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Research Article

Laparoscopic myomectomy - a three year experience

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ABSTRACT

Background: Fibroids are the most common benign tumor of the uterus to affect women of reproductive age. Many women opt for laparoscopic myomectomy to conserve their uterus for fertility. This study aimed at evaluating the complications, need for blood transfusion and the average time taken for Laparoscopic myomectomy.
Methods: We conducted a retrospective observational study of laparoscopic myomectomy cases in a tertiary care hospital for a period of 3 years from July 2013.
Results: A total of 31 cases of laparoscopic myomectomy were evaluated. Average time taken was 161 +/- 31.2 minutes. Most common type of fibroid encountered was intramural, 16 (51.6%). The chief presenting symptom was abnormal uterine bleeding, 16 (51%). 3 (5.8%) of the patients had intraoperative/immediate post-surgery blood transfusion. Major vessel injury occurred in one case (3.2%). In 25 (80.64%) cases power morcellation was used, minilap incision and colpotomy for fibroid retrieval in 2 cases each. There was no single case of febrile morbidity. Average period of hospital stay was 2 days.
Conclusions: Laparoscopic myomectomy is a viable option in women with symptomatic fibroids who want to retain their uterus. The procedure is safe in the hands of skilled surgeon.

Keywords: Laparoscopic myomectomy, Fibroids, Benign tumor

INTRODUCTION

Uterine fibroids (leiomyomata) are the most common benign tumours in women, with a lifetime prevalence of around 30%. These tumours are over growths of smooth muscle and connective tissue that are hormone dependent. Fibroids may be solitary, multiple or diffuse. The majority of fibroids do not cause any symptoms but one in four women with fibroids are symptomatic.[1] The symptoms depend on the location and size of the fibroid and include heavy menstrual bleeding, pain during periods and intercourse, a dragging sensation in the lower abdomen and urinary or defecation problems.[2] They can cause concern in women of reproductive age because of heavy, irregular menstrual bleeding and pain, which can have a negative impact on a woman's life and warrants intervention.[3,4] Treatment options include nonsurgical methods (pharmacological, uterine artery embolisation [UAE], magnetic resonance imaging [MRI]-guided focused ultrasound [MRgFUS], minimally invasive surgery (hysteroscopic myomectomy, laparoscopic myomectomy), and open surgery (myomectomy or hysterectomy). The choice of treatment has to be tailored for each patient according to their wishes, the type and location of the fibroid and associated symptoms and availability of service.[5] Treatment options for fibroids has been the subject of Cochrane reviews, but research is still needed to determine the most appropriate treatment options for women with fibroids. Surgical management of uterine fibroids may be required in women with severe pressure symptoms, unresponsiveness to other therapies (medical, UAE) or in large pedunculated subserosal or submucous fibroids. Surgical treatment can be either hysterectomy or myomectomy. The size and location of the fibroid in the uterus and the desire for future fertility affects the choice of surgical procedure. Hysteroscopic, laparoscopic, vaginal or laparotomy routes may be used. Myomectomy can be performed either by the

laparoscopic or open laparotomy. Myomectomy may reduce menstrual blood loss and can be considered for women who want to preserve the uterus[6]. Techniques for reducing blood loss during myomectomy include a preoperative course of GnRH analogue or selective progesterone receptor modulators (SPRM), use of vasoconstriction agents (vasopressin) and tourniquets during surgery. Laparoscopic myomectomy is considered the best treatment option for symptomatic uterine fibroids in women who wish to retain childbearing capacity.[7] A systematic review comparing laparoscopic myomectomy and open myomectomy showed that laparoscopic procedures were associated with less postoperative pain or fever and shorter hospital stay.[8] One meta-analysis showed that the laparoscopic approach is associated with longer operating times, less blood loss, less postoperative pain and fewer complications than open conventional myomectomy.[9] The choice of open laparotomy or laparoscopic myomectomy depends upon the availability of facilities and expertise of surgeons. The size and number of fibroids may make laparoscopic myomectomy inappropriate.

METHODS

This was a retrospective descriptive study conducted in a tertiary care hospital over a period of 3 years from August 1, 2013. During this period, all cases of Laparoscopic myomectomy were evaluated.

RESULTS

Table 1: Observations of number of laparoscopic myomectomy cases.

Total number	31 laparoscopic myomectomy cases	
Average time taken	161 +/- 31.2 minutes	
Types	Intramural 16	51.6%
	Subserous 7	22.5%
	Combined 6	19%
	Cervical 2	6.5%
Chief complaints	AUB 16	51.6%
	Pain 7	22.5%
	Infertility 7	22.5%
	Mass abdomen 1	3.2%
Blood transfusion	In 3 patients including one who had preoperative transfusion	
Retrieval by	Power morcellation in 26 Coloptomy 2, minilap 2, laparotomy 1	

There were 31 cases of laparoscopic myomectomy cases during the period of 3 years. Most of the fibroids were intramural 16 (51.6) followed by 7 cases (22.5%) of sub serous fibroids. There were 6 cases (19%) of mixed type (both subserous and intramural). Cervical fibroids constituted 2 (6.5%) of the cases. Most of the patients presented with abnormal uterine bleeding, Pain and infertility presented equally as the chief complaints in7 cases (22.5 %) each. One case (3.2%) presented as mass abdomen. Mean time taken for the surgical procedure was 161 +/- 31.2 minutes. 3 (5.8%) of the patients had intraoperative/ immediate post-surgery blood transfusion. Major vessel injury (external iliac artery) occurred in one case (3.2%) resulting from slipping of the mono polar hook electrode. One patient had transient tachycardia following vasopressin infiltration in to the myoma. The size of the fibroids removed was ranging from 1.5 cm to 12 cm. with an average of 5 cm. In 25 (80.64%) cases power morcellation was used, minilap incision and colpotomy for fibroid retrieval in 2 cases each. There was no single case of febrile morbidity. Average period of hospital stay was 2 days.

DISCUSSION

Abnormal uterine bleeding was the chief symptoms. Geidam et al noted that abdominal mass (63.7%), menorrhagia (57.7%), and subfertility 55.2% were the leading indications for abdominal myomectomy.[10] Mean time taken for the surgical procedure was 161 +/- 31.2 minutes. Sinha et al reported a mean operating time of 136.67 ± 38.28 minutes.[11] The procedural time is comparable and may further improved on attaining enhanced surgical skills. 3 (5.8%) of the patients had intraoperative/immediate post-surgery blood transfusion. This is in comparison with (39.2%) quoted by Sinha et al. and 1.46% by Nezhat and associates.[11,12] There was no single case of febrile morbidity in this study. .Vavilis et al reported that the incidence of pyrexia in first 48 hours was 16.1 % in the abdominal myomectomy group.[13] The intraoperative complication rate was (3.22%). Altqassen et al noted an intraoperative complication rate of 2.6%.[14] At most care should be excised while using electrocautery in order to reduce the complications. The limitation of the study was small sample size. The number and size of fibroids varied in each case and hence a statistical correlation was not possible with the morbidity or time taken for the surgery.

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