



Research Article

Four years of experience in our clinic regarding hysteroscopies for abnormal uterine hemorrhages

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Abstract

Introduction. Abnormal uterine hemorrhages (AUH) are the most common symptom for presentation to gynecologist. Any uterine bleeding other than menstrual bleeding, which concerns the duration, frequency, quality or quantity of the bleeding is considered abnormal.

Material and Methods. We realized a retrospective study based on medical records of the patients admitted for abnormal uterine hemorrhage at “Saint John” Emergency Clinical Hospital, “Bucur” Maternity between 2013 and 2016. From the patients with AUH, we focused on those who underwent hysteroscopies.

Results. Our study included 146 patients. The age of patients varied from 22 to 71 years. Abnormal uterine bleeding was most prevalent among women of 40-50 years (20%), and the mean age was 42.65%. 82.88% from our patients had obstetrical history and only 17.12% didn't give birth either as an option, or from primary or secondary infertility. 7.53% of the patients were hypertensive and 5.48% had endocrine pathology. All patients underwent diagnostic hysteroscopy and 4.79% patients therapeutic hysteroscopy. The therapeutic measures that were made are: hysteroscopic resection of the endometrium (47.3%), excision of polyps (36.99%), sinechiolysis (8.22%) and myomectomy (2.71%). The diagnoses were 46.48% endometrial polyp, 13.7% intramural leiomyoma, 13.7% IUD (intrauterine device) and 9.59% intrauterine synechiae, while 15.06% cumulated for uterine septum, endometrial hyperplasia, cervical polyp, foreign intrauterine bodies, secondary infertility, dysfunctional metrorrhagia.

Conclusion. In patients with abnormal uterine hemorrhages, hysteroscopy provides the most accurate diagnosis and can reduce the burden of hysterectomy in many cases.

Keywords : hysteroscopies, abnormal, uterine hemorrhages

Highlights

- ✓ Hysteroscopy offers the advantage of direct visualization of the uterine cavity, providing valuable information about any abnormality that can determine abnormal uterine bleeding
- ✓ Combined with endometrial biopsy, hysteroscopy can establish an accurate diagnosis and a good therapeutic plan.

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Introduction

Abnormal uterine hemorrhages (AUH) are the most common symptom presentation to the gynecologist (1, 2). Any uterine bleeding other than menstrual bleeding, which concerns the duration, frequency, quality or quantity of the bleeding is considered abnormal. Generally, menstruation last 7 days and the maximum amount of blood is does not exceed 80 ml (3). Abnormal uterine bleeding affects 10-30% of women at childbearing age and more than 50% of women at perimenopausal period (4, 5). Studies showed that AUH is the leading cause of gynecologist's presentation to approximately 20% of 20 million women (6).

In the last decade, hysteroscopy become the first golden standard method for the evaluation of the endometrial cavity, including diagnosis and treatment for abnormal uterine hemorrhages. The highest accuracy of hysteroscopy is for endometrial polyp's diagnosis, while for endometrial hyperplasia the results are unsatisfactory. With the increasing incidence of focal lesions in patients with AUH, it was observed that the best method for diagnosing AUH is hysteroscopy in parallel with endometrial biopsy. Hysteroscopy is the only method that allows direct cervical imaging and targeted biopsy. It allows excision of certain lesions such as endometrial polyps and submucosal fibroids, endometrial vascular assessment and submucosal fibrous classification for preoperative evaluation (7).

Materials and methods

We performed a retrospective study based on medical records of the patients admitted for abnormal uterine hemorrhage in Saint John Emergency Clinical Hospital, Bucur Maternity between January 2013-December 2016. The inclusion criteria were patients with AUH that underwent hysteroscopy. The exclusion criteria were patients with AUH that had uterine curettage.

The variables included in the study were represented by: patients age, obstetrical history, type of births- spontaneous/ Cesarean section, associated medical pathologies, associated surgical pathologies, other gynecological disorders, menopause, associated symptoms, endometrial thickness evaluated by transvaginal ultrasound, type of hysteroscopy performed, and postoperative diagnosis.

