



GIANT UTERINE MYOMA(4.1KG) WITH SIMPLE RENAL CYST : A RARE CASE REPORT

Gynecology

Dr Chandrashekhar T Professor, Dept of OBG, VIMS Ballari

Dr Vanaja D Assistant Professor, Department of OBG, VIMS, Ballari

Dr ILA R Bhadrashetty Postgraduate, Dept of OBG, VIMS Ballari

ABSTRACT

Leiomyoma are the most common benign tumors arising from smooth muscles of uterus whose growth is influenced by estrogen and progesterone. Here we report an unusual case of giant uterine myoma with simple renal cyst. A 40 year old female, presented with complaints of pain abdomen and mass per abdomen since 1 year. Her USG and CECT abdomen showed a well defined large homogenously enhancing lesion filling the whole abdominal cavity from pelvis to subdiaphragmatic area with large retroperitoneal renal cyst. Intraoperatively, total abdominal hysterectomy was done to remove solitary fibroid of 20 x 12 x 10 cm weighing 4.1 kg. Patient sustained the procedure well. Histopathology revealed uterine leiomyoma with calcific degeneration. Conclusion: With wide use of ultrasonography in the present settings, encountering such giant uterine myoma is rare. Tackling such large fibroids require expertise and pose challenge in avoiding injury to adjacent structures intraoperatively.

KEYWORDS

Giant, Myoma, Uterine Fibroid, Leiomyoma, Surgery, Simple Renal Cyst.

INTRODUCTION:

Leiomyoma are the most common benign tumors of uterus. They arise from smooth muscles of uterus and are monoclonal in origin. Their growth is influenced by estrogen and progesterone. They occur in 50% of reproductive age group women. (5kg myoma). They can be classified as submucosal, intramural, subserosal. Symptoms of fibroids generally depend on its location and include menstrual dysfunction, pelvic pain, urinary symptoms, constipation, etc. Infertility, abortions and pregnancy complications can also be seen in setting of fibroids. Management methods of fibroids are based on various factors like patients age, presenting symptoms, size and location of fibroid, desire for future pregnancy. Expectant management, medical treatment, uterine artery embolisation, High intensity focused ultrasound (HIFU) are alternatives to classical surgical treatment. Surgical interventions can be myomectomy or hysterectomy based on patient profile. Both procedures can be done either by laparotomy or laparoscopy. Hysteroscopic removal of submucosal fibroid is also an option. In case of large uterine fibroid with possibility of extending over adjacent structures, conservative management is difficult and surgical procedures are required often. Hysterectomy becomes mandatory in such situations.

Case Report:

A 40 year old female, P1L1, with previous FTVD 22 years back, presented with complaints of pain abdomen and mass per abdomen since 1 year. Her menstrual cycles were normal and regular. On clinical examination, patient had good general health. Abdomen was uniformly enlarged and pendulous, with bilateral fullness of flanks, a large mass of 32 weeks uterine size with smooth surface, regular borders, hard consistency, non tender with free horizontal mobility was noted. Its lower border could not be made out. Hernial orifices were normal. No lymphadenopathy noted. Cervix was pulled up on per speculum examination. Forniceal fullness noted on per vaginal examination. Her USG abdomen and pelvis showed: "large hypoechoic mass lesion in lower abdomen with left ovarian cyst (10*4cm) and large retroperitoneal cyst (11*12cm) in left lumbar region." CECT abdomen and pelvis showed "Large cystic lesion of 11*7cm in left lumbar region playing upper pole of left kidney with beak sign S/O exophytic left renal cyst class II A well defined large homogenously enhancing lesion of size 16*8 CM seen extending from fundus of uterus into lower abdomen S/O uterine myoma"

Patient was taken up for elective surgery. A midline longitudinal incision was made from the pubic symphysis to umbilicus to open abdomen. An enlarged uterus extending up to the xiphisternum, firm in consistency with enlarged superficial veins and superficial focal calcific areas was seen. No adhesions to the intestinal organs were observed. Right ovarian cyst of 2*2 cm noted with normal looking left

ovary. The bilateral fallopian tube, round ligaments were stretched out and thickened. A total abdominal hysterectomy was performed. Intraoperative blood loss was 250 ml. Specimen was of 4.1 Kg, weighed postoperatively with dimensions 22x20x20 cm. Left renal cyst was managed conservatively. Patient's postoperative clinical course within 5 days of hospital stay was complication-free with quick recovery. She was discharged after 5 days of surgery in stable condition.

