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Research Article

A Retrospective Study of Surgical Management of Fibroid Uterus (Myomas)

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Abstract

Introduction: The aim of this study is to identify the safety and feasibility of surgical management of fibroid uterus.

Materials and Methods: A retrospective review of surgical management of fibroid uterus from 1st January 2001 till 31st December 2018 at the Buraimi Hospital, Oman. Buraimi Hospital is a regional referral hospital under MOH, Sultanate of Oman.

Results: There were 116 patients who underwent surgical management for fibroid uterus. 38.79% patients were from age group of 40 - 49 yrs. In our study unmarried women were 23.27%. Women with Para 6 to 10 were 30.17%. 82.75% women were with class II obesity. Main symptom for our group was menorrhagia. In our study, 60.33% patients were with multiple myomas, whereas 6.03% cases were with > 10 myomas. Average duration of surgery was 2 to 3 hrs (48.27%). Out of 116 patients, 18.96% women were with adhesions. Average blood loss in our study was < 200 ml. In our study 69.82% women did not require blood transfusion. Out of 116 patients 7 patients had complications (intraoperatively two patients and post operatively five patients - 3 with Superficial wound gap and 2 with Fever) Average hospital stay was 3-5 days (55.17%). Out of 116 patients, fourteen women had recurrence of myomas; 8 to 10 years after myomectomy. Three patients underwent repeat myomectomy. Seven patients had Full term normal delivery after Myomectomy and Nine had Lower segment caesarean section after Myomectomy. Eleven women who presented with sub-fertility and fibroid conceived after Myomectomy. One of our patient was with occasional Mitotic figures with atypia on histopathology examination.

Conclusion: With early diagnosis and adopting proper selection criteria, surgical management of fibroid uterus is an effective and safe treatment.

Keywords: *Myomas; Fibroid Uterus; Leiomyomata; Myomectomy; Minimal Invasive Surgery (MIS); Uterine Artery Embolization (UAE); Gonadotropin Releasing Hormone (GnRH)*

Introduction

Fibroids are the benign smooth muscle cell tumours of the uterus and female pelvis [1]. Fibroids are usually asymptomatic however sometimes patients present with menorrhagia, dysmenorrhoea, pressure related symptoms of bowel and bladder and infertility. Definitive treatment for symptomatic fibroids is only surgery [2].

Fibroids are observed in 2.7% to 12.6% of pregnant women [3]. Most often they do not pose any problem during pregnancy but approximately 10% to 30% of pregnant women develop complications [4]. The location of fibroids determines the risk of bleeding in pregnancy with those situated close to placental site having more bleeding complications [3,5].

Myomectomy during caesarean delivery has traditionally been discouraged. With the exception of small, pedunculated fibroids most of the textbooks advice against caesarean myomectomy due to theoretical risk of massive hemorrhage and increased postoperative morbidity [2]. Contrary to the traditional belief some of the recent reports indicate that in selected patients, myomectomy during caesarean delivery does not appear to result in an increased risk of intrapartum or short term postpartum morbidity and is a safe and effective procedure [6-9].

This retrospective study was conducted in our institution is an attempt to identify the safety and feasibility of myomectomy.