All patients are given informed consent when admitted in the hospital for anonymous data use for scientific purpose. Data were retrieved from medical records and from images recorded at hysteroscopy and statistical analysis was performed in SPSS.

Results

One hundred and forty-six patients meet the inclusion criteria. In the study, the age of patients varied

from 22 to 71 years. Abnormal uterine bleeding was most prevalent among women of 40-50 years (20%), and the mean age was 42.65%. 82.88% from our patients had obstetrical history and only 17.12% had no pregnancy, or from primary or secondary infertility. 7.53% of the patients were hypertensive and 5.48% had endocrine pathology.

The surgical history is illustrated in Figure 1 where we can identify that the largest proportions are represented by those with no such pathology (38.36%) and 36.99% is by patients with C-section in their medical history.

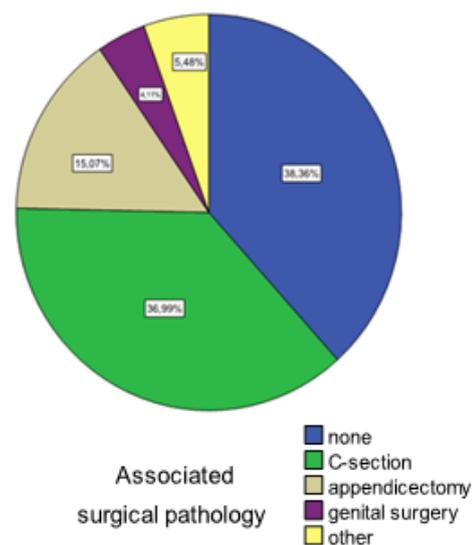


Figure 1. The distribution of the associated surgical pathology

We can observe in Figure 2 that 78.77% cases have no other gynecological disorder associated, and 21.33% cases have multiple gynecological disorders. The most common is uterine myomas in 6.16% cases, followed by infertility in 5.48% cases and ovarian cyst in 3.42%.

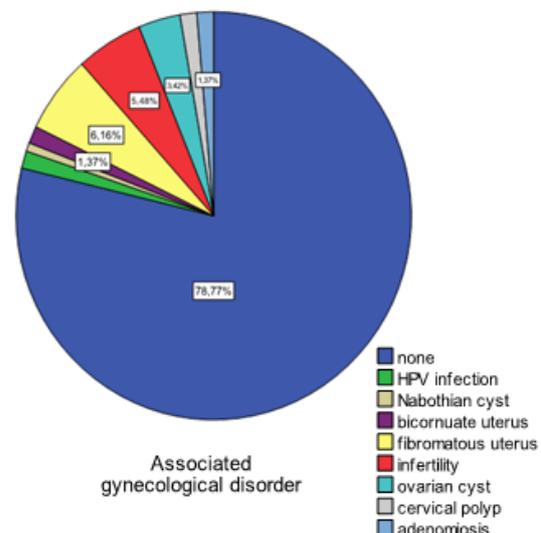


Figure 2. The distribution of the associated gynecological pathology

Considering that over 70% of patients were within the range of 20-40 years, 86.99% of the patients were in the reproductive period life and only 13.01% were in the menopausal period.

Regarding the type of AUH it was identified that 56.85% from the patients presented at the emergency room for metrorrhagia, 28.08% for menometrorrhagia, 4.79% for oligomenorrhea, 3.32% for amenorrhea and 0.65 for polymenorrhea.

Evaluating the persistence of the symptoms we observed that 19.86% patients had abnormal uterine bleeding for more than 3 months, 18.49% patients for 3 months, 44.52% patients for 2 months, 8.22% for 1 month and only 2.24% presented in less than one-week duration of AUH. The most frequent associated complaint was abdominal pain (25.34%).

All patients were evaluated clinic and by transvaginal ultrasound. The mean endometrial thickness was 10.87 mm.

