Experience in managing Myomas: A case series

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Abstract
Leiomyomas or fibroids are the most common benign pelvic tumors in females that grow monocolonally from the smooth muscle cells of the uterus. Such tumors occur in nearly half of women over the age of 35 years, with increased prevalence during the reproductive phase due to hormone-stimulated growth. At 50 years of age, 80% of African and almost 70% of Caucasian women have fibroids. Following are 8 such case scenarios of fibroids uterus having different presentations, at RL Jalappa Hospital. The first 4 cases belong to the perimenopausal age group and the last 4 cases are the atypical fibroids presenting along with pregnancy. The various treatment modalities are opted as per the patient symptoms and situation. Uterine leiomyoma can present with various symptoms of which menstrual irregularities is most common. The management modality is purely based on the patient’s symptoms. Cesarean myomectomy decision is a challenge and will depend on the site and size of the myoma.

Keywords: PPH, leiomyoma, infertility, Morcellator, Endo peritoneal bag, Hifu cesarean myomectomy

Introduction
Leiomyomas or fibroids are the most common benign pelvic tumors in females that grow monocolonally from the smooth muscle cells of the uterus. Such tumors occur in nearly half of women over the age of 35 years, with increased prevalence during the reproductive phase due to hormone-stimulated growth. At 50 years of age, 80% of African and almost 70% of Caucasian women have fibroids. A typical leiomyoma is a firm nodular well circumscribed structure arising from the myometrium. Mostly arising from the uterus and less commonly in the cervix. As they enlarge, they may remain intramural or may eventually become subserosal or submucosal in location. The usual symptoms on presentation would be dysmenorrhea, heavy menstrual bleeding, abdominal discomfort and pressure symptoms. If the cavity of the uterus is distorted it may interrupt the implantation leading to subfertility. According to their locations, fibroids are classified again as per FIGO. The imaging diagnosis is made with the use of ultrasound or MRI. The underlying pathogenesis is still not clear, several risk factors like positive family history, genetic alterations, and lifestyle factors (smoking, obesity, dyslipidemia, nutrition, exercise, and medical contraception) have been identified.

With continued growth of the fibroid size, compression related symptoms like dyspnoea, frequent urination or bowel complaints are more common. Extremely large myomas, can involve serious complications such as respiratory failure due to diaphragmatic compression or incarcerated abdominal wall hernia. Therefore, the presentation of fibroids depend on the tumor’s location and size. Hence the management of these will also depend on the age of the patient, the family status, the severity of symptoms, compression symptoms and other associated factors. Pregnancy is an estrogenic state. Fibroids are present in 0.1 to 10.7% of pregnant women and their prevalence rises if the patient wants to postpone having children until a later age. The pregnancy hormones influence on the growth of the fibroid. And similarly, the growing fibroid complicates the existing pregnancy. The various fibroid related complications seen in pregnancy are, acute pain abdomen, cephalopelvic disproportion, antepartum hemorrhage, preterm labour, malpresentation, dysfunctional labour, post partum haemorrhage, IUGR, retained placenta and abortions. In pregnancy complicated with fibroids, the management depends on the size and the site of the fibroid. Only if the size of the myoma exceeds >5cm and if it is in the line of incision, intervention may be considered. Most of the cases, fibroids present as incidental finding.
Following are 8 such case scenarios of fibroids uterus having different presentations, at RL Jalappa Hospital. The first 4 cases belong to the perimenopausal age group and the last 4 cases are the atypical fibroids presenting along with pregnancy. The various treatment modalities are opted as per the patient symptoms and situation.

Case 1
A 44 year old P3L3, tubectomised, presented with complains of heavy menstrual bleeding since 2 months. She had irregular cycles each lasting for 10 days, in every 20-25 days interval. Bleeding was associated with passage of clots and dysmenorrhoea. On examination patient was pale. On local examination mass upto 12 weeks (compared to gravid uterus) size. Usg abdomen done showed, anteverted bulky uterus of size, 13*5.5*7cm with a posterior wall fibroid measuring 3*2.8cm, anterior wall intramural fibroid measuring 2.4*2.4cm and subserosal fibroid measuring 2.6*1.8cm. On admission patient’s Haemoglobin was found to be 7gm %. Hence 1 pint PRBC was transfused preoperatively. Patient underwent total abdominal hysterectomy along with bilateral salpingoopherectomy. Intraoperatively uterus was found to be 14-16 weeks size with multiple intramural and subserosal fibroids present. On dissection of the specimen, largest measuring upto 6*5cm which was intramural and located in the anterior wall. Post operative recovery was uneventful and got discharged on day 5.

Fig 1: Case 1; cut section of uterus showing intramural fibroid of 6*5 cm.

Case 2
A 42 year old unmarried female presented to the OPD with complains of heavy menstrual bleeding since the past 7 months. Each cycle was lasting 5-7 days and was associated with passage of clots and dysmenorrhoea. On per abdominal examination a 24 weeks size mass, which was uniformly enlarged. Bimanual examination confirmed a uterine mass extending upto 24 weeks size. Ultrasound report showed enlarged uterus with multiple intramural and subserosal fibroids present. On dissection of the specimen, largest measuring upto 6*5cm which was intramural and located in the anterior wall. Postoperative recovery was uneventful and got discharged on post operative day 8.

