Original Article

Outpatient Diagnostic Hysteroscopy in Premenopausal Women With Abnormal Uterine Bleeding Below 35 years of Age

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Abstract

Objective: To determine the hysteroscopy findings (by outpatient diagnostic hysteroscopy) in Premenopausal Women with Abnormal Uterine Bleeding below 35yrs of Age.

Study Design: Descriptive study.

Settings: It was one year study conducted at Pakistan Institute of Medical Sciences (PIMS), Islamabad from 27th Feb 2010 to 28th Feb 2011.

Methodology: Total 51 married women were included in our study between 19 to <35yrs of age. All women with irregular pervaginal bleeding, failed medical treatment or pathology detected on ultrasound pelvis were included. Women with Pregnancy, lower genital tract infection and those with incomplete follow-up were excluded. Diagnostic hysteroscopy and curettage was done under paracervical block in the outpatient department. Endometrial curretings were sent for histopathology and data was recorded on predesigned proformas.

Results: On hysteroscopy the findings were, endometrial hyperplasia in 12 cases (23.5%), submucous fibroids in 03 (5.9%), intrauterine adhesions in 02 (3.9%) and retained products of conception (RPOC) in 02 (3.9%) cases, respectively. Total 22 (43.1 %) patients had a pathology detected on histopathology; hormonal imbalance in 11(21.5%), endometrial hyperplasia in 4(7.8%), disordered proliferative endometrium in 3 (5.8%), Asherman`s and RPOCs in 2 cases each(3.9%), as already stated.

Conclusion: Diagnostic hysteroscopy remains a gold standard in patients with failed medical treatment. Premenopausal women with irregular cycles or failed medical treatment should have an endometrial biopsy regardless of the age because they are at increased risk of having an endometrial pathology.

Key Words: Hysteroscopy, premenopausal bleeding, histopathology.

Introduction

The term premenopause is recommended to be used for whole of the reproductive period from menarche to the final menstrual period.[1]

Abnormal uterine bleeding is one of the most common gynaecological problems that a health care provider sees. It accounts for approximately 15% of office visits and 25% of gynecological surgeries.[2] Causes of abnormal uterine bleeding in premenopausal women include pregnancy related complications, hormonal contraceptive methods, uterine fibroids or polyps, hormonal imbalance, cancer or precancer of the cervix or the endometrium, medical illnesses such as hypothyroidism, liver disease, or chronic renal disease, clotting disorders such as von Willebrand disease, platelet abnormalities, or problems with clotting factors and iatrogenic factors. [3, 4]

Endometrial curettage first described in 1843, was the most common operation performed worldwide and was the gold standard initially. In 1970s, vacuum suction curettage devices were introduced which allowed sampling in an office setting without anaesthesia. The most popular among these was Vabra aspirator. Subsequently smaller, cheaper and less painful catheters became popular. Pipelle device was one of these with better patient acceptance but similar efficacy to Vabra.[5]

Pelvic ultrasound, hysteroscopy and endometrial biopsy are used very commonly in our gynaecological practice for the assessment of abnormal uterine bleeding. Diagnostic hysteroscopy combined with histological examination of an endometrial aspiration or biopsy is considered the current gold standard for the diagnosis of intrauterine pathology.

After the adolescent period, endometrial cancer should be considered in the differential diagnosis of abnormal uterine bleeding because up to 10% of women with endometrial cancer are diagnosed before the age of 45.[6] Less than 1% endometrial carcinoma occur under 35 years of age and 6% in those 45 or less.[7] In New Zealand in 1993, 1.4% of cases occurred in women <40 years.

Hysteroscopy and biopsy are indicated for women with erratic menstrual bleeding, failed medical therapy, or transvaginal ultrasound suggestive of intrauterine pathology such as polyps or submucous fibroids (Grade B Recommendation). Treatment failure or ineffective treatment is an indication for a biopsy.[8] Recent technological improvements in instrumentation and development of safe media for uterine distension has increased the applicability, simplicity, safety and effectiveness of hysteroscopy for the visual exploration of uterine cavity, hence importance of hysteroscopy in evaluating patients with abnormal uterine bleeding is immense.[9-12]

The rationale of this study was to know the frequency of different endometrial pathologies in women with abnormal uterine bleeding below 35yrs of age and to suggest that the diagnostic hysteroscopy should be done even below 35yrs of age.