HPE report of the surgical specimen showed: leiomyoma uterus with calcific changes

DISCUSSION:

Uterine leiomyomas are the most common benign smooth muscle tumors of the female genital tract occurring commonly in reproductive age group. The etiology of these tumors is yet to be clearly known, but are probably due to the influence of the hormones progesterone and estrogen as their incidence is increased in the reproductive years and decrease after menopause.

They can be uterine and extrauterine fibroids. Uterine fibroids are further classified into intramural (70%), submucosal (20%), subserosal (10%), cervical (1%). Occurrence of Giant uterine leiomyomas is rare in recent years in part due to increased health seeking behavior and early diagnosis with increased use of ultrasonography.

Giant uterine leiomyomas are defined as those tumors that weigh more than 11.4 kg or a diameter more than 17 cm or dimension more than 33x28x22 cm.^[1,2,3] In our case, patient reported late and it can be explained by the fact that benign tumors like fibroid can outgrow quietly without causing specific symptoms due to large volume of the abdominal cavity, abdominal wall flexibility and slow growth rate of the tumor. The largest myoma ever reported weighed 63.3 kg and was removed during postmortem.^[4] After molecular analysis in recent studies it has come to an understanding that MED12 gene is associated in the pathogenesis of these tumors and MED12 negative genotype is associated with larger fibroids.^[5,6] These giant neoplasm usually causes abnormal uterine bleeding, pelvic pain, back ache and pressure effects on adjacent structures leading to obstructive uropathy, deep vein thrombosis and can lead to respiratory failure and deranged renal parameter.^[2]

Perioperative patient condition optimization and careful planning of surgical procedures using critical diagnostic modalities are required for better management of giant uterine leiomyoma. Following studies showed increased chances of massive blood loss and requirement of difficult surgical procedure was likely while managing giant uterine leiomyomas.

1 Jonas et al.[7]	Perioperative mortality rate of 14.8%–16.7% with giant uterine leiomyomas
2 Lim et al. [8]	7 L of intraoperative bleeding, postoperative circulatory disorder, and abnormal coagulation with removal of 27.8- kg giant uterine leiomyoma
3 Steward et al. [9]	2 L of intraoperative bleeding, followed by 5.0 L of intraperitoneal rebleeding resulting in DIC requiring bilateral iliac artery ligation, mass transfusion and systemic management in the intensive care unit on operating 11.6-kg giant uterine leiomyoma.
4 Amber et al. [10]	1.8 L of intraoperative bleeding and 2.0 L of intraperitoneal rebleeding that caused shock while 26.9-kg giant uterine leiomyoma was operated.

Diagnosis of uterine fibroids starts with a detailed pelvic examination. Ultrasonography is the initial investigation of choice due to its low cost and decreased radiation exposure, but in case of giant fibroids the organ of origin cannot be ascertained in this investigation.^[2] In such case a CT/MRI of abdomen and pelvis is required to rule out other differential diagnosis that include- ovarian cystic neoplasm, hematometra, endometriosis, leiomyosarcoma.^[11]

However, at present no single investigation can diagnose a giant uterine leiomyoma pre-operatively and it is usually diagnosed intraoperatively during laparotomy and confirmed with histopathological examination like in our case, where the giant abdominopelvic mass was found arising from the uterus and pathology revealed leiomyoma with calcific degeneration.

