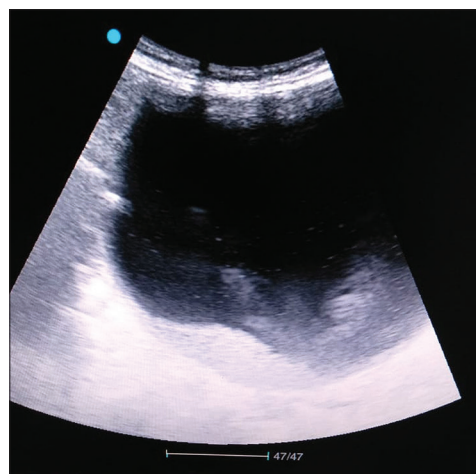


# A Rare Case of Cystic Degenerated Fibroid Masquerading as an Ovarian Mass

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A 42-year-old multiparous tubectomized woman presented with chief complaints of lower abdominal pain for 6 months. She had no menstrual complaints. Her menstrual cycles were regular 5/30 days with average flow, and her last menstrual period was 8 days ago. No other significant history was present. Her general examination findings were unremarkable. Abdominal examination revealed a well-defined mass arising from the pelvis up to 18 weeks uterine size. The mass was soft in consistency, nontender, horizontal mobility was present, and the lower limit of the mass could not be felt. Per speculum examination revealed healthy cervix and vagina. On bimanual examination, the mass was felt through anterior fornix and uterus could not be felt separately from the mass. A differential diagnosis of fibroid uterus or an ovarian mass was made. Ultrasonography was done to identify the origin of the lesion. Transabdominal and transvaginal ultrasonography revealed normal sized uterus with endometrial thickness of 9 mm. A cystic mass was noted in the pelvis, measuring 11 cm × 9 cm × 11 cm with few septations [Figure 1]. The cyst wall was irregular, and the cyst wall thickness was 1.2 cm. Ovaries could not be separately visualized, and there was no evidence of free fluid in the abdomen. Ultrasound impression was that of benign mass of ovarian origin. CA-125 level was 19.8 U/ml. The results of routine laboratory investigations that included a complete blood count, serum electrolytes, liver and renal tests, and Pap smear were normal. She was planned for an exploratory laparotomy. Intraoperative