAs (50%) other indications were preparatory for IVF 30.2%, uterine fibroid/polyp and abnormal uterine bleeding accounted for 10.4% and 9.4%, respectively. Other indications include prior evacuation of retained products of conception 21 (19.8%), myomectomy 37 (34.9%), caesarean section 4 (3.8%) and previous failed IVF 24 (22.6%). About 25% of patients previously had adhesiolysis (blind procedure), only 10.4% of these were done using the hysteroscope [Table 1].

The most common findings at hysteroscopy were IUAs (68.9%); severe 30.2%, moderate 21.7%, and mild 17%. Few patients had uterine polyp (6.6%), submucous myoma (5.5%), and uterine septum (3.8%). Subanalysis of the association between the findings at surgery and the original indication for hysteroscopy showed that finding of IUA was strongly associated with hypomenorrhea/amenorrhea (uterine synechiae) as indication for hysteroscopy.

Majority of therapeutic adhesiolysis was done using the scissors (76.4%) while 2 (1.9%) patients had adhesiolysis and resection of uterine polyp using the Bigatti shaver™. Common complications such as uterine perforation, infection, and bleeding were not recorded in this review. One (0.9%) case of noncardiogenic pulmonary edema was recorded from fluid overload as significant complication of the procedure. Postprocedure treatment for most patients was use of sequential hormone replacement.

Overall, most of the patients had return to normal menses after adhesiolysis (65.1%), 7.5% (8/106) had no menses and 5.7% were scheduled for repeat. The analysis showed that majority of those with negative outcome (no menses) had findings of severe IUAs 62.5% (5/8) [Table 2].

| Table 1: Demographic and clinical characteristics (n=106) |
| Variable | Frequency (%) |
| Age |
| Mean (SD) | 38.60 (7.1) |
| Range | 24-55 |
| Parity |
| P0+0 | 45 (42.5) |
| P0+x | 41 (38.7) |
| P≥1 | 20 (18.9) |
| Indication for hysteroscopy |
| Intrauterine adhesions | 53 (50.0) |
| Preparatory for IVF | 32 (30.2) |
| Fibroid/polyp | 11 (10.4) |
| Abnormal uterine bleeding | 10 (9.4) |
| Previous adhesiolysis |
| No | 79 (74.5) |
| Yes | 16 (15.1) |
| Blind hysteroscopy | 11 (10.4) |
| Type of instrument used |
| Scissors | 81 (76.4) |
| Resectoscope | 11 (10.4) |
| Shaving | 2 (1.9) |
| None | 12 (11.3) |
| Treatment outcome |
| Normal menses | 69 (65.1) |
| Scanty menses | 23 (21.7) |
| No menses | 8 (7.5) |
| Need for repeat | 6 (5.7) |

SD – Standard deviation, IVF – In vitro fertilization
Thirty-nine (38.8%) women had IVF treatment after hysteroscopy. Outcome was successful in 16 women, a pregnancy rate of 41%. Further analysis showed that over 50% of those with previous failed IVF had successful pregnancy outcome following hysteroscopy (7/12: 58.3) but this was not statistically significant, \( P = 0.143 \) [Table 3].

**DISCUSSION**

In gynecology practice, hysteroscopy is the standard procedure for diagnostic evaluation of the uterine cavity and for operative treatment of uterine abnormalities such as IUAs, submucosal leiomyomas, and endometrial polyps. In this study, these abnormalities occurred mostly among nulliparous women in their reproductive age, lending credence to the association between hysteroscopy and menstrual and/or fertility challenges. Our findings demonstrate that IUA was the most common reason for hysteroscopy in this study. Berman have reported IUAs to be a common indication for hysteroscopy. We also observed that pre IVF evaluation is becoming a common indicator for hysteroscopy. Similar findings have been documented; in addition, other indications as was seen in this study could be abnormal uterine bleeding, submucous fibroid or polyp, congenital uterine malformation. Aghahosseini et al. noted that pre-IVF evaluation is an increasingly common reason for hysteroscopy. This was corroborated in this study where IVF work up closely followed IUAs as common indications for hysteroscopy.

**Table 2: Association between grade of intrauterine adhesions at surgery and treatment outcome**

| Findings        | No menses | Treatment outcome | Need for repeat |
|-----------------|-----------|-------------------|-----------------|
| Scanty menses   | Normal    | Mild adhesion     | Moderate        |
| Normal          | 0         | 1                 | 2               |
| Mild adhesion   | 1         | 1                 | 1               |
| Moderate        | 2         | 7                 | 11              |
| Severe          | 5         | 11                | 14              |
| Adhesion + fibroid | 0      | 2                 | 3               |

**Table 3: Outcome of in vitro fertilization after hysteroscopy**

| Findings before IVF | Frequency (%) |
|---------------------|---------------|
| Yes                 | 39 (38.8)     |
| No                  | 67 (63.2)     |

| Outcome of IVF (n=39) | Frequency (%) |
|-----------------------|---------------|
| Successful            | 16 (41.0)     |
| Not successful         | 23 (59.0)     |

| Previous failed IVF (n=39) | Successful (16) | Not successful (23) | \( P \) |
|----------------------------|------------------|---------------------|--------|
| Yes                        | 7                | 5                   | 0.143  |
| No                         | 9                | 18                  |        |

**Conclusion**

Overall hysteroscopy procedures offer a safe and effective treatment for varying intrauterine/endometrial pathologies.
In addition, it has become a useful adjunct for improving IVF outcome especially for those with repeated failed treatment.

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**Conflicts of interest**

There are no conflicts of interest.

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