Hysteroscopic Myomectomy; Experience at King Hussein Medical Center

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ABSTRACT

Objective: To study the efficacy and safety of hysteroscopic myomectomy in a group of patients referred to our center.

Methods: Eighty three patients underwent hysteroscopic myomectomy at King Hussein Medical Center between March 2009 and August 2013 and followed up for 2 years. Those women had been referred to King Hussein Medical center with various symptoms attributable to uterine fibroids. All patients were between 30 and 52 years. All patients had trans-abdominal (TA) and trans-vaginal (TV) ultrasound scans. Diagnosis was confirmed at hysteroscopy.

Results: Forty five patients presented with heavy menstrual bleeding as the only symptom. Sixteen patients had heavy and irregular uterine bleeding. Ten patients had dysmenorrhoea. Twelve patients had normal periods but diagnosed coincidentaly to have uterine fibroids either as part of infertility investigation or during routine check up.

Among those patients, 73.4% (61 patients) had type 0 submucous fibroids, 12% (10 patients) had type one and 14.4% (12 patients) had type 2 fibroid.
At two years follow up, 43 patients (95.5%) who presented with heavy menstrual bleeding were satisfied with their periods and requested no further intervention. Of those who presented with heavy and irregular uterine bleeding, 10 patients (62.5%) were cured and the remaining 6 patients opted for either endometrial ablation or hysterectomy. Only 2 patients with dysmenorrhoea (20%), were satisfied with the hysteroscopic myomectomy. The remaining 80% requested hysterectomy for their symptoms. Among the asymptomatic group, 10 patients were lost for follow up and the remaining 2 patients (16.6%) were content and asymptomatic.
The overall complication rate was 6% (5 patients); one patient had fluid overload, 2 patients had bleeding and two patients had cervical laceration.

Conclusion: Hysteroscopic surgery is an effective and safe procedure in management of abnormal uterine bleeding. It is considered good alternative for hysterectomy in terms of shorter surgical time , stay in the hospital and significantly lesser economic impact on the health system. It also meet the needs of the patients in terms of safety, outcomes and satisfaction.

Key words: Efficacy, Fibroid, Hysteroscopic , Myomectomy, Submucous.

JRMS Aug 2017; 24(2): 18-21 / DOI: 10.12816/0039637

Introduction

Uterine fibroids (myomas or leiyomymas) are benign, monoclonal tumours of the smooth muscle cells found in the human uterus. [1,2] Uterine fibroids are the most common benign tumours in women, diagnosed in 20-40% of women in their reproductive years and the leading indication for hysterectomies in the USA. [3,4] The majority of women with uterine fibroids are asymptomatic, consequently get less clinical attention and fibroid tumours

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Manuscript Received April 6 2017, Accepted Aug 3 2017.

often remain undiagnosed. [5,6] Symptomatic women typically complain about abnormal uterine bleeding, specifically in terms of heavy and prolonged bleeding. [7]
Sonohysterography and office hysteroscopy can provide accurate diagnosis.

Classification systems have been developed to help predict the difficulty of resection. The classification developed by Wamsteker *et al*.[8] and adopted by the European Society for Gynaecological Endoscopy (ESGE), which considers only the degree of myometrial penetration of the submucous fibroid, is currently worldwide used.

According to this classification, a fibroid G0 is completely within the uterine cavity and appears only jointed to the cavity wall by a thin pedicle; a fibroid G1 has its larger part (50%) in the uterine cavity; and a fibroid G2 has its larger part (50%) in the myometrium. [8,9]

Patient selection and proper surgical technique are essential to achieve good results and reduce the risk of complications. Hysteroscopic treatment can, in many cases, provide excellent results and eliminate the need for major surgery.[10]

Methods

Eighty three patients were operated upon at King Hussein Medical Centre between March 2009 and August 2013 and followed up for 2 years. All patients were between 30 and 52 years. Patients had been referred to King Hussein Medical centre with various symptoms related to uterine fibroids. Some of the patients were diagnosed with fibroid at ultrasound scan. All patients had trans-abdominal (TA) and trans-vaginal (TV) ultra-sound scans. Diagnosis was confirmed by diagnostic followed by operative hysteroscopy and histopathology. . We did not use pre-operative preparation agents such as GnRH analogues (GnRH-a). In theatre, and after the diagnosis and the extent of the submucous fibroid was determined, an operative zero degree 10 mm bipolar resectoscopy with 8 mm 908 U-shaped cutting loop (Karl Storz GmbH Co), was performed for all of the cases using isotonic saline as a distension medium. The technique employed for the hysteroscopic removal of submucous fibroids was determined by type and location within the endometrial cavity. Resectoscopic excision by slicing was used in most cases. Pedunculated fibroids were managed by division at base and simple extraction thereafter.