Fig 2: Case 2; Cut section of the uterus showing a large submucosal fibroid

Case 3
A 56 years old P2L2 tubectomised, presented with complains of heavy menstrual bleeding since 1 year. Bleeding was for 8 days in a 20 day cycle which was associated with passage of clots and dysmenorrhoea. On examination patient appeared pale. Abdominal distension was present. Mass margins were not delineated. Bimanually around 24 weeks size uterus with bilateral fornical fullness was present. Ultrasound reported as uterine mass if 17*16*9cm. A well defines uterine lesion of 17*15.6*8.2 cm with multiple cystic areas noted in the anterior myometrial wall causing complete effacement and posterior displacement of the endometrial cavity. This lesion was intramural. MRI reported as an atypical fibroid measuring 16*9.4*1.3 cm. Patient underwent total abdominal hysterectomy with salpingoopherectomy. Intraoperatively intramural uterine fibroid of size 20*20cm weighing 2.374kg removed. On cut section, leiomyoma with myxoid changes along with adenomyosis was found.2 pints PRBC were transfused inevitably. Patient recovered well postoperatively and hence got discharged on post operative day 8.

Fig 3: Case 3; intramural uterine fibroid of size 20*20cm weighing 2.374kg removed

Case 4
A 40 year old, P4L3D1, tubectomised, came with complains of offensive smelling vaginal discharge. No history of irregular submucosal fibroid of size 6*8 cm. Patient was catheterised for 24 hours following which the DJ stent was removed. Patient recovered well and got discharged on post operative day 8.
bleeding. Pain abdomen which was dull aching present. On examination patient appeared pale. Per abdomen a solid mass of 15*15cm with regular borders and smooth surface palpated. On bimanual examination uterus 20 weeks size, and bilateral fornical fullness present. MRI reported as bulky uterus with large atypical cervical fibroid measuring 7.5*8.5cm and bilateral hydrouteronephrosis present. Patient underwent total abdominal hysterectomy with bilateral salpingoopherectomy along with DJ stenting. Intraoperatively cervical fibroid of 18*15 cm seen. Uterus 24 weeks size, with left sided ureter seen abutting the cervical fibroid, which was dissected and separated. Post operative was uneventful. Patient discharged on post operative day 8.

Case 5
A 20 year old primigravida with 38 weeks 6 days gestation, was referred from the district hospital in view of intraoperatively diagnosed multiple uterine fibroids in the lower uterine segment. Patient was taken for elective LSCS in the same district hospital in view of transverse lie. Due to the presence of intraoperative fibroids, the procedure was abandoned. Abdomen was closed in layers and the patient was shifted to RL Jalappa hospital. On arrival patient was clinically stable. Fetal heart sound was localised. After informing the unit chief and the senior anesthesist and neonatologist, patient was taken to OT. Intraoperatively, 10*7 cm submucosal fibroid present in the lower uterine segment. Classical incision given on the upper segment of the uterus. Placenta was cut through. Baby was extracted by breech. Uterus was closed in layers. Bilateral internal artery ligation was done. After achieving hemostasis, abdomen was closed in layers. Patient recovered well and went home with a live baby. Uterine myoma was not touched in this case. Patient was asked for proper follow up, to see the size of the fibroids.

Case 7
A 32 year old G2A1 with 11 weeks 3 days of pregnancy came with USG showing missed abortion with absent cardiac activity. She also complains of pain abdomen since past 6 months. The first pregnancy was also a missed abortion at 3 months of gestation. For which dilatation and curettage was tried, but failed, following which hystorotomy was done. During this procedure uterine submucosal fibroid was seen of 6*6cm, for which myomectomy was also done. She had a total of 7 PRBC transfusion during the procedure. In the current pregnancy, on examination, per abdominally uterus measured upto 28 weeks size, hard consistency. MRI pelvis reported as uterus measuring 20*9.5*8.9cm with gestational sac and fetal pole. Hypointense

Fig 4: Case 4; “lantern on the top of St. Paul’s cathedral”

Fig 5: Case 5; 10*7 cm submucosal fibroid present in the lower uterine segment. Classical caesarean section done.

Fig 6: Case 6; 5*4 cm submucosal fibroid was found in the lower uterine segment along the incision site.

Multiple fibroid uterus two at fundus of uterus & one bigger one at lower side or utatrt side of cervical region pushing d cx to left side.

