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Laparoscopic Myomectomy—Complications and Conversion

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Abstract
Objectives: *To evaluate the conversion rate and complications of laparoscopic myomectomy*
Material and Methods: *It was a retrospective study of 43 cases of laparoscopic myomectomy performed over a period 28 months from December 2015 to March 2018 at Vinayaka Mission`s Medical College & Hospital. Demography, indications for myomectomy, location and the number of fibroids, surgery done, difficulties and complications encountered and the necessity for conversion to open surgery were analysed.*
Results: *A total of 108myomas were removed on 43 patients. The mean age of patient undergoing laparoscopic myomectomy was 32.16 years.24 patients had only one fibroid. Only 5 patients had fibroids more than 4 in number. In 8 patients the largest fibroid was less than 5 cms, 6-12 cms in 34 women. One patient had fibroid measuring 15 cm. Of the 108 fibroids removed 80 were intramural. There was only one conversion to Laparotomy. Two patients had excessive blood loss and 8 patients had to be transfused blood intra operatively or postoperatively.*
Conclusion: *Our data suggests that laparoscopy is a safe and effective procedure for myomectomy even in 15 cms fibroids.*
Keywords: *laparoscopy, fibroids, myomectomy.*

Introduction

Uterine fibroids occur in at least 20% of women of reproductive age. Although they are the most common pelvic tumour in women, uterine fibroids are generally asymptomatic. Surgical intervention, including hysterectomy and myomectomy, is currently the best management of symptomatic fibroids. Fibroids and Infertility coexist in the same woman. It is not clear whether fibroids causes infertility or infertility causes fibroids , or they are coincidental conditions or there is a common factor causing both or both are a part of a bigger hormonal disturbance is not known. Women with fibroids and infertility have to preserve their uterus. An increasing number of women wish to preserve uterus regardless of their fertility status[(1)] and thus myomectomy has become a trend in management.With the benefits

of better cosmetic results anda faster recovery time, laparoscopic myomectomy (LM) has become a preferred choice of patients and surgeons over conventional laparotomy. Three major steps are involved in LM, (1) excision of the fibroid(s), (2) repair of the uterine defect, and (3) extraction offibroid specimen(s). The controlof operative blood loss is crucial, and thus an effective method of excision is an important strategy. Also laparoscopic approach provides the best benefits in fertile patients with symptomatic leiomyomas.[(2)]

Here, we present a comprehensive outcome analysis of 43consecutive cases who

Underwent laparoscopic myomectomy by a single surgeon, emphasizing conversion rate and complications encountered during the procedure of laparoscopic myomectomy.

Materials & Methods

All the women who underwent laparoscopic myomectomy operations performed by the principle author under the guidance of the corresponding author, at Vinayaka Mission`s Medical College and Hospital, Karaikal, Pondicherry during the period December 2015to March 2018 are the subjects of the study. A written informed consent regarding the procedure and its potential risks was obtained from all patients. Counselling was given regarding the necessity of conversion to laparotomy or necessity of hysterectomy during the course of surgery.

All women underwent preoperative pelvic ultrasound scan. Patients received perioperative antibiotics and had an indwelling catheter until the first postoperative morning. All laparoscopic procedures were performed under general anaesthesia in lithotomy position. Uterine manipulator was used. For myomectomy one 10 mm and two 5mm trocars were placed in the abdomen. The uterine serosa and myometrium was coagulated with a bipolar forceps and incised to expose the surface of the fibroid. Fibroid was grasped with grasping forceps and extracted from the surrounding myometrium by blunt dissection with the bipolar forceps. Connective tissue bridges were coagulated and cut with scissors to reduce blood loss. Fibroids were stored in the pouch of Douglas. The myometrium was bipolar coagulated to achieve nearly complete haemostasis. The uterus was closed with interrupted intracorporeal sutures (Vicryl No.1, sharp curved needles) in one layer to achieve the complete haemostasis. In cases of pedunculatedfibroids, the stalks were bipolar coagulated and transected with scissors. Fibroids were removed after morcellation with an electric morcellator and extracted through the lateral port 15 mm trocar. Clots and debris were removed through repeated irrigation and suctioning. All the procedures were documented. Prophylactic antibiotics-cefotaxime, gentamycin and metronidazole were given routinely along with induction of anaesthesia. Routine post operative care was given and patiens were discharged in three days. They were followed up at one week and six weeks.