Methodology

Total 300 women were assessed by detailed history, clinical examination, baseline investigations (complete blood picture, random blood sugar, urine analysis and hepatitis B and C screening), pap smear and pelvic ultrasound. Coagulation studies were done in those patients who gave the history of heavy menstrual bleeding since menarche. Out of these further 18 women (5.4%) were excluded due to pregnancy, 57 women (17%) due to infection, 106 (57%) were lost to follow up and 68 (35%) responded to medical treatment. Patients were selected by consecutive sampling.

Inclusion criteria: All women with irregular vaginal bleeding, failed medical treatment or positive finding on USG pelvis were included amounting to 51 women.

Exclusion criteria: On the basis of assessment as mentioned above, women with pregnancy, lower genital tract infection and patients with incomplete follow-up were excluded.

Procedure: All women fulfilling the inclusion criteria were registered. Informed written consent was obtained. Hysteroscopy was performed in outpatient department by using rigid hysteroscope, Karl storz with 30 degree tilt and 5mm diagnostic sheath (Olympus office system). Normal saline was used as distension medium. After performing pelvic examination paracervical block with 1% lignocaine was given at 4 and 8 o'clock position and hysteroscope was introduced into the uterine cavity through cervical os. Diagnostic hysteroscopy and curettage was done and endometrial curettings were sent for histopathology. Data was recorded on predesigned proformas and analyzed on Microsoft excel.

Results

Total 51 women were studied. Their median age was 28years (range 19 – 34yrs) and mean age of menarche was 12yrs (range 11- 13yrs). The most common indication for hysteroscopy was metrorrhagia (58.8%) while least common was secondary amenorrhoea. Others were menorrhagia (25.5%) and polymenorrhagia (11.7%) (Figure 1). On pelvic ultrasound the most common pathology diagnosed was Endometrial hyperplasia in ten patients(19.6%) followed by fibroids of the uterus in 6(11.8%) (Table I). On hysteroscopy findings were Endometrial Hyperplasia in 12 cases (23.5%), submucous fibroids in 03 (5.9%), intrauterine adhesions in 02 (3.9%) and RPOC in 02 (3.9%) cases respectively (Figure 2). Total of 22 (43.1 %) patients had pathology detected on histopathology i.e. hormonal imbalance (21.5%), Endometrial Hyperplasia (7.8%), disordered proliferative endometrium (5.8%), fibrosis suggestive of Asherman's (3.9%) and RPOC (3.9%), as shown in Table II.

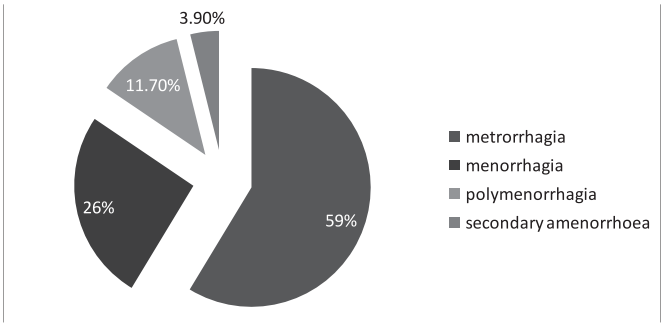

Figure 1. Pattern of viginal bleeding (n=51)

Table I. Ultrasonographic Findings (n=51)

Findings	No of Patients	Percentage
Endometrial hyperplasia	10	19.6%
Fibroid	06	11.8%
Normal findings	35	69.0%