Giant Fibroids cannot be treated with the most widely used minimally invasive surgery techniques: hysteroscopic myomectomy, vaginal hysterectomy, or total laparoscopic hysterectomy (TLH). Similar to our case, the majority of giant fibroids are removed during total abdominal hysterectomy with additional context specific bilateral salpingo-oophorectomy. Intraoperative complications such as hemodynamic instability due to extensive blood loss, injury to adjacent structures, increased operative time are possible.^[12] The general morbidity and mortality in patients who receive a laparotomy is remarkably higher compared to MIS. Postoperative complications include venous thrombosis and acute renal failure.^[13]

Patient's health awareness status, family background, low socioeconomic background could have contributed to her worsening condition. The delay in seeking care could be explained by her lack of complaint regarding irregular menstruation and attributing abdominal mass simply to weight gain. Women with fibroids of this size are expected to most likely suffer from menstrual disorders [1] but our patient presented with regular menstrual cycles. This case was well planned yet challenging to us as fibroids of this enormous size are rare. Surgical challenges of access, intraoperative determination of anatomy, and hemorrhage were anticipated. Such large masses with uncertain diagnoses pose challenges for surgeons and surgical expertise almost always helps in better patient care in such critical cases. The patient was relieved after her treatment and was discharged in stable condition.

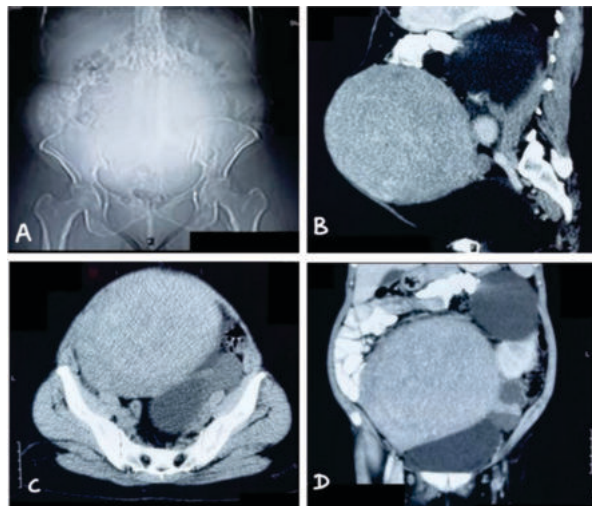


Figure 1 : CT reveals extensive abdominal enlargement in the scout view

A-scout view, b-sagittal section, c-coronal section, renal cyst with splaying and beak sign (white arrow) can also be visualized, d-transverse section.

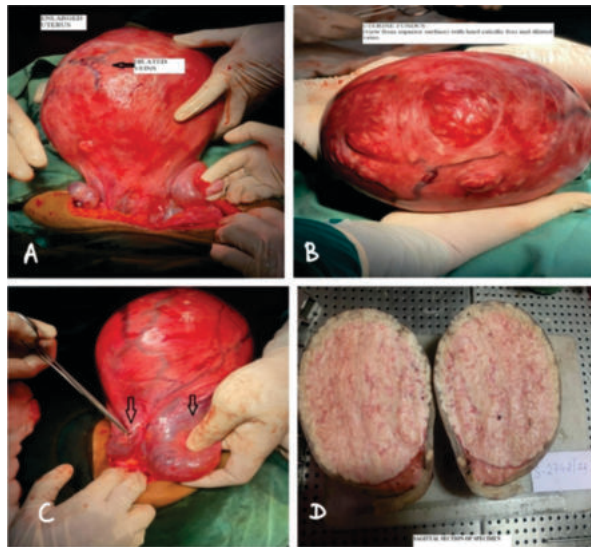


Figure 2 : intraoperative images :

- a- Enlarged uterus with dilated superficial vein
- b- Uterine fundus with calcific changes and dilated veins
- c- Bulging broad ligament – due to bulk of the mass
- d- Cut section of gross specimen showing large fibroid (pearly white with whorled appearance)

CONCLUSION:

Giant fibroids pose a diagnostic and surgical challenge, requiring expertise and multi-modality management. Despite expected risks these gigantic benign tumors can be managed complication-free with proper diagnosis and surgical expertise.

Informed Consent : Written informed consent was taken from patient for publishing of this case and accompanying images.

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