

Factors Impacting the Success of Outpatient Hysteroscopy in the Rapid Access Clinic

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Abstract

Objective: Outpatient hysteroscopy (OPH) is increasingly used as the first line investigation for perimenopausal and postmenopausal women with abnormal uterine bleeding. With high success and good pathology detection rates it has the advantage of allowing investigation and management of patients within a one-stop clinic set-up, resulting in high patient acceptability. Failure rates are low, however the main limitation is patient intolerance secondary to pain. Difficulties are thought to be encountered in nulliparous or postmenopausal women though the evidence is sparse. The aim of this study was to assess which patient factors have an impact on the success of OPH.

Design: Prospective observational study
Material and methods: The study was carried out from September 2012 to March 2013 in the outpatient hysteroscopy clinic at John Radcliffe Hospital, Oxford. All 96 patients in this series had their OPH performed by the same operator, using only a complete vaginoscopic approach. We used binary logistic regression to analyse which factors had an effect.

Results: No significant correlation was found between age and menopausal status. Our study suggested that parity by itself is not predictive but it did find a statistically significant link between previous mode vaginal mode of delivery and successful OPH (p-value=0.001).

Conclusions: This paper enhances our understanding of relevant patient factors, which will be useful in facilitating more patient specific counselling. It should also ideally encourage further studies into strategies to improve the success rate of this invaluable diagnostic and therapeutic modality.

Keywords: Gynecology; Endoscopy

Introduction

Outpatient diagnostic hysteroscopy is increasingly used as the first line investigation for perimenopausal women with abnormal uterine bleeding [1,2].

It has a high success rate and a good pathology detection rate, with little morbidity [3-5]. It has the advantage of allowing investigation and management of patients within a one-stop clinic set-up and hence has high patient acceptability and satisfaction. In addition, it avoids the need for general anaesthesia with its associated risks [6,7].

Failure rate (defined as inability to complete the procedure) of outpatient hysteroscopy is low; however the main limitations are patient tolerance secondary to pain. Difficulties are thought to be encountered if patients are nulliparous or postmenopausal though the evidence for this is sparse [8].

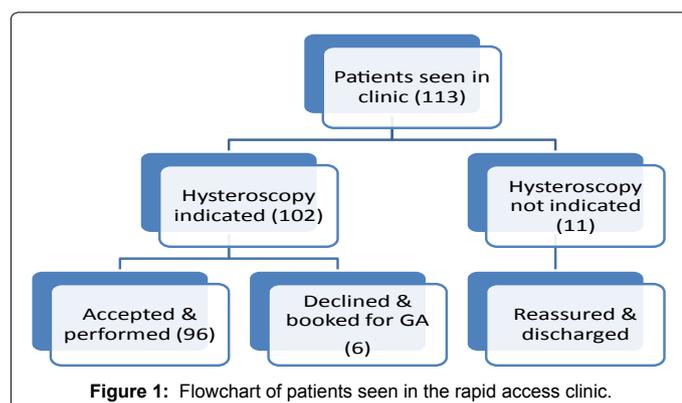
Materials and Methods

The aim of this study was to assess which patient factors, if any, have an impact on the success of outpatient hysteroscopy. This was

a prospective observational study. The study was carried out from September 2012 to March 2013 in the outpatient hysteroscopy clinic, department of Obstetrics & Gynaecology, John Radcliffe Hospital, Oxford. The clinic is staffed by one appropriately trained operator (senior registrar) and a nurse. All patients in this series had their outpatient hysteroscopy performed by the same operator, using a complete vaginoscopic approach. Patients were not given analgesia or any form of cervical preparation (such as vaginal Misoprostol) prior to the procedure.

The presenting complaints of patients included: Post-menopausal bleeding (77%), abnormal perimenopausal bleeding (8%), dysfunctional uterine bleeding in the pre-menopause which included menorrhagia and IMB/PCB (10%) and incidental finding of thickened endometrium (5%). During this time period, 113 patients were seen in the rapid access clinic. In 11 women hysteroscopy was deemed inappropriate due to the finding of a thin endometrium (<4 mm) on ultrasound scan. Subsequent gynaecological examination revealed genital tract atrophy and these patients were then reassured and discharged.

All other patients were counselled about outpatient hysteroscopy and verbal consent obtained for the procedure. Six women were excluded as they declined the intervention despite counselling. The study group thus comprised of 96 women, all of whom had out-patient



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hysteroscopy attempted (85% of the total referred to the clinic) (Figure 1).

A complete vaginoscopic approach was employed in all cases, a practice recommended by and consistent with the RCOG guideline [9]. This was done without insertion of a speculum or tenaculum to stabilize the cervix and using a 3.5 mm Versascop, with a single inflow channel (Gynecare, Ethicon Inc., Menlo Park, Ca, USA) and normal saline as the distension medium.

Data was analysed using SPSS. Factors potentially affecting the successful outcome of outpatient hysteroscopy were analysed using a binary logistic regression. A p value of <0.05 was considered to indicate statistical significance in all tests. The success rate of vaginoscopic hysteroscopy was the main outcome measure. This was defined as the ability to insert the hysteroscope into the uterine cavity, facilitating good visual inspection whilst assessing for pathology. We also wished to assess whether factors such as age, parity, mode of delivery, duration of menopause and menopausal status had any effect on the success rate of vaginoscopic hysteroscopy.

Results

The average age of patients having outpatient hysteroscopy was 59 years (range 40 – 88 years). The median parity was 2 (range 0-6). Nineteen patients (21.8%) had never experienced vaginal birth (13 nulliparous and 6 having only had delivery by caesarean section). Forty percent of women were sexually active.

