Management of Uterine Leiomyoma

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Abstract

Background: To determine the prevalence of clinically significant myomas and review various treatment options of uterine leiomyomas.

Methods: In this cross-sectional study patients admitted for abnormal uterine bleeding, due to fibroids, were included in the study. It included 54 premenopausal women, 30–50 years old, who had an intact uterus and were neither pregnant nor lactating, or using oral contraception or intra-uterine devices.

Results: Uterine leiomyomata were detected in 54 women (22.4%) out of 240 patients admitted in the ward with abnormal uterine bleeding. Mean age for the women having leiomyoma was 39.3 years. Most women (18.4%) were multigravida. Surgical treatment was common treatment modality (70.3%) as compared to medical treatment (29.7%).

Conclusion: Surgery continues to remain an important alternative when medical treatment fails to relieve symptoms of leiomyoma.

Key Words: Leiomyoma; Menorrhagia.

Introduction

Fibroids are the commonest tumour occurring in 20% of all women of reproductive age. They are composed of smooth muscle with variable amount of connective tissue. Uterine fibroids which eventually develop in more than 50% of women, are asymptomatic but they can cause a range of symptoms and complications that challenge clinicians. They can complicate the pregnancy, mask the diagnosis of ovarian tumours and confuse the management of menopause by causing abnormal uterine bleeding. The prevalence of clinically significant myomas is at its peak in the perimenopausal years and declines after the menopause. It is not known why some fibroids are symptomatic while others are quiescent. The size, number and location of fibroids undoubtedly determine their clinical behaviour.1,2

Recent developments in fibroids, including measurement of tissue receptor for steroids and growth factors, non-invasive methods of monitoring fibroid growth and the use of LHRH agonists have enabled study of the nature and response to therapy although much work remains to be done. Symptomatic fibroids require treatment. Effective surgical options available are hysterectomy and myomectomy, and as yet there are no proven effective long-term medical therapies. Hysterectomy is the second most frequent major surgical procedure performed in women in the United States, second only to cesarean delivery. Twenty percent of women will have had a hysterectomy by the age of 40 and one third by age 65. Hysterectomy for fibroids is performed in 33.5%. Hysterectomy is also the procedure of choice whenever there is a likelihood of malignancy within a myoma.3

Fortunately, the past decade has witnessed the emergence of highly sophisticated diagnostic and therapeutic technologies for fibroids. Magnetic resonance imaging and high-resolution ultrasound are non-invasive, high-quality diagnostic procedures. The new treatment modalities include: laparoscopic and vaginal myomectomy; uterine artery embolization (UAE); magnetic-resonance-guided focused ultrasound surgery (MRgFUS); hysteroscopic resection where the fibroids are submucous; myolysis by heat, cold coagulation and laser; laparoscopic uterine artery occlusion; and temporary transvaginal uterine artery occlusion. Laparoscopic surgery requires skills that are not common place, and there are limitations on the size and number of fibroids that can be treated by this modality. Much the same applies to vaginal myomectomy. UAE has a range of complications including premature ovarian failure, chronic vaginal discharge and pelvic sepsis, and may have limited efficacy when the fibroids are large. MRgFUS was approved by the US Food and Drug Administration in 2004, while NICE recommended that the procedure should be used in an audit and research setting.3,4

Patients and Methods

This cross-sectional study, performed from Nov 2009 to Oct 2011, in the Department of Obs & Gynaeology DHQ Teaching hospital, Rawalpindi, included premenopausal women, 30–50 years old, having
fibroid with an intact uterus and who were neither pregnant nor lactating, or using oral contraception or intra-uterine devices. Various treatments of leiomyoma were examined and analysed. Based on the ultrasound examination size, tissue location, axial position and treatment received (medical and/or surgical) was recorded.

Results
Out of 54 cases of fibroid uterus, 6 patients (37.50%) were treated with progesterone tablets in the form of primolut-N. Five patients (31.2%) were given antifibrinolytic agents, danazole was prescribed only in 18.75% (Table 1). Mirena was given to only 2 patients (12.50%). Out of 16 (29.63%) patients, 7 (53.85%) noticed significant reduction in blood loss and they were willing to continue the same treatment. Medical treatment failed to reduce the menstrual blood loss in 7 patients (43.75%) and these patients were then treated surgically (Table 2). Out of 45 patients, treated surgically, 41 (91.1%) had undergone hysterectomy due to severity of symptoms and they had completed their family. Myomectomy was done in 4 (8.8%) patients (Table 3). Out of 34 patients in which hysterectomy was done, bilateral salpingo-oophorectomy (BSO) was performed in 8 (23.53%) patients. In 7 (20.58%) patients unilateral salpingo-oophorectomy (USO) was done and in 19 (55.89%) of patients only total abdominal hysterectomy (TAH) was performed (Table 4).