All patients underwent diagnostic hysteroscopy and 4.79% patients therapeutic histeroscopy. The therapeutic measures were: hysteroscopic resection of the endometrium (47.3%), excision of polyps (36.99%), sinechiolysis (8.22%) and myomectomy (2.71%).

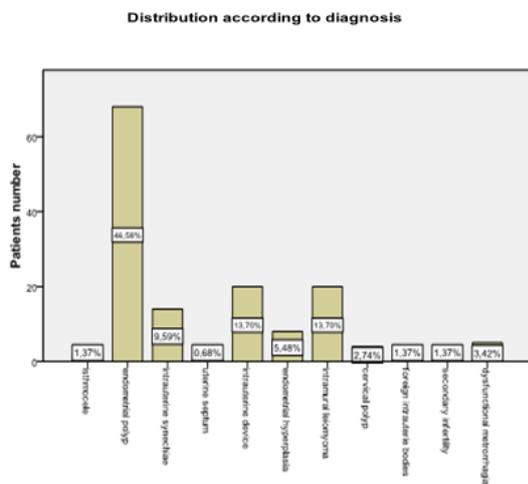
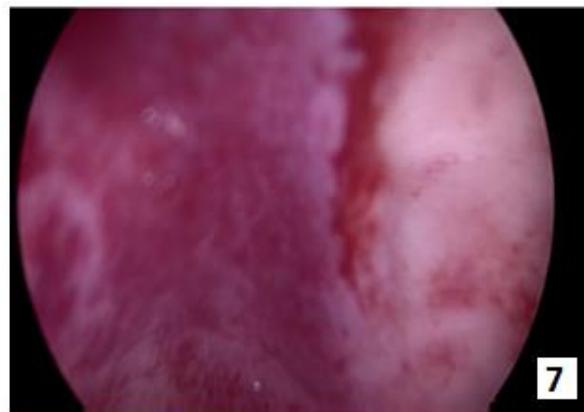
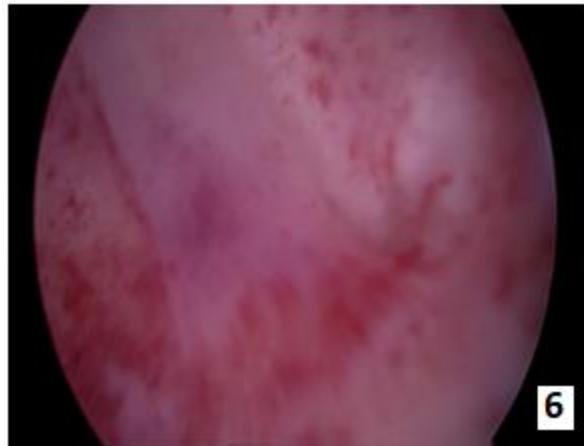


Figure 3. Postoperative diagnosis distribution

According to Figure 3, in our study the diagnoses were represented in 46.48% cases by endometrial polyp (see Figures 4 and 5), 13.7% intramural leiomyoma, 13.7% IUD (intrauterine device) and 9.59% intrauterine synechiae, while 15.06% cumulated for uterine septum, endometrial hyperplasia (Figures 6 and 7), cervical polyp, foreign intrauterine bodies, secondary infertility, dysfunctional metrorrhagia. We identified in 1.37% cases uterine isthmocele following cesarean section.



Figures 4 and 5. Endometrial polyps-hysteroscopic view



Figures 6 and 7. Endometrial hyperemic mucosa, hysteroscopic view

Discussion

The etiology and the intervention plan are essential in the management of abnormal uterine bleeding because a precise diagnosis can lead to surgical or medical treatment directed to the specific pathology and may avoid the necessity for major surgery (8).

Until recently, the main diagnostic and therapeutic method was dilatation and curettage with biopsy, with a sensitivity of less than 50%. It has been demonstrated in a study by Gimpelson RJ et al. demonstrated that the hysteroscopy combined with endometrial biopsy was more accurate than dilatation and curettage with biopsy. Currently, hysteroscopy is considered the gold standard in uterine cavity evaluation (9).