Seventy nine patients (82%) were postmenopausal. The duration of menopause varied from 1-40 years, with an average of 10.96 years. The duration of menopause was not statistically significant (p-value = 0.627). The average symptom duration in this group was 7 weeks before attendance at out-patient hysteroscopy. The average endometrial thickness in this postmenopausal group was 9.68 mm, however the endometrium was not seen in its entirety in 13 cases.

The outpatient hysteroscopy was successful in 81 cases (84.3%). Failure of the procedure was either due to cervical stenosis (n=9) or inability to tolerate the procedure due to pain (n=6). Of this group 46.6% were either nulliparous or had never had a vaginal delivery.

Three percent of patients in the study experienced vasovagal episodes. Thirty patients eventually had hysteroscopy under general anaesthesia for various indications, listed in Table 1.

66 Patients had successful OPH without the need for anaesthesia. These patients were either able to be immediately reassured and discharged from clinic (n=21) or had histopathology sent. Thirty six

Indications for GA Hysteroscopy	Number of cases (n=30)
Unsuccessful OPH	15
Operative resection required	13
Declined polypectomy at OPH	1
Unable to tolerate speculum for Pipelle	1

Table 1: Indications for hysteroscopy under general anaesthesia.

Histology result	Number of cases (n=96)
No sample sent (consistent with atrophic changes)	28
Normal	58
Simple hyperplasia	3
Complex hyperplasia	4
Cancer	3

Table 2: Histology results of endometrial samples taken.

patients had Pipelle endometrial sampling and nine had immediate polypectomy. Twenty eight patients had no histopathology sample sent off as the cavity displayed atrophic changes or a sample was taken but revealed only scant curetting. If any obvious irregularity was noted within the cavity, a biopsy was taken (n=68). The histopathology outcomes are below in Table 2. The findings of pre-cancerous changes and malignancy are our series is 10.4%, which is entirely consistent with the current literature.

Discussion

It is now well established in the literature that outpatient hysteroscopy is an efficient, safe and convenient procedure, which is facilitating an era of “see and treat” ambulatory gynaecology [10,11]. Narrow bore hysteroscope (<5.5 mm) cause less pain whilst giving good views of the cavity. OPH is less painful than traditional hysteroscopy techniques (SMD -0.44, 95% CI from -0.65 to -0.22, I(2)=58%) and is associated with lower local anaesthetic requirements and causes fewer vasovagal side effects [12-14]. It is also a quick procedure and is faster to perform than traditional techniques (average of about 2 minutes) [15].

As there is good evidence to suggest that patients experience significantly less procedural pain when a vaginoscopic approach is used, this should ideally be the default method (advocated in the UK and other European countries like France) [9,16]. There is also no need for routine administration of cervical preparation prior to OPH as there is no clear evidence of benefit with regards to failure rates and pain reduction [9,16]. The overall success rate of OPH in the literature varies (83-98%) [12]. Some authors have implemented the application of local anaesthetic, if the no-touch vaginoscopic technique has failed [17]. However in our study (compliant with RCOG guidelines), no local anaesthetic was attempted if no- touch vaginoscopy failed, with a resultant success rate of 84%. The commonest cause for failure of outpatient hysteroscopy is patient intolerance secondary to pain.

Studies are now being done to identify risk factors which are likely to predict failure of outpatient hysteroscopy [12]. However, at present there is a lack of consensus on which factors affect the outcome. Studies to date have looked at age, menopausal status and parity. We attempted to look at a number of these factors, to ascertain if any had an impact on the outcome of OPH. This was undertaken to gain further clarity on the current controversies regarding OPH. One of the limitation of our study, was the sample size which was small (n=96), however this is reasonably consistent with other hysteroscopic studies done in the past [7,18-20].

Di Spezio et al., suggest that success of OPH is negatively affected by menopausal status and nulliparity [8]. Another recent study, suggests that OPH is negatively affected by menopause and age. [21]. Whilst Török and Major suggest that there is no evidence that parity and menopausal status affect level of pain (linked to procedure failure) [22].

Our study was in agreement with the findings confirmed by the Török study and suggested that parity and menopausal status has no effect on the success of outpatient hysteroscopy. Whilst the number of children by itself (parity) does not seem to affect the outcome (p-value=0.610), our study did suggest that having a previous vaginal mode of delivery positively affected the outcome of OPH (p-value=0.001). All other factors examined in our study demonstrated no significant difference on the outcome of OPH.

Conclusions

This study serves to provide continued support for the current advice that out-patient hysteroscopy is an acceptable intervention to the

vast majority of patients [6,23]. This procedure was acceptable to 94.1% of patients in this study. It also has high patient tolerability offering good success rates (84% in this study), with very few side effects [5,24]. Whilst no statistically significant correlation could be found between age, menopausal status, duration of menopause and parity. Our study suggests a statistically significant correlation between the success of OPH and previous vaginal mode of delivery.

Setting up an outpatient hysteroscopy service, does not require a high level of expertise (this service was run by one operator). It is quick to perform and is associated with reduced treatment costs versus in-patient hysteroscopy, thus reducing the total cost of care in women referred for hysteroscopy [25,26]. There are numerous benefits for both patients and service providers associated with this technique, including faster recovery, less time away from work and home and cost savings to the woman, employers and the health service [27,28]. Increased technological advances are also allowing more operative procedures to be undertaken on an outpatient basis making this technique increasingly useful for patients and clinicians [29]. These advantages cannot be ignored in the current medical climate. Therefore, greater understanding of patient factors will allow more patient specific counselling (enhancing patients expectations from the procedure) and should ideally encourage further studies into strategies to improve the success rate of this invaluable diagnostic and therapeutic modality.

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