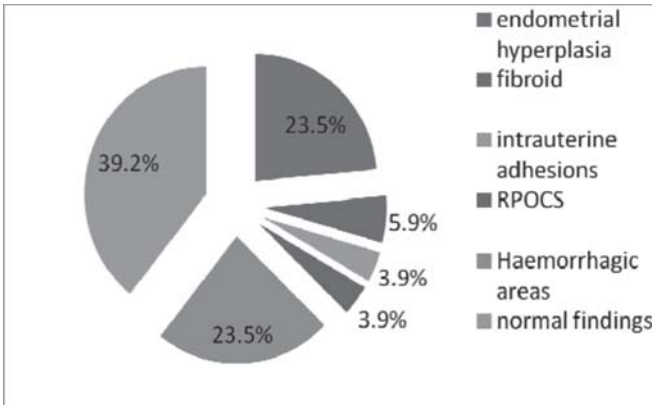

Figure 2. Hysteroscopy findings

Table II. Histopathology Findings (n=51)

Findings	No of Patients	Percentage
Hormonal Imbalance	11	21.5%
*Pill effect endometrium	07	13.7 %
Endometrial hyperplasia	04	7.8 %
Disordered proliferative endometrium	03	5.8 %
Suggestive of Adhesions	02	3.9 %
Retained Products of Conception	02	3.9 %
*Proliferative endometrium	15	29.4 %
*Secretory endometrium	07	13.7%

*Non Pathological

Two cases as fulfilled the inclusion criteria underwent hysteroscopy & curettage and were later diagnosed to have RPOC. Total 7(13.7 %) of the patients with pill effect endometrium on histopathology showed haemorrhagic areas on hysteroscopy. In our study frequency of endometrial hyperplasia were 4 cases (7.8%) on histopatholgy, however hysteroscopy picked up only 3 cases(5.8%) & ultrasound 2 cases(3.9%) respectively.

Discussion

Frequency of simple endometrial hyperplasia in premenopausal women is 3.10/100,000 in 18–29yrs and 11.04/100,000 in 30–34yrs of age.[13] Frequency of endometrial cancer in premenopausal women is 2.3/100,000 in 30-34 yrs of age. (ACOG Practice Bulletin #14, 2000).The risk of progression of simple hyperplasia without atypia and with atypia to cancer is 1 % and 8 % respectively while that of complex hyperplasia without and with atypia is 3 and 29 % respectively.[14]

The most important risk factor in premenopausal women is irregular menstrual cycles, which is associated with a 14% risk of an abnormal endometrial biopsy, including benign and malignant lesions. The risk factors for endometrial cancer need to be considered while determining if an endometrial biopsy is needed in a premenopausal woman.[15]

Largest study in literature of 10yrs duration concluded that irregular menstrual bleeding justifies investigating women regardless of their age.[16] The RCOG has recommended since 1994 that women aged 40 yrs or less, with heavy menstrual bleeding and regular cycles, need not have endometrial samples taken. However some authors suggest that woman with irregular bleeding or other risk factors for hyperplasia should have an endometrial sampling regardless of age (Gallup and Stock1984, Ash 1996).[17]

Women under 40 years of age have very low risk of developing endometrial carcinoma[4] and therefore its exclusion is not necessary in these patients. However, assessing the endometrium is important in those who do not respond to medical therapy as they might have polyps and therefore thorough investigation is needed. [18, 19]

In our study common bleeding patterns were metrorrhagia 58.8% and menorrhagia 25.5% that are comparable to 51.9% and 35.4% respectively in a study conducted by Muzaffar M and colleagues.[20]As the final diagnosis was based on histopathology, therefore on that basis our study showed a prevalence of endometrial hyperplasia of 7.8%. Almost similar results of 2-7% were reported in some observational studies (McKenzie & Bibby 1978, Koss 1984, Ash 1996, Farquhar 1998). On hysteroscopy endometrial hyperplasia was diagnosed in 12 cases (23.5%) that is lower than 20% in a study conducted by Anastasiadis PG and colleagues as they have also included women above 35yrs of age in their study.[21] In our study submucous fibroid was diagnosed in 7.8% on hysteroscopy and histopathology was unable to identify any fibroid.

Conclusion

Diagnostic hysteroscopy remains the gold standard in patients with failed medical treatment. Premenopausal women with irregular cycles or failed medical treatment should have an endometrial biopsy regardless of the age because they are at increased risk of having an endometrial pathology.

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