

A Rare Case of Huge Broad Ligament Fibroid with Degenerative Changes Mimicking as Complex Ovarian Cyst

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Abstract

We report an unusual case of a huge broad ligament uterine fibroid with degenerative changes mimicking as a complex ovarian cyst on ultrasonography and CECT with the diagnostic difficulties posed. A 48-year-old married female presented with complaints of abdominal distention and a palpable abdominopelvic mass occupying whole of lower abdomen. Ultrasonography and CECT revealed a large mass with few internal septations extending into both uterine adnexa. The patient underwent a laparotomy. Gross examination revealed normal ovaries and a huge mass with prominent degenerative changes, originating from the uterus. The tumor was excised and pathologic evaluation revealed a broad ligament fibroid with degeneration. In conclusion, a huge broad ligament leiomyoma with degenerations can mimic a complex ovarian cyst on imaging studies. Therefore, broad ligament fibroid with degenerations should be considered during the differential diagnosis of large adnexal masses

Introduction

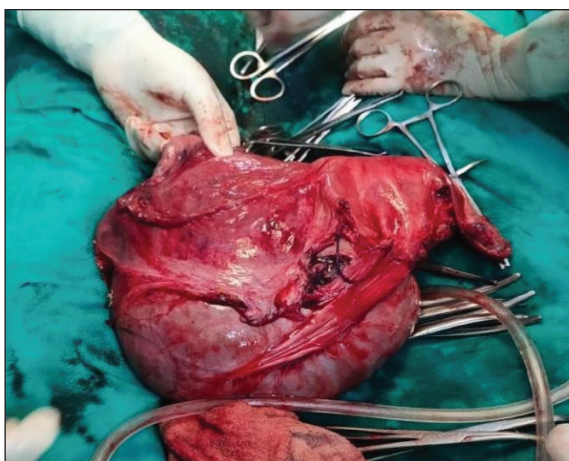
Leiomyoma of the uterus is the most common benign tumor of the female pelvis in the reproductive age group, which arises from uterine smooth muscle. It may arise in the broad ligament or at other sites where smooth muscle exists. They may be asymptomatic in more than 50% of patients or present with heavy menstrual bleeding, infertility or pressure effects if large or with pain if undergoing torsion. Broad ligament fibroids generally present with pressure symptoms like bladder and bowel dysfunction. They have typical easily recognizable appearance on

imaging. Confusion in imaging studies may arise when fibroids present in unusual locations or undergo degenerations, which must be kept in mind. Here, we present a case of a woman with giant uterine myoma that had undergone extensive cystic degenerative changes, camouflaging an ovarian malignancy.

Case Report

A 48 year old female admitted in Shri Krishna Medical College and Hospital, Muzaffarpur, Bihar with complaints of abdominal mass and gastric upset along with pain in abdomen during menses since 1 year with insidious onset of diffused, dull aching and intermittent abdominal pain for 3 months. She had a weight gain of approximately 8 Kgs with a feeling of heaviness and hardness in the lower abdomen. She had 2 full term deliveries by cesarean section. She had regular and cyclical menstrual pattern. Examination revealed average build and nutrition. Her vital signs

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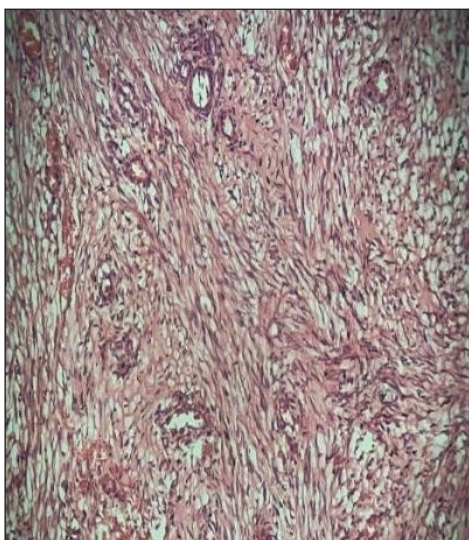
(Fig 1)



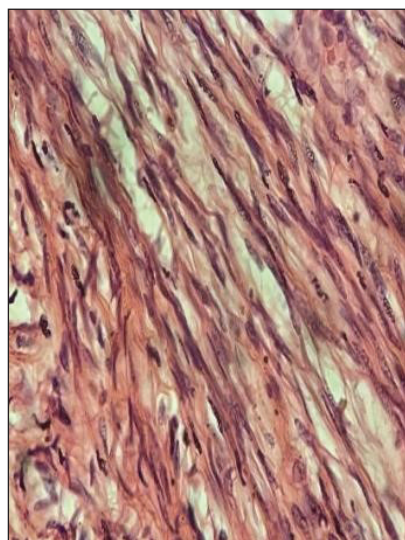
(Fig 2)



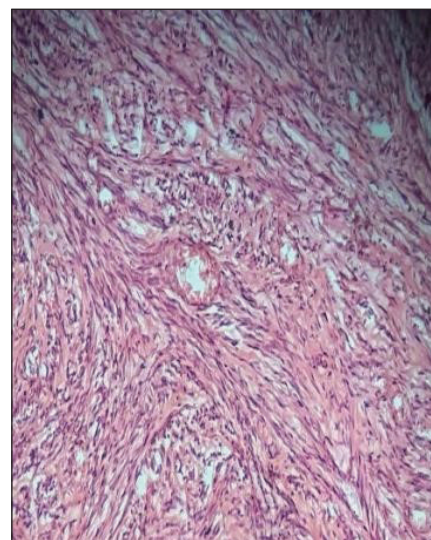
(Fig 3)