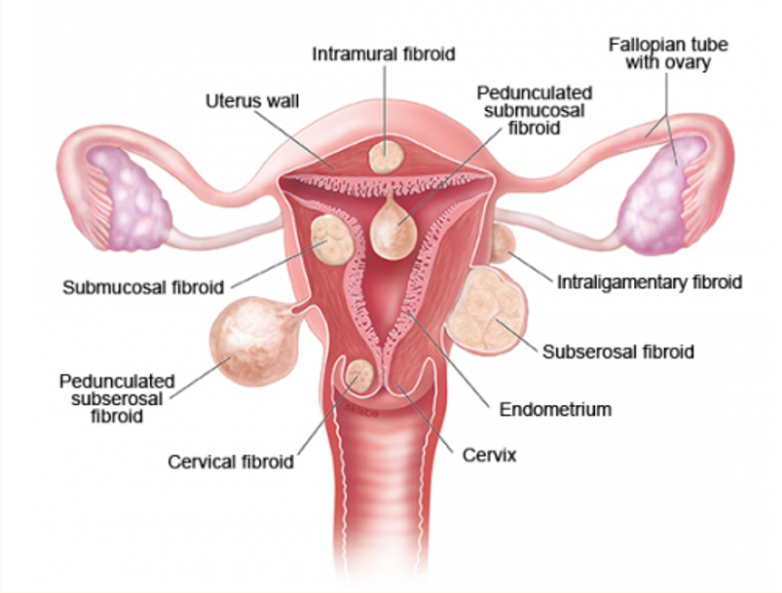

Figure : *Different locations and types of fibroid.*

Materials and Methods

All the Patients who were diagnosed to have fibroid uterus who underwent surgical management at the Buraimi Hospital, Oman were included in this retrospective study. A search through the hospital medical record database was carried out from 1st January 2001 till 31st December 2018. We do not have facility for minimal invasive surgery (MIS) or uterine artery embolization (UAE), hence we do the study of open myomectomy/hysterectomy.

Primary outcome measures studied were incidence of haemorrhage, significant intraoperative adhesions and blood loss requiring the need for intraoperative or postoperative blood transfusion.

Secondary outcome measures were duration of surgery, postoperative fever, wound infection and duration of hospital stay. Operative time was noted from skin incision to skin closure. Fever was defined as postoperative rise in temperature of 38.0°C or greater.

Results

During study period of eighteen year, 116 women underwent surgical management for fibroid uterus.

Total number of patient diagnosed as fibroid uterus during 18 years.

Year	Cases
2001	5
2002	4
2003	6
2004	12
2005	6
2006	7
2007	9
2008	11
2009	6
2010	9
2011	3
2012	8
2013	9
2014	9
2015	3
2016	3
2017	3
2018	3
Total	116

Demographic data

Age

Age	Number of patients	Percentage
20 - 29 years	23	19.82
30 - 39 years	33	28.44
40 - 49 years	45	38.79
50 - 55 years	15	12.93
Total	116	

Race

	Number of patients	Percentage
Omani	102	87.93
Non Omani	14	12.06
Total	116	

Marital status

Marital status	Number of patients	Percentage
Unmarried	27	23.27
Married	89	76.72
Total	116	

Parity

Parity	Number of patients	Percentage
Para 0	35	30.17
Para 1- 5	12	10.34
Para 6 - 10	35	30.17
Para > 10	7	06.03
Unmarried	27	23.27
Total	116	

Weight

Weight	Number of patients	Percentage
< 50 kg	8	06.89
50 - 90 kg	96	82.75
90 - 110 kg	12	10.34
Total	116	

Symptoms

Symptoms	Number of patients
Menorrhagia/Menorrhagia causing anemia	55
Pelvic mass	13
Pressure symptoms	35
Urinary retention	1
Infertility	12
Nil (During Lower segment caesarean section)	9

Associated co-morbidity

Associated co-morbidity	Number of patients	Percentage
Gestational Diabetes mellitus/Diabetes mellitus	12	10.34
Gestational hypertension/Chronic hypertension	8	06.89
Iron deficiency anemia	16	13.79
Nil	80	68.96
Total	116	

Distribution of myomas

Number of myomas

Number of Myomas	Number of patients	Percentage
Solitary	46	39.65
Multiple: 2- 5	38	32.75
5 - 10	25	21.55
> 10	7 *(22, 13, 28, 16, 15, 22, 19)	06.03
Total	116	

(Total no of Myomas)*

Types of myomas

Types of Myomas	Number of patients
Sub serous	39
Intramural	52
Sub mucous	25
Pedunculated	13

Location of Myomas

Location of Myomas	Number of patients
Fundus	52
Body	64
Lower segment	21
Broad Ligament	1
Fibroid polyp	1

Uterine size above symphysis pubis due to myomas

Uterine size	Number of patients	Percentage
Uterus not palpable	30	25.86
12 - 18 cm	60	51.72
19 - 22 cm	19	16.37
23 - 26 cm	7	06.03
Total	116	