Case 6
A 26 year old primigravida with 39 weeks gestation, was referred from district hospital in view of fetal distress. Patient was in labour for the past 10 hours. On arrival, cardiotocograph showed variable decelerations dipping upto 80 beats per minute. Patient and attenders were counselled and emergency LSCS was decided. Intraoperatively a 5*4 cm submucosal fibroid was found in the lower uterine segment along the incision site. Myomectomy was successfully done. Baby was extracted by vertex with 2 tight loops of cord around the neck measuring 72cm. 1 pint of PRBC was transfused intraoperatively. Post operative period was uneventful.
lesions scattered in the myometrium largest of size, 5.8*6.9*5.2cm in the posterior myometrial wall with calcification. After proper counselling, patient was taken up to OT. Intraoperatively, uterus was 28 weeks size. Right ovary was adhered to posterior uterine wall. Anteriorly bladder was pulled up and adhered to the previous hysterotomy scar. Multiple fibroids were seen of which 2 were subserosal each measuring 2*3cm at the uterine fundus. Patient underwent total abdominal hysterectomy with right oophorectomy.1 Pint PRBC was transfused intraoperatively. Patient recovered well and was discharged on post operative day 7.

**Case 8**
A 32 year old, G3P2L1 with 37 weeks 5 days gestation, referred from district hospital in view of severe preeclampsia. Patient was taken for emergency LSCS. Intraoperatively, Couvelaire uterus with an intramural fibroid of 15*13cm in the posterior wall in the lower uterine segment present. Baby was extracted by vertex with normal APGAR score. Retrop placental clots of 250gm present. Since there was atomic PPH which was uncontrolled by medical management, patient underwent peripartum hysterectomy. Intraoperatively 4 pints PRBC and 2 pints FFP was transfused. Post operative recovery was uneventful and the patient was discharged on post operative day 8.

Fig 7: Case 8: Couvelaire uterus with an intramural fibroid of 15*13cm in the posterior wall in the lower uterine segment present

**Discussion**
Fibroids are the most common gynaecological tumors seen in the reproductive age group females. The incidence is around 50%. Uncommonly fibroids may undergo degeneration, like cystic, hyaline or red degeneration. These degenerative fibroids can present with acute pain abdomen. As most of the uterine myomas are asymptomatic, the number of undiagnosed uterine fibroids is large. The most common presentation as we have described in the first three cases is menstrual irregularities. Compression symptoms are mostly found in giant fibroids (size>50cm) cases. The largest size that we have got in out institute is 20cm with 2.734kg (case 2). The incidence of cervical leiomyoma is 1-2% and are found mostly in the supravaginal portion [2]. Anterior fibroid exerts pressure on the bladder, whereas, the posterior fibroid pushes the pouch of Douglas posteriorly, thereby compressing rectum against sacrum as seen in case 4. Preoperative GnRH analogue administration for 3 months reduces intraoperative blood loss and facilitates surgery by reducing size and vascularity of fibroid. However, the disadvantage of them is that they destroy the fine plane of cleavage making myomectomy difficult. Preoperative imaging and mapping of fibroid to see for size, number, location and its effect on surrounding structures makes one to prepare for difficult steps of surgery. Preoperative DJ stenting helps to prevent ureteric injury intraoperatively. Various surgeries or better known as fertility sparing surgeries are also available for leiomyoma like myomectomy. Vasopressin infiltration helps in reducing the haemorrhage and to have proper plane for dissection. Consent for hysterectomy should always be explained to relative’s prior myomectomy. Pregnancy following myomectomy is high as 50-70%. Outcome of laparoscopic myomectomy has a better outcome than open laparotomy. Power morcellator and the use of endo peritoneal bags have made the procedure more safe. Management with HIFU is claimed to be superior to surgical management in terms of subsequent pregnancy outcome. Fibroids complicating pregnancy are mostly asymptomatic and only 9% present with pain abdomen, mostly in the 2nd and 3rd trimester. As per the largest study done of fibroids complicating pregnancy in Romanian tertiary care hospital in 2022, vaginal delivery were in 7% of the cases, with caesarean delivery in 85.96%.68% were diagnosed in the first trimester and the myomectomy rate was 24.48%. In case 5, the fibroid was an incidental finding which was not recognised in scan. Successful myomectomy was achieved without further post operative complications. Where as in case 4, this patient was an unbooked case, and a classical caesarean section was performed leaving the myoma untouched. Case 7 is a case of uterine leiomyoma complicating fertility. Patient underwent myomectomy during the first pregnancy, and again ended up with hysterectomy due to recurrence. Women may have the options for good quality of life following hysterectomy rather than persistant morbidity due to bleeding and poor health. So, age may not always be the determining factor as seen in this case. In a study by Noot et al, about 13.33% patient landed with caesarean hysterectomy due to large lower uterine segment fibroid.3Myomectomy during caesarean section is generally avoided because of its increased risk of haemorrhage. However surgery is indicated for torsion of an isolated pedunculated leiomyoma. Availability of blood products, use of oxytocics and the presence of multidisciplinary team with the presence of a pelvic surgeon is important. Cesarean myomectomy is thus to be avoided whenever possible as it may lead to excessive bleeding during the procedure, placenta accreta spectrum in the following pregnancy.

**Conclusion**
Uterine leiomyoma can present with various symptoms of which menstrual irregularities is most common. The management modality is purely based on the patient’s symptoms. Cesarean myomectomy decision is a challenge and will depend on the site and size of the myoma.

**Conflict of Interest**
Not available

**Financial Support**
Not available

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