(Fig 4)



(Fig 5)



(Fig 6)

were within normal limits. Systemic examination was normal. Entire lower abdomen was uniformly distended by a 25x20 cm mass with smooth surface, regular well defined margins, side to side mobility, non-tender mass firm in consistency arising from, pelvis reaching 4 cm above umbilicus. Shifting dullness was absent. In per speculum examination cervix could not be visualized. Per vaginum examination revealed that cervix was firm and downwards but deviated to the left side; uterine size could not be properly assessed properly. The same mass was felt through all fornices with cervical movements not being transmitted to mass. Per rectal examination was normal. Complete blood count, serum electrolyte levels, tests of liver and renal function were normal. Ultrasonography and CECT revealed a huge 23x15x22 cm abdominopelvic cystic lesion with multiple internal septations and solid components likely arising from right adnexa suggestive of primary epithelial ovarian malignancy

(serous cystadenocarcinoma) without ascites. However, the tumor markers were within normal limits. With a probable diagnosis of ovarian tumor, the patient was taken up for staging laparotomy. An abdominal midline xiphopubic vertical incision was made. Peritoneal washings were taken from paracolic gutters, pouch of Douglas and sent for cytology. It was seen that uterus and bilateral ovaries were normal. Enclosed between the leaves of broad ligament a large 25x20x22 cm, smooth, cystic mass with solid components was seen arising from right lateral wall of uterus between right round ligament and right uterine artery and pushing the right ovary posteriorly. Enucleation of the mass was done after opening the right broad ligament and dividing the round ligament. The Uterus and bilateral ovaries were removed as patient had completed her family. Postoperative recovery of patient was uneventful.

Gross histopathology specimen showed 25x20x22 cm smooth, multiloculated solid cystic mass with intact capsule weighing 3.4 Kg multiple thin septations filled with gelatinous and mucoid material was found suggestive of degeneration and calcification.

Microscopic and Histopathological Findings:

Section shows predominantly fascicles of smooth muscle cells in a myxoid background. Cells have cigar shaped nuclei with mild eosinophilic cytoplasm. Areas of necrosis or atypical mitotic figures are not seen.

Impressions-Features Suggestive of Broad ligament fibroid with degenerative changes.

Discussion

Leiomyoma of the uterus is the most common tumor of female pelvis with a prevalence of 20%-30%. Extrauterine location of fibroids are rare. Leiomyoma occasionally occurs with unusual growth pattern or in unusual locations that makes their identification more challenging, both clinically and radiologically. In 50% of cases there are no symptoms.¹ They are usually asymptomatic but have a potential to grow to a very large size which can present as pressure symptoms of pelvic pain and bladder or bowel dysfunction.⁴⁻⁶ The extra-uterine location of leiomyoma can be in broad ligament, ovary, urinary bladder, urethra, vulva, vagina or anywhere there is smooth muscle.⁵⁻⁷ In the broad ligaments the fibroid can be of two types i) true broad ligament fibroid which can arise from smooth muscle of round ligament, tubo-ovarian ligament or smooth muscle of uterine artery or ovarian vessels; ii) false broad ligament fibroid which arises from lateral wall of uterus or cervix. Most common secondary changes are degeneration, infection, hemorrhage, necrosis and rarely sarcomatous change. Degeneration like cystic, hyaline, myxoid or red degeneration occur when fibroids outgrow their blood supply.

Calcification follows necrosis. Out of these, hyaline degeneration is common occurring in about 60% of cases whereas cystic degeneration is rare in about 4%. These degenerations pose a diagnostic challenge in imaging studies. CT is not the primary modality in the diagnosis of fibroid.³ Degenerating fibroid can mimic ovarian tumor, endometrioma and abscess on ultrasound. Among extra-uterine fibroids, broad ligament fibroids generally achieve enormous size and generally present with pressure symptom like bladder and bowel dysfunction.^{8,9} The diagnosis of broad ligament fibroid is difficult. The most useful modalities are USG, CT and MRI. The differential diagnosis of broad ligament fibroid includes pedunculated subserosal fibroid projecting towards the broad ligament, solid ovarian neoplasm, broad ligament cyst and lymphadenopathy.⁷ Typically a fibroid on ultrasound appears solid in echogenicity with hypogenic shadowing. Degenerations give heterogeneous appearance. Our case was a false broad ligament fibroid which originated from uterus and grew within the folds of broad ligament with marked cystic degeneration. However, appearance of normal ovary should have been seen in our case which was missed on both ultrasound and in CT by radiologist. Surgery in such cases is challenging because of size and location of these fibroids especially since surrounding organs such as ureter, intestines and urinary bladder are at risk to get injured.^{8,9}

Conclusion

Although fibroids typically have a characteristic ultrasound appearance, degenerating fibroids can have variable patterns and pose diagnostic challenges. Ours is an unusual case of a leiomyoma with extensive cystic degeneration presenting with symptoms of gastro intestinal pathology, masquerading as a cystic epithelial ovarian tumor. We are reporting this case on account of its rarity and diagnostic difficulties.

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