Treatment modalities instituted for Myomas during 15 years

Treatment	Number of patients	Percentages
Total abdominal hysterectomy with/without bilateral salpingo-oopherectomy	49	42.24
Subtotal hysterectomy during caesarean section	1	0.86
Caesarean section with myomectomy	14	12.06
Multiple myomectomy	27	23.27
Solitary myomectomy	12	10.34
Myomectomy, 6 - 8 months after full term normal delivery	2	01.72
Myomectomy, 7 months after lower segment caesarean section	2	01.72
Myomectomy with salpingectomy for Ectopic pregnancy.	2	01.72
Myomectomy with ovarian cystectomy	5	04.31
Caesarean section with myomectomy and ovarian cystectomy	1	0.86
Pedunculated fibroid polypectomy	1	0.86
Total	116	

Duration of surgery

Duration of Surgery	Number of patients	Percentage
< 2 hours	42	36.20
2 - 3 hours	56	48.27
3 - 4 hours	18	15.51
Total	116	

Adhesions during surgery

Adhesions	Number of patients	Percentage
Adhesions	22	18.96
No adhesions	94	81.03
Total	116	

Estimated blood loss during surgery

Estimated blood loss	Number of patients	Percentage
< 200 ml	66	56.89
201 - 500 ml	34	29.31
501 - 800 ml	8	06.89
801 - 1000 ml	5	04.31
1000 - 1200 ml	3	02.58
Total	116	

Blood transfusion required

Blood transfusion	Number of patients	Percentage
Preoperative	12	10.34
Intraoperative	8	06.89
Postoperative	15	12.93
Nil	81	69.82
Total	116	

Complications

Intra operative complications	No of patients	Percentage
Broad ligament Hematoma extending to Retroperitoneal space	1	0.86
End to end anastomosis of small bowel (History of Multiple surgeries prior to myomectomy)	1	0.86
Post-operative complications		
Superficial wound gap	3	02.58
Fever	2	01.72
No complications	109	93.96
Total	116	

Duration of hospital stay

Hospital Stay	Number of patients	Percentage
3 - 5 days	64	55.17
6 - 8 days	28	24.13
9 - 11 days	19	16.37
12 - 15 days	5	04.31
Total	116	

Follow UP after surgery

Follow up	Number of patients
Full term normal delivery after Myomectomy	7
Lower segment caesarean section after Myomectomy.	9
Sub fertility conceived after Myomectomy	11
Spontaneous missed miscarriage after Myomectomy	3
Repeat Myomectomy	3
Lost for follow up after 6 months	9
Lost for follow up after 1 yr	9
Lost for follow up after 2 yrs	12
Unmarried patients with reoccurrence of Myomas	6
Unmarried patients with no reoccurrence of Myomas	21
Married patients with reoccurrence of Myomas	8
Married patients with no reoccurrence of Myomas	76

Histopathology examination

- Leiomyomata - 115.
- Occasional mitotic figures with atypia - 1.

Discussion

Fibroids are extremely common with the incidence of 40 to 60% by the age of 35 and 70 to 80% by the age of 50 years; the precise etiology however, still remains unclear [1]. Majority of our patients belonged to the age group of 40 to 49 years (38.79%). Hysterectomy is performed for many other indications but leiomyomata uteri are the most common indication for hysterectomy [2].

Preoperatively gonadotropin releasing hormone (GnRH) agonist was not given in our study. GnRH provides short-term benefits for women undergoing myomectomy regarding blood loss and uterine size but may increase the difficulty of surgery as it makes enucleation of fibroids more difficult by obscuring the tissue plane between the myoma and the myometrium. In the long-term, their use appears to increase the risk of persistent or recurrent myomas. Bleeding during myomectomy can be prevented or decreased with mechanical or pharmacologic methods. Unfortunately, none of these interventions has been proven to reduce the rate of blood transfusion [14].

Fibroids in pregnancy can give rise to complications like preterm delivery, malpresentation, caesarean section and postpartum endomyometritis [3]. Fibroids are associated with a significantly increased risk of spontaneous abortion [2] and studies have shown that incidence of spontaneous miscarriage has declined from 41% to 19% following myomectomy [10]. Location of the fibroid is also considered

important in predicting reproductive outcome. Klatsky., *et al.* [3] noted that submucosal fibroids had increased association with miscarriages. Majority of fibroids in our study was in the body of the uterus and intramural in location resulting in better reproductive outcome.