Results

All uterine fibroids were 5 cm or less in size and all were submucous. Forty five patients had heavy menstrual bleeding as the only symptom. Sixteen patients had heavy and irregular uterine bleeding. Ten patients had dysmenorrhoea. Twelve patients had normal periods but diagnosed accidentally to have uterine fibroids either as part of infertility investigation or during routine check up, (Table I).

Among those patients, 73.4% (61 patients) had type 0 submucous fibroids, 12% (10 patients) had type one and 14.4% (12 patients) had type 2 fibroid,(Table II).

All patients were operated upon in the main theatre and under general anaesthetic. At 2 years follow up, 43 patients (95.5%) who presented with heavy menstrual bleeding were satisfied with their periods and requested no further intervention. Of those who presented with heavy and irregular uterine bleeding, 10 patients (62.5%) were cured and the remaining 6 patients opted for either endometrial ablation or hysterectomy. Only 2 patients with dysmenorrhoea (20%), were satisfied with the hysteroscopic myomectomy. The remaining 80% requested hysterectomy for their symptoms,6 patients Of them (60%) had a histopathological finding of adenomyosis post hysterectomy. Among the asymptomatic group, 10 patients were lost for follow up and the remaining 2 patients (16.6%) were content and asymptomatic,(Table III).

The overall complication rate was 6% (5 patients); one patient had fluid overload, 2 patients had bleeding , controlled by the insertion of Foley's catheter in theatre and removed after 18 hours, and two patients had cervical laceration which were controlled by vaginal packing. All 5 patients were discharged 24 hours post-operatively. There were no cases of uterine perforation or infection in our study group, (Table IV).

Table I: Presenting symptoms (n=83).

Symptom	Heavy menstrual bleeding	Heavy and irregular uterine bleeding	Dysmenorrhoea	Asymptomatic
Number (%)	45 (54.2)	16 (19.2)	10 (12.0)	12 (14.4)

Table II: Classification,(n=83)

Type	Type 0	Type 1	Type 2
Number (%)	61 (73.4)	10 (12)	12 (14.4)

Table III: Success rate of hysteroscopic myomectomy

Symptom	Heavy menstrual bleeding	Heavy and irregular uterine bleeding	Dysmenorrhoea	Asymptomatic
-Number,(%) success	43,(95.5)	10,(62.5)	2,(20)	2,(16.6)
-Number lost to follow up	0	0	0	10

Table IV: Complications of the procedure

Complication	Fluid overload	Uterine bleeding	Uterine perforation	Cervical laceration	Infection
Number(%)	1(1.2%)	2(2.4%)	0(0%)	2(2.4%)	0(0%)

Discussion

Excessive uterine bleeding affects some 20 percent of the women of reproductive age worldwide.[11] Localization of uterine fibroids seems to be an important factor in determining frequency and severity of symptomatology. Submucous fibroids may induce severe clinical symptoms such as excessive bleeding, usually during menses, colicky dysmenorrhoea , and are thought to predispose some women to reproductive failure. [12]

Our patients presented with heavy uterine bleeding, heavy and irregular uterine bleeding, and dysmenorrhoea. It is unclear whether dysmenorrhoea is related to the presence of submucous fibroid. Indeed only 20% of our patients were satisfied with the hysteroscopic myomectomy and the remainder requesting further interventions.

The diagnosis of uterine fibroid and the specification of the type of fibroid were made using TA and TV scans. We utilized the TA scan as the initial diagnostic tool because it was convenient, quick and non-invasive.

Diagnostic Hysteroscopy, can be used to evaluate the extent of submucosal fibroids but it is relatively invasive. [13]

The cure and satisfaction rate for patients who presented with menorrhagia was 95.5%. This rate reflects the high success rate and the place operative hysteroscopy plays in solving heavy periods and anaemia attributed to submucous fibroids. Our patients with heavy menstrual bleeding underwent complete resection of the fibroid.

For the patients who presented with heavy and irregular uterine bleeding, the lower success rate of 62.5% was attributed later to the associated other causes of bleeding including hormonal imbalance, drug-induced bleeding and non-compliance with hormonal contraceptives. Those patients had normal cervical smears. To increase the success rate, it could have been helpful to perform

additional hysteroscopic procedure like endometrial ablation.

The overall complication rate in our patients of 3.6%, one case of fluid overload and 2 cases of bleeding was an acceptable one.

We did not use pre-operative agents to facilitate cervical dilatation in our patients.

All our patients received prophylactic antibiotics before surgery.

Conclusion

Hysteroscopic surgery is an effective and safe procedure in management of abnormal uterine bleeding. In good hands, it is considered good alternative for hysterectomy in terms of shorter surgical time , stay in the hospital and significantly lesser economic impact on the health system. It also meet the needs of the patients in terms of safety, outcomes and satisfaction.

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