Results

Forty three women underwent laparoscopic myomectomy. During the same period, three women underwent open laparotomy myomectomy and fifty six women underwent laparoscopic hysterectomy for fibroids. All 43 laparoscopic procedures were performed uneventfully with conversion to Laparotomy in 1case.

The mean age of the women was 32.16 years with a range of 5.23 years

Total 108 fibroids were removed in the 43 women.

Number of fibroids:-

Single fibroid—24 women

Two-four fibroids—14 women

More than four fibroids—5 women

Table 1: Size of the Fibroids

Serial no.	Diameter in Cms	Number
1.	< 2	9
2.	2-4	52
3.	5-8	38
4.	9-12	8
5.	> 12	1
Total		108

Table 2: Site of the Fibroids

Intramural	80
Sub serous	24
Sub serous pedunculated	02
Intraligamentary	02
Total	108

Conversion and Complications

The intra-operative and post-operative complications encountered are

Excessive blood loss—2

Blood transfusion---8

Bowel injury ---Nil

Haematoma---Nil

Bowel injury---Nil

Hysterectomy---Nil

Conversion to open myomectomy---One

Discussion

Since the first introduction of Laparoscopic Myomectomy by Semm in 1979many reports of this technique have been published worldwide. Although improvements in laparoscopic techniques and instruments during the last 3 decades have helped gynaecologists overcome several limitation in Laparoscopic Myomectomy, this technique remains achallenging technical procedure, especially in controlling operative blood loss.

Excision of the fibroid(s) is the first step of Laparoscopic Myomectomy. In open myomectomy, blood loss is controlled by tournique application to the uterine artery. No such facility of obstructing the blood flow temporarily is available in laparoscopic myomectomy. Because of the limited operative field and instruments, there is more blood loss when dissecting fibroids from the uterine wall compared with theabdominal approach.

Different instruments have been introduced to overcome this problem, such as the claw grasper and myoma screws. The grasping forceps provides a sharp bite and fixation of fibroids, but there is a risk of injury of internal organs such as the bowel. Myoma screws facilitate deeper stabilization of fibroids but it has been reported that theyare easily broken and are a possible risk to the patient.

A total of 108 fibroids are removed on 43 patients in our study performed over a period of 28 months from December 2015 to March 2018.

The mean age of patient undergoing laparoscopic myomectomy was 32.16 years.Jean-Bernard Dubuisson et al 2001[3] reported mean age of 37.8 years. So the fibroids are more common in the 4th decade of life.

24 patients (57.1%) had only one fibroid. Only (11.6 %) patients had fibroids more than 4 in number. 8 patients (18.6 %) had moderate sized fibroids of 9 to 12cm. Only one had more than ten fibroids, the largest being 15 Cms.

Total 108 fibroids were removed out of which 80 (74.1%) were intramural. Henri Marret et al 2004(*4*) reported 51.1 % intramural fibroids. Intramural fibroids are more common than the other types of fibroids i.e. serosal, subserosal etc.

There was only one (2.3 %) conversion to Laparotomy in our case.Jean-Bernard Dubuisson et al 2001[3] reported conversion rate of 11.3%. Piero Seinera et al 1997[5] reported conversion rate of 1.8%.In our case conversion to the open procedure was -- She was an young unmarried female witha 32 weeks pregnancy sized mass. On laparoscopy she had 19 fibroids ranging from 1 to 15 Cm. The big fibroids were removed laparoscopically, beginning at the top. But as we kept going down, more and more fibroids started to appear and it was considered in the best interest of the patient to convert to a Laparotomy for a more complete removal of even the smaller fibroids keeping in view her marital status and impending marriage. Selection of the case for laparoscopic surgery is based on the number, size of the fibroids, approachability and the experience of the surgeon. At surgery, the interests of the patient is to be kept in the mind, rather than the surgeon`s ego.

Two patients (4.8 %) had excessive blood loss. Pei-Ju Wu et al 2012[6] reported 6.66 % patient had excessive blood loss .In our study8 patients (19 %) had to be transfused blood intraoperatively or postoperatively.

Conclusions

Laparoscopic removal of the myomas is being witnessed as a safer technique apart from the other benefits related with the laparoscopic surgery. Our study reiterates the safety of the laparoscopic myomectomy with a single conversion to Laparotomy and very few complications.

Conflict of interest: Nil.

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