Fibroids encountered during caesarean section pose a therapeutic dilemma. Myomectomy has traditionally been discouraged during caesarean section. In recent years some authors have advocated routine removal of all anterior wall uterine fibroid during caesarean section [11]. The advantages of caesarean myomectomy is that it obviates the need for interval myomectomy, decreases complications associated with fibroid in subsequent pregnancies and gives sense of relief to patients. It also increases the chances of vaginal delivery in subsequent pregnancies when removed from the lower uterine segment [12].

Burton., *et al.* [9] reported 13 cases of myomectomy at caesarean section. In their study only one case was complicated by intraoperative hemorrhage. They concluded that myomectomy during caesarean section may be safe in carefully selected patients

There was no statistically significant difference in incidence of hemorrhage, need for blood transfusion and hospital stay noticed in our study which correlated with studies by Roman., *et al.* [6], Li., *et al.* [8] and Brown., *et al* [13]. There is statistically significant difference in operative time in our study as 7 patients were with > 10 fibroids and multiple adhesions in 18.96% of our patients.

Cancerous tumors in connective tissue (sarcoma) might develop from fibroids in extremely rare cases, but there is no scientific proof to support this [15]. One of our patient was with occasional Mitotic figures with atypia on histopathology examination. She was referred to Gynae Oncology in Royal Hospital, Muscat, Oman for further management.

Conclusion

With early diagnosis and adopting proper selection criteria, surgical management of fibroid uterus is an effective and safe treatment.

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Bibliography

1. Day BD., *et al*. "High cumulative incidence of uterine leiomyoma in black and white women: ultrasound evidence". *American Journal of Obstetrics and Gynecology* 188.1 (2003): 100-107.
2. Breech Lesly L and John AR. "Telindes operative gynaecology". 10th edition. Lippincott: Williams and Wilkins. Leiomyomata uteri and myomectomy. In, John A. Rock, Howard W. Jones III (2008): 687-726.
3. Klatsky PC., *et al*. "Fibroids and reproductive outcomes: a systematic literature review from conception to delivery". *American Journal of Obstetrics and Gynecology* 198.4 (2008): 357-366.
4. Katz VL., *et al*. "Complications of uterine leiomyomas in pregnancy". *Obstetrics and Gynecology* 73.4 (1989): 593-596.
5. Lee HJ., *et al*. "Contemporary management of fibroids in pregnancy". *Reviews in Obstetrics and Gynecology* 3.1 (2010): 20-27.
6. Roman AS and Tabsh KM. "Myomectomy at time of caesarean delivery: a retrospective cohort study". *BMC Pregnancy Childbirth* 4.1 (2004): 14.
7. The Practice Committee for the American Society for Reproductive Medicine in collaboration with The Society of Reproductive Surgeons. "Myomas and reproductive function". *Fertility and Sterility* 90.5 (2008): S125-S130.
8. Li H., *et al*. "Myomectomy during caesarean section". *Acta Obstetricia et Gynecologica Scandinavica* 88.2 (2009): 183-186.

9. Burton CA., *et al*. "Surgical management of leimyomata during pregnancy". *Obstetrics and Gynecology* 74.5 (1989): 707-709.

10. Buttram VC and Reiter RC. "Uterine leiomyomata: etiology, symptomatology and management". *Fertility and Sterility* 36.4 (1981): 433-445.

11. Kwawukume EY. "Myomectomy during caesarean section". *International Journal of Gynecology and Obstetrics* 76.2 (2002): 183-184.

12. Omar S Z., *et al*. "Large lower segment myoma: Myomectomy at lower segment section - a report of two cases". *Singapore Medical Journal* 40.2 (1999): 109-110.

13. Brown D., *et al*. "Caesarean myomectomy-a safe procedure. A retrospective case controlled study". *Journal of Obstetrics and Gynaecology* 19.2 (1999): 139-141.

14. Techniques to reduce blood loss during abdominal or laparoscopic myomectomy.

15. Stewart EA. "Overview of treatment of uterine leiomyomas (fibroids)". UpToDate (2013).

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