Office Hysteroscopy in Patients with Abnormal Uterine Bleeding and Normal Transvaginal Sonography

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Abstract

Background: Abnormal uterine bleeding (AUB) is one of the most common clinical problems in gynecology. Transvaginal sonography (TVS) and hysteroscopy are two diagnostic methods for patients with AUB. For most of the patients with AUB, diagnostic hysteroscopy can be done in clinic with minimal discomfort and much lower expense than operative room.

Materials and Methods: In our clinical trial study, from March 21, 2005 to March 20, 2007, patients with AUB in Ahwaz Imam Khomayni hospital, after history and physical examinations underwent TVS. Of those, 147 patients with normal TVS entered the study and were considered for outpatient hysteroscopy. Patients with endometrial cavity lesion were scheduled for operation room, and those with empty endometrial cavity aspiration biopsy were done outpatiently. Specimens were sent to pathologist for examination.

Results: All the patients were divided into three groups: group 1 or minority was under 30 years old (7 women), group 2 was 30-40 years, and group 3 or majority was over 40 years old (96 women). 115 patients (78.2%) had normal and 32 patients (21.8%) had abnormal hysteroscopic results. 116 patients (78.8%) had normal and 31 patients (21.2%) had abnormal pathologic results; moreover, cervical canal polyp was the most common lesion hysteroscopically and pathologically in all groups.

Conclusion: Of 147 patients (100%) with AUB and normal TVS, 32 patients (21.8%) were abnormal hysteroscopically. Cervical canal polyps may be missed by transvaginal sonography, but can be diagnosed by hysteroscopy. In patients with AUB and normal TVS, hysteroscopy can be used as the second step.

Keywords: Abnormal Uterine Bleeding, Transvaginal Sonography, Hysteroscopy

Introduction

Abnormal uterine bleeding is one of the most common clinical problems in gynecology (1). Transvaginal sonography and hysteroscopy are among diagnostic methods in women with abnormal uterine bleeding (1,2). One of the advantages of transvaginal sonography is detection of uterine (liomyomata, endometrial ployps, and adenomyosis) and ovarian lesions (ovarian tumors) (1). Data gathered by hysteroscopy is more informative than blind sampling (3-9), which in this regard the diagnosis of endometrial polyps or liomyoma can be mentioned (6, 7, 9, 10). For many patients, diagnostic hysteroscopy can be done outpatiently with minimal discomfort and less expenses than the operation room (11). The aim of this study is to determine the patients suffering from abnormal uterine bleeding with normal transvaginal sonography, need also to have hysteroscopy or content to normal transvaginal sonography.

Materials and Methods

This clinical trial study was carried out in Imam Khomayni Hospital in Ahwas during March 21, 2005 to March 20, 2007. In this period of time, all patients who entered the hospital for abnormal uterine bleeding, after history and clinical examinations, underwent transvaginal sonography. Among them, 147 patients with normal transvaginal sonography (with endometrium less than 5mm thickness in post menopausal group and less than 12mm thickness in childbearing group, with no endometrial lesion) were entered the study and underwent outpatient hysteroscopy. If there was any lesion in endometrial cavity during office hysteroscopy, the patient would be scheduled for operation to extract the lesion by operative hysteroscopy. If there was no endometrial lesion, aspiration biopsy would be carried out outpatiently. The samples from all patients were sent for pathological examinations. In this study the patients
were divided into 3 age groups: group 1: below 30 years old, Group 2: 30-40 and group 3: over 40 years old. Data from patients’ histories, clinical examinations, transvaginal sonographic, and hysteroscopic and pathologic results were gathered and analyzed by SPSS 13 software. For analyzing, statistical description methods such as distribution frequency tables and calculation values for sensitivity, specificity and predictive value were used.

Results

Hysteroscopic results for different age groups are shown in table 1. Table 1 shows that the majority of the patients (96 women) are in group 3 and the minority of patients (7 women) are in group 1. Table 2 shows 115 patients (78.2%) have normal hysteroscopy and 32 patients (21.8%) have abnormal hysteroscopy and the most common lesion is cervical canal polyp. Two cervical canal polyps are shown in figure 1. According to pathologic findings, 116 patients (78.8%) are normal and 31 (21.2%) are abnormal and the most common lesion is cervical canal polyp.

According to table 3, of 115 patients (78.2%) with normal hysteroscopy, one patient (0.7%) is abnormal pathologically (endometrial polyp). Also among 32 patients (21.8%) with abnormal hysteroscopy, 2 patients (1.4%) are normal pathologically (by hysteroscopy, one person is reported to have endometrial atrophy and one person submucosal myoma). Comparison of hysteroscopic and pathologic results show hysteroscopy has 97.8% sensitivity with confidence interval of 95% (84.9-99.7), specificity of 99% with confidence interval of 95% (92-99.5), and 94% positive predictive value and 99% negative predictive value. Negative predictive value of transvaginal sonography is 78.9%. These findings show high conformity between hysteroscopy and pathology.

Discussion

Traditionally, endometrial biopsy (often in operation room) has been done routinely in the management of patients with persistent abnormal uterine bleeding and normal transvaginal sonography to rule out malignancy. This study was shown that these patients could have outpatient hysteroscopy and outpatient endometrial biopsy, and also 21% of lesions which were missed by normal transvaginal sonography alone, were detected by hysteroscopy. Of 147 patients (100%) with normal transvaginal sonography, 32 patients (21.8%) were abnormal and 115 patients (78.2%) were normal hysteroscopically.
copy was more accurate than transvaginal sonography. In another study in Italy, 419 patients with abnormal uterine bleeding were investigated. It again confirms our results (12). In another study carried out in the UK, 400 patients with abnormal uterine bleeding were investigated. Sensitivity and specificity of transvaginal sonography were 56.3% and 100%, respectively. Also, hysteroscopy had 81.3% sensitivity and 100% specificity (15).

**Conclusion**

Overall, it can be stated that from 147 patients (100%) whose transvaginal sonography were normal, 32 patients (21.8%) were reported to have abnormal hysteroscopy. According to our study, it is clear that cervical canal polyps are missed in transvaginal sonography. Therefore, hysteroscopy is one of the best methods to detect polyps for this area. According to high conformity between the hysteroscopy and pathology, diagnostic ability of hysteroscopy was higher than transvaginal sonography. Therefore, it is recommended that patients with abnormal uterine bleeding whose transvaginal sonography is normal, hysteroscopy is considered to be the second step.

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