Evaluation and Histopathological Correlation of Abnormal Uterine Bleeding in Perimenopausal Women

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Abstract

Objectives: 1) To evaluate clinically the gynaecological causes of abnormal uterine bleeding in perimenopausal women. 2) To correlate clinical evaluation with ultrasonographic and histopathological examination.

Study Method: Retrospective study of 112 perimenopausal women with abnormal uterine bleeding for a period of 6 months.

These women were evaluated and clinical, ultrasonographic and histopathological findings were correlated.

Results: The major symptom with which the women presented was menorrhagia in 53.3%. All these women underwent D and C followed by medical management or hysterectomy depending upon the diagnosis. The HPE of endometrium was analysed. The HPE of uterus confirmed fibroid uterus and DUB correlated well with ultrasonographic and histopathological examination. Clinical as well as USG proved less useful for diagnosing adenomyosis.

Introduction

Perimenopause is the period 2-8 years preceding menopause and 1 year after the final menses (WHO). However a better practical definition is the phase preceding the onset of menopause, generally occurring around 40-50 years of age (beginning at age 47.5, lasting for 4 years) during which the regular cycle of a woman transitions to a pattern of irregular cycles. Menorrhagia is cyclical bleeding at regular interval which is excessive in amount (> 80 ml) or duration. Menorrhagia is thought to be associated with uterine fibroid, DUB, adenomyosis, pelvic infections, endometrial polyp, clotting defects. Polymenorrhagia, intermenstrual bleeding and metrorrhagia are other common disorders at perimenopause. DUB, fibroid uterus and adenomyosis are the common hyperoestrogenic conditions where endometrium is in the proliferative phase and if untreated may lead to endometrial carcinoma.

Study Method

This is a retrospective study of 112 perimenopausal women with abnormal uterine bleeding in the age group of 40-52 years for a period of 6 months. We analyzed these women by recording age, parity, menstrual symptoms and associated symptoms for clinical evaluation. Women with associated medical disorders were not included in this study. Ultrasonographic evaluation of all the women was done. Clinical impression and USG reports were correlated. These women underwent D and C for endometrial sampling and specimen sent for histopathological exam (HPE). The HPE reports were analyzed. These women were further managed either conservatively.
or surgically depending upon the response. Histopathological reports of endometrial pattern as well as that of the hysterectomy specimens were correlated with clinical diagnosis and ultrasonographic findings.

**Results**

A correlation between age, parity and incidence of abnormal uterine bleeding is depicted in Table 1. Out of 112 women 85 (76.1%) women were in the age group of 40-45 years. Whereas the incidence was high in parity 3 (28%) and grandmultipara (32%). This shows incidence of abnormal uterine bleeding increases as the parity increases. The different symptoms with which they presented. The majority of the women 53.3% presented with menorrhagia, 28.2% with polymenorrhagia, 12.2% had intermenstrual bleeding and 6.5% had metrorrhagia. The most common associated symptom was dysmenorrhoea found in 70% of women in 40 - 45 yrs of age and 25% in 46 - 50 yrs of age. Clinically 55 (49.1%) were fibroid uterus, 49 women (43.85%) were diagnosed as DUB and 8 (7.14%) were adenomyosis. USG diagnosed 53 (47.3%) fibroid uterus, 40 (35.7%) women had ET > 8 mm strong suspicious of DUB and 19 (16.9%) were adenomyosis (Table 2). These women were managed by surgical approaches – D and C alone or D and C followed by hysterectomy. Histopathological report revealed that endometrium was proliferative in 74 cases (66.1%), simple hyperplasia 20 (17.8%) and seretory endometrium in 18 cases (16.1%).

Women who underwent hysterectomy were 85 (75.8%) and 27 (24.2%) women were managed conservatively, 45 (52.9%) women underwent hysterectomy for fibroid uterus (8 women with small fibroids received medical management and were asymptomatic at the end of 3 months). 21 (24.7%) women underwent hysterectomy for DUB and 19 women treated by medical or hormonal therapy.19 (22.3%) hysterectomies were done for adenomyosis. Histopathological reports of hysterectomy specimen were as follows. Fibroids uterus 46 (54%), Adenomyosis 25(29.4%) and DUB 14 (16.4%). Thus out of 45 suspected fibroid uterus all were confirmed by HPE. There were 26 fundal fibroids, 6 ant. wall, 5 post.wall, 6 submucous fibroid and 2 cervical fibroids.

Out of 21 suspected DUB, 14 were DUB and 6 turned out adenomyosis by HPE. Hysterectomies done for adenomyosis were 19 and confirmed by HPE as well. The clinical, USG and histopathological correlation is depicted in Table 2.

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**Table 1 : Distribution of age and parity**

<table>
<thead>
<tr>
<th>Parity</th>
<th>40-45 yrs</th>
<th>45-50 yrs</th>
<th>&gt;50 yrs</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>0</td>
<td>3 (2.6%)</td>
<td>1 (0.9%)</td>
<td>0</td>
<td>4 (3.5%)</td>
</tr>
<tr>
<td>I</td>
<td>5 (4.4%)</td>
<td>0</td>
<td>0</td>
<td>5 (4.4%)</td>
</tr>
<tr>
<td>II</td>
<td>30 (26.78%)</td>
<td>6 (5.4%)</td>
<td>0</td>
<td>36 (32.18%)</td>
</tr>
<tr>
<td>III</td>
<td>21 (18.8%)</td>
<td>10 (9%)</td>
<td>0</td>
<td>31 (27.8%)</td>
</tr>
<tr>
<td>Grand Multipara</td>
<td>26 (23.21%)</td>
<td>7 (6.2%)</td>
<td>3 (2.6%)</td>
<td>36 (32.18%)</td>
</tr>
<tr>
<td>Total</td>
<td>85 (76%)</td>
<td>3 (2.6%)</td>
<td>3 (2.6%)</td>
<td>112</td>
</tr>
</tbody>
</table>