Table 1: Medical treatment (n=16)

<table>
<thead>
<tr>
<th>Medicines given</th>
<th>No (%)</th>
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<tbody>
<tr>
<td>Progesterone</td>
<td>6 (37.50%)</td>
</tr>
<tr>
<td>Antifibrinolytics &amp; NSAI</td>
<td>5 (31.20%)</td>
</tr>
<tr>
<td>Danazole</td>
<td>3 (18.75%)</td>
</tr>
<tr>
<td>Mirena*</td>
<td>2 (12.50%)</td>
</tr>
</tbody>
</table>

* Mirena is an intrauterine progesterone releasing intrauterine system

Table 2: Response of medical treatment (n=16)

<table>
<thead>
<tr>
<th></th>
<th>No (%)</th>
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</thead>
<tbody>
<tr>
<td>Medical treatment continued</td>
<td>9 (56.25)</td>
</tr>
<tr>
<td>Failure of medical treatment</td>
<td>7 (43.75%)</td>
</tr>
</tbody>
</table>

Table 3: Surgical treatment
n=4 + 41 (Patients with failed medical treatment)=45

<table>
<thead>
<tr>
<th>Type of surgery</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Myomectomy</td>
<td>04 (8.8)</td>
</tr>
<tr>
<td>Hysterectomy</td>
<td>41 (81.1)</td>
</tr>
</tbody>
</table>

Discussion
Hysterectomy is the second most frequent major surgical procedure performed in women in the United States, second only to caesarean delivery. Twenty percent of women will have had a hysterectomy by the age of 40, and one third by age 65. Indications for hysterectomy include uterine myomas (33.5%), endometriosis (18.2%), uterine prolapse (16.2%), and cancer (11.2%). Removal of the uterus has been the usual procedure of choice whenever surgery is indicated for uterine myomas and when childbearing considerations have been fulfilled. Specific exceptions include a solitary subserous or pedunculated myoma and a submucous myoma readily accessible for hysteroscopic removal.

Common procedures such as hysterectomy and myomectomy, including choice among types of myomectomy, still cannot be meaningfully compared. Studies comparing uterine artery embolization (UAE) with other procedures reported procedure time and length of stay favoring UAE, but inconsistency of the direction of effect for complications and absence of key information on longer-term outcomes suggest that the evidence is inadequate to comment on the relative risks and benefits of UAE versus hysterectomy or myomectomy.

In present study, success rate of progestogens in treating the menorrhagia was 42.86%, similar to a study done in Multan. There was significant reduction in menstrual blood in one patient, who was prescribed Danazol in our study, showing Danazole was effective in reducing blood loss in menorrhagic patients with fibroid. In a placebo-controlled study administering 2.5 mg gestrinone (which is synthetic derivative of 19-nortestosterone) weekly for 12 weeks to 19 women with objectively diagnosed menorrhagia with fibroid, a marked reduction in menstrual blood loss was seen in 5 women, and 10 became amenorrhoieic. Three (42.8%) patients out of five patients noticed significant improvement in menorrhagia with tranexamic acid in present study. No patient was prescribed GnRH analogue because almost all patients were poor and they could not afford such treatment.
In present study, surgical treatment was given to 38 patients as first option and in 7 patients after failed medical management. Out of 45 patients who underwent surgical treatment for fibroid associated menorrhagia, abdominal hysterectomy was done in 41 patients. Hysterectomy rate in present study was 91.1%. No vaginal hysterectomy was done. In another study, total hysterectomy rate was 69.4%, out of which abdominal hysterectomy was done in 66% of patients and in 3.4% of patients vaginal hysterectomy was done because uterine size was less than 12 weeks.7

Medical treatment of fibroids with GnRH analogues has been introduced since a long time, it does give a short term relief but regrowth occurs after cessation of treatment. Medical treatment does have some place in the management of perimenopausal women with myomas who want to avoid surgery in the hope that their disease will regress spontaneously with menopause. GnRH analogues are also in use as preoperative medication before myomectomy or hysterectomy to reduce operative morbidity. But non-availability of analogues and their substantial cost has limited their use in Pakistan. Interventional radiologists should be aware of the clinical indications and potential risks for individual patients. Improvement of the procedure should include development of specific angiographic devices, use of an adapted embolic particle and training of interventional radiologists.8

Conclusions

1. Fibroid is one of the important cause of menorrhagia in young patients with low parity but nullipara and multipara are not spared.

2. Myomectomy is being performed increasingly for the treatment of fibroids in the patients who have not completed their families.

3. Hysterectomy is definitive treatment of fibroid and is an effective treatment for fibroid associated menorrhagia.

4. With advancement in field of diagnosis and management there is a lot of room for improvement

References