In 1989, Loffer et al. demonstrated that both dilatation and curettage with biopsy and hysteroscopy had a 100% specificity but the hysteroscopic sensitivity was higher (98%) compared to curettage (65%) (10). In contrast, in 1997 Saidi MH et al, showed that transvaginal echography and sonohysterography have higher sensitivity (95% and 90%) than diagnostic hysteroscopy (78%) (11).

In 2008, Stefano Angioni et al found that hysteroscopy has a 100% sensitivity in the diagnosis of endometrial polyps and submucosal leiomyomas, compared to biopsy "blind" curettage, which has a sensitivity of 11% and 13%, respectively (12).

According to a 1995 study by Brill Al, University of Illinois, College of Medicine, Department of Obstetrics and Gynecology, Chicago, 60612-7313, USA, hysteroscopy is the best method of diagnosing and treating abnormal uterine bleeding, long superior to a "blind" biopsy curettage. Hysteroscopic ablation and resection can treat these bleeds by reducing menstrual flow and avoid unnecessary hysterectomy (13).

In 2003, Gianninoto A. et al conducted a study comparing the hysteroscopy and histology results and demonstrated that hysteroscopy can diagnose benign and malignant pathologies, thereby reducing the use of curettage (14). On the same subject, Aisha M Eldaberg et al. demonstrated in 2015 that hysteroscopy allows direct visualization of the uterine cavity, a safe and reliable procedure for evaluating benign endometrial lesions, but to exclude endometrial hyperplasia or neoplasia, it is always advisable to perform diagnostic hysteroscopy combined with biopsy curettage. In benign endometrial lesions, the hysteroscopy sensitivity was 98.9% and the specificity 97.5%, with a diagnosis accuracy of 98.3% (15).

In the study conducted in 2016 by Hariharan Valson et al (16), endometrial polyps represent the most

frequent hysteroscopy diagnosis, 16% or other studies conducted by Raquel et al. 32.5% cases (17) and by Cordeiro et al., 37.6% cases (18). In our study, the most common hysteroscopy diagnosis were endometrial polyps also. An important role also begins with the scar following the caesarean section (isthmocele), which was demonstrated by Van Horenbeeck et al in 2003 (19) and by Amanda M. Tower et al., that it could cause intermenstrual bleeding (20).

In a study conducted in 2012 by Alanis Fuentes and Obregón Zegarra EH, the mean age of patients who presented to a physician with abnormal uterine bleeding was 42.15 years (21), this result corresponding to that in our study, the mean age of the patients was 42.65 years.

In 2006, Chatpavit Getpook et al demonstrated that an endometrium thickness of 8 mm or less cannot be associated with malignant uterine pathologies in the case of abnormal uterine bleeding during the premenopausal period. As a result of the data from our study, the average thickness of the endometrium was 10.87 mm, which in the case of a menopausal woman can direct the diagnosis to a malignant one, or it may be normal for a woman during ovulation.

According to a study conducted in 2000 by Frank Willem Jansen et al the hysteroscopic procedures had a very low complication rate (0.13%) (22).

Our study indicates a good correlation between ultrasound scan and hysteroscopy concerning endometrial pathology. By performing direct biopsy, endometrial polyp removal or simple cavity inspection hysteroscopy was better for diagnosis but further direction of study will be to compare the accuracy of hysteroscopic diagnosis with D&C performance.

Another advantage of hysteroscopy is the relative low risk of complication, in our study it was only one uterine perforation solved with conservatory management. On the other hand, a considerable disadvantage is represented by the elevated cost comparative to D&C and the need for proper equipment and trained specialists.

Conclusions

Hysteroscopy offers the advantage of direct visualization of the uterine cavity, providing valuable information about any abnormality that can determine abnormal uterine bleeding, and combined with endometrial biopsy it can establish an accurate diagnosis and a good therapeutic plan.

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