**Table 2**

<table>
<thead>
<tr>
<th>Disease</th>
<th>Clinical</th>
<th>USG</th>
<th>HPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fibroid</td>
<td>55 (49.1%)</td>
<td>53 (47.3%)</td>
<td>46 (55%)</td>
</tr>
<tr>
<td>DUB</td>
<td>49 (43.8%)</td>
<td>40 (35.7%)</td>
<td>14 (16.47%)</td>
</tr>
<tr>
<td>Adenomyosis</td>
<td>8 (7.6%)</td>
<td>19 (16.8%)</td>
<td>25 (29.4%)</td>
</tr>
<tr>
<td>Total</td>
<td>112</td>
<td>112</td>
<td>85</td>
</tr>
</tbody>
</table>
Discussion

Evaluation of patients with abnormal uterine bleeding and identifying those with dysfunctional uterine bleeding is achieved with a combination of the following: history; physical examination; laboratory evaluation; USG and endometrial sampling. Abnormal perimenopausal bleeding is associated with endometrial carcinoma in approximately 10% of cases, so evaluation of women's risk factors for endometrial hyperplasia or carcinoma is recommended. Though endometrial sampling can be done by D and C, endometrial aspiration and hysteroscopy directed histry is considered Gold standard. Though hystero-scopes are not available, D and C is also an effective way to control uterine bleeding in absence of uterine pathology and systemic cause. We compared our study of endometrial patterns with Jordon university study and G.Michail et al. In these studies no of cases studied were 116 and 84 respectively, where proliferative endometrium was found in 53% and 66.1% and 15% atypia. In our study we had 66.1% proliferative endometrium and 17.8% simple hyperplasia with no atypia. Fibroids are common finding in women with menorrhagia. Furthermore, the incidence of fibroids has been shown to be greater in black women. Menorrhagia in fibroids is due to increased size of the uterine cavity thereby increasing the surface area of the endometrium, hyperoestrogenaemia causing endometrial hyperplasia, vascular alteration of the endometrium and obstructive effect of fibroid on uterine vasculature leading to endometrial venule ectasia which causes proximal congestion in the myometrium and the endometrium.

Majority of women with uterine fibroid associated with menorrhagia are treated by hysterectomy. In our study, fibroid uterus was responsible for abnormal uterine bleeding (AUB) in 54% of women comparable with a study of DHQ hospital and Nishtar hospital Multan in which AUB evaluation revealed 54.8% fibroid uterus.

Diagnosis of adenomyosis on clinical findings is usually different. Transabdominal sonography (TAS) doesn't allow reliable diagnosis of adenomyosis or consistent differentiation from leiomyomas, even transvaginal sonography (TVS) has limitation in tissue characterization. MRI is more helpful to diagnose adenomyosis but expensive. In our study clinically only 7.6% were diagnosed as adenomyosis, USG diagnosed 16% and HPE diagnosed 29.4%. The reported prevalence of adenomyosis in hysterectomy specimens varies from 5% to 70%. Menorrhagia associated with ovulatory cycles can be treated with or without hormones. The anti-inflammatory medication mfenamic acid can reduce bleeding by 225 to 46%. We used it for menorrhagia associated with small fibroids as well in some cases of DUB in this study successfully. The LNG-IUS is a relatively new treatment that remains effective for 5 years. It has been...
found to reduce menstrual blood loss by 74%-97%. A number of minimally invasive surgical options for hysterectomy now exist and are promising like endometrial ablation, thermal balloon therapy and uterine artery embolization but restricted availability and cost factor limit their use.

Conclusion

In our study fibroids of uterus were the most common cause of abnormal uterine bleeding. Second common cause was DUB. Histopathology revealed majority of endometrium in proliferative phase. Clinical, radiological and pathological evaluation correlated very well to diagnose fibroids. However clinically as well USG proved of little help to diagnose adenomyosis. Maximum hysterectomies were done for fibroid uterus. Thus hysterectomy remained the commonest method of intervention. However it is the responsibility of healthcare professionals to encourage teaching and implementation of alternative procedures to ensure that women receive the maximum benefits with least morbidity.

Summary

Abnormal uterine bleeding occurring as heavy cyclical or acyclical flow at perimenopausal age is alarming and needs thorough evaluation, as it could be the only clinical manifestation of endometrial cancer. The present study was done to evaluate the gynaecological causes of abnormal uterine bleeding in perimenopausal women. It is a retrospective study of 112 perimenopausal women with abnormal uterine bleeding for a period of 6 months. These women were evaluated and clinical ultrasonographic and histopathological findings were correlated. Fibroid uterus, DUB, and adenomyosis were the principal causes of abnormal uterine bleeding in this study. All these women underwent D and C followed by medical management or hysterectomy depending upon the diagnosis. The HPE of endometrial and hysterectomy specimens were analyzed and correlated with clinical and ultrasonographic diagnosis.

References

4. Ken Tamai, Kaori Togashi. Department of Radiology, National Hospital Organization Kyoto Medical Center, Kyoto, Japan (K.Tamai, T.I)
6. Hampton NRE, Rees MCP, Lowe DG, Rauramo I, Barlow D, Guillebaud J. LNG-IUS with conjugated oral equine estrogen; a successful regimen for HRT in perimenopausal women Research Unit, Margaret Pyke Centre,73 Charlotte Street, London W1T4PL, Women’s Centre, John Radcliffe Hospital, Oxford OX3 9DU, Department of Histopathology, St Bartholomew’s Hospital, West Smithfield London.