

## Case Report

# Giant uterine fibroid: a rare differential diagnosis for an abdominopelvic mass

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## ABSTRACT

Uterine leiomyomas also called as fibroid uterus are commonest tumors of the female genitourinary tract, however the occurrence of a giant uterine fibroid is rare. The giant uterine leiomyomas pose a great diagnostic as well as surgical challenge due to its size, vague nonspecific symptoms and the inadvertent injury to the adjacent organs during surgery. Here we would like to report a case of a 42 years female, known psychiatric patient with complaints of progressive abdominal distension for 5 years with rapid enlargement in the past 1 year with amenorrhea for 6 months and constipation for 2 months. Pre-operatively patient was diagnosed with ovarian malignancy and was proceeded with staging laparotomy where the mass was found to be arising from the uterus. Patient underwent total abdominal hysterectomy with bilateral salpingo oophorectomy and pathological examination revealed fibroid uterus with cystic degeneration. Post-operatively the patient recovered well and was discharged and on follow up examination was found to have returned to her normal life.

**Keywords:** Giant fibroid, Giant leiomyoma, Ovarian neoplasm, Abdominopelvic mass

## INTRODUCTION

Uterine leiomyomas are tumors arising from the smooth muscles of the uterus.<sup>1</sup> They occur most commonly in the reproductive age group and incidence decreases rapidly after menopause pointing towards hormonal factors as the cause for the neoplasm.<sup>2</sup>

Giant uterine leiomyomas are rare because fibroids are usually slow growing at an average growth rate of 9% in 6 months included in the differential diagnosis for abdominal pelvic mass.<sup>3,12</sup>

Giant uterine leiomyomas are defined as leiomyomas weighing more than 11.4 kg. Giant uterine leiomyoma are rare in current health care setting due to increased awareness and better health seeking behavior. As

leiomyomas grow and reach larger dimensions, they cause pressure effects on adjacent structures and cause a strain on lungs and heart and are potentially life threatening. The largest fibroid that had been removed till date weighs 63.3 kg and it was removed post-mortem in 1888. The largest uterine tumor excised from a person who had survived the procedure is 45.4 kg.

Less than 100 cases of giant uterine leiomyomas had been documented in literature till now. Herein we reported this case of a 42 years old female presenting with an abdominopelvic mass, diagnosed initially as a case of an ovarian tumor and later found to have a giant leiomyoma intraoperatively. It is mainly to create awareness among the physicians, that even in the recent years there is a possibility of a giant uterine leiomyoma as a differential diagnosis for an abdominopelvic mass.

**CASE REPORT**

A 42 years old nulliparous women from Gudiyatham, India housewife by occupation, separated from her family presented to the OPD with complaints of abdominal distension for 5 years, gradually progressive initially with rapid progression and vague abdominal pain for 1 year and amenorrhea for 6 months and constipation for 2 months. She was a known case of seizure and psychiatric disorder on irregular treatment. No significant family history. She had BP been on native treatment for abdominal distension earlier. She is a known case of hypertension and had been on native treatment for abdominal distension.

On examination she was depressed, dyspneic, Tachypneic and examination of the abdomen revealed a well distended abdomen with 8x8x6 cm reducible umbilical hernia. An abdominal mass of size 40x30x30 cm covering all four quadrants was palpable. On percussion fluid thrill was present. Auscultation bowel sounds were heard. Per vaginal examination - Drawn up cervix with forniceal bulging. On per rectal examination there was no abnormality detected. After the initial examination the organ of origin of the mass and a provisional diagnosis of ovarian cystic neoplasm was made and further proceeded to investigation. Was thought to be ovaries.

Ultrasonogram of the abdomen and pelvis showed a large abdominal pelvic cystic lesion with a solid component arising in the midline. Contrast enhanced computed tomography of abdomen and pelvis showed- an abdominopelvic cystic mass measuring 26.1x36x34 cm with solid component measuring 15x9 cm with punctuate calcification. The organ of origin was not identified and uterus and ovaries were not separately visualized. A large defect of size 8 cm noted in the umbilical region. Tumor markers: CA 125 and LDH were 178 and 235 IU/l (marginally elevated), beta HCG and AFP were untraceable and within normal limits respectively. The patient was planned for staging laparotomy with the probability of an ovarian neoplasm in mind and adequate preoperative preparation done and subsequent treatment of her psychiatric and seizure disorder was reinitiated.

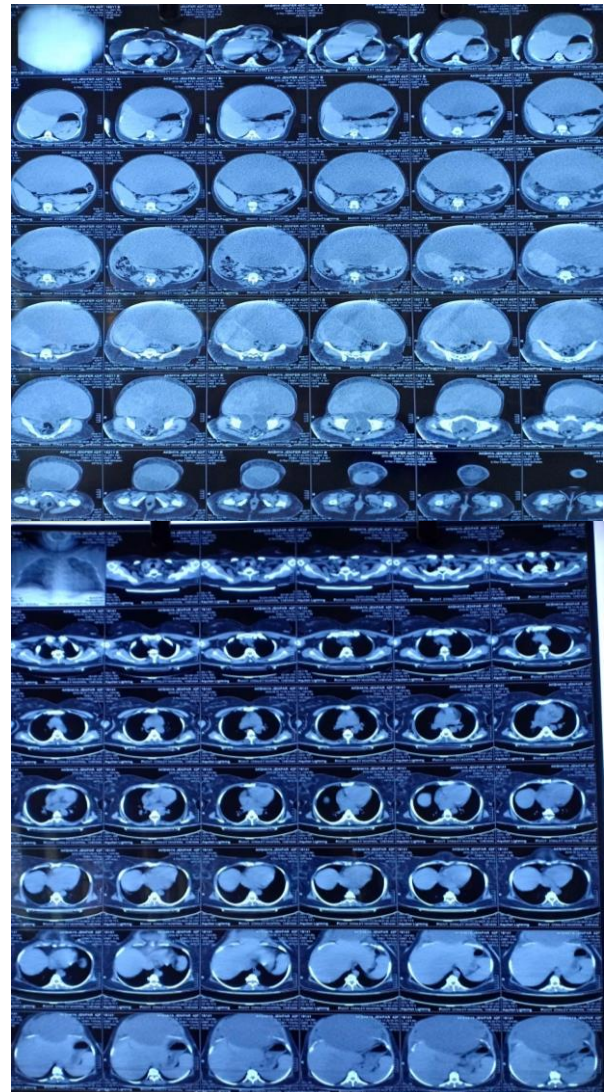
On exploration there was a huge cystic lesion was arising from the uterus and bilateral tubes and ovaries were normal. There was no hepatic or peritoneal metastasis and bowel and omentum was found to be normal. Hence, a decision of total abdominal hysterectomy with bilateral salpingo oophorectomy was done After a long surgery of 5 hours, a hysterectomy specimen that weighed nearly 22 kgs was removed and it contained around 14 l of hemorrhagic fluid.

Peritoneal fluid analysis showed- reactive mesothelial cells. HPE report of the specimen showed- atrophic endometrium, myohyperplasia of myometrium. Intramural and subserosal leiomyoma with cystic degeneration, chronic endocervicitis, both ovaries and

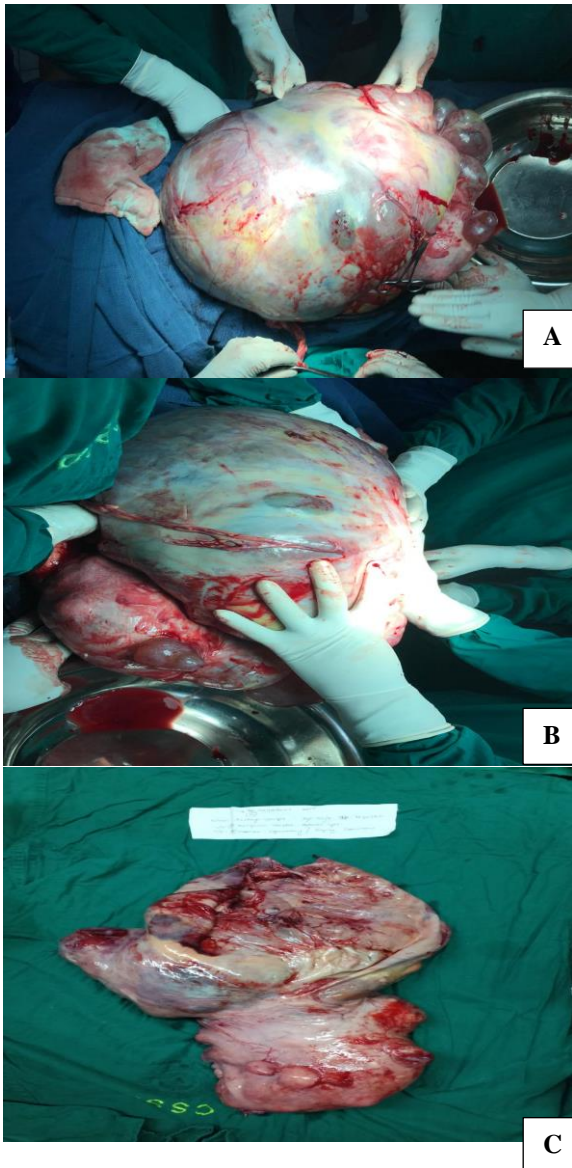
fallopian tubes were found to be normal. Post-operatively the patient was kept under close monitoring and ICU observation. Post-operative period was unremarkable and she was discharged on 10th post-operative day after suture removal.



**Figure 1: Photographic images of abdominopelvic mass in frontal and lateral views.**



**Figure 2: CECT images of the abdominopelvic mass.**



**Figure 3: Intra-operative image and post-operative respected specimen.**



**Figure 4: Post-operative image of the patient after removal of the tumor.**

## DISCUSSION

Uterine leiomyomas also known as fibroid uterus are the most common benign tumors of the female genital tract of women of reproductive age group that arise from the smooth muscles of the uterus. The incidence of uterine fibroid decreases after menopause. The etiology of these tumors is not clearly known, but are probably due to the influence of the hormone's progesterone and estrogen due to their increased incidence in the reproductive years.

They are classified into extrauterine and uterine fibroids that are further classified into intramural/interstitial (75%), submucosal (15%), subserosal (10%), cervical (1%). Giant uterine leiomyomas though a fibroid, are a rare occurrence in recent years and it is also in part due to increased health seeking behavior.

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 33×28×22 cm.<sup>2,4,11</sup> Till date there had been less than 100 cases of giant uterine fibroids reported in literature. The largest leiomyoma that was removed post-mortem in 1888 weighed 63.3 kg and from a living person who survived the procedure weighed 45.5 kg.<sup>5</sup>

Uterine fibroids grow into large tumors without producing any symptoms due to their slow rate of growth, elasticity of the abdominal wall and large capacity of the abdominal wall.<sup>6</sup> 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.<sup>12,13</sup> 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.<sup>2</sup> Though these tumors grow to large sizes their chance of malignant transformation is low. On progressive enlargement they can undergo other secondary degenerative changes like hyaline degeneration, dystrophic calcification, cystic degeneration and sarcomatous changes.

In our case the mass had undergone cystic degeneration which occurs only in around 4% of all the fibroids and secondary changes are seen more in the central portion due to the radial manner of blood supply to the fibroid.<sup>1,2</sup>

The diagnosis of uterine fibroids starts with a pelvic examination, but the smaller fibroids are usually missed in this examination.<sup>3</sup> Hence, radiological examination is required to know the location, extent, size and the number of fibroid.<sup>6</sup> 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.<sup>2,7</sup> In those case a CT/MRI of abdomen and pelvis is requires

and is useful to differentiate among the differential diagnosis that includes- ovarian cystic neoplasm, hematometra, endometriosis, leiomyosarcoma.<sup>6,8,9</sup> Tumor markers are also helpful to differentiate giant fibroids from ovarian neoplasms which is a close differential diagnosis. However, it is important to know that there is no single investigation at present that can diagnose a giant uterine leiomyoma pre-operatively and it is usually diagnosed intra-operatively during laparotomy or histopathological examination that had occurred in our case, where the giant abdominopelvic mass was found arising from the uterus and pathology revealed leiomyoma with cystic degeneration.

The treatment in case of a uterine fibroid is dependent on two important factors namely the severity of the symptoms and patients desire to preserve fertility/parity of the female.<sup>7</sup> The array of treatment options available are from expectant/medical management to surgical management- total abdominal hysterectomy with bilateral salpingo Oophorectomy. Expectant or medical management of fibroids are done when tumor is small or moderate in size and are less symptomatic, but patients with giant leiomyoma require surgery and pose a great challenge to the operating physician like blood loss, inadvertent ureteric, bladder injury or bowel injury.<sup>10</sup> And post-operatively patient can have respiratory compromise and increased mortality. Therefore, the size of the tumor should initially be Decreased using GnRH agonist. Uterine artery embolization can also be tried to reduce the vascularity and cause infarction to the myoma. Surgical options available for the patient include myomectomy, myolysis and hysterectomy. Total abdominal hysterectomy with bilateral salpingo oophorectomy is the conventional treatment for giant uterine leiomyoma, but for women who want to preserve their fertility-myomectomy or myolysis can be performed via laparoscopy/hysteroscopy/laparotomy. Laparoscopy/vaginal approach for a leiomyoma is associated with decreased morbidity and better recovery in post-operative period.

## CONCLUSION

Giant uterine leiomyomas though rare should always be kept in mind as a differential diagnosis for abdominopelvic mass under evaluation. Ultrasound remains the initial investigation of choice to diagnose leiomyomas, however there is no single preoperative investigation that can diagnose a giant uterine leiomyoma and hence high suspicion is required for diagnosis preoperatively, however these tumors are usually diagnosed intra operatively and after histopathological examination. Since giant uterine leiomyomas can cause respiratory failure adequate preparation with incentive spirometer preoperatively and adequate postoperative care and multi-disciplinary approach for treatment is

required for decreasing morbidity and mortality and to achieve a better outcome for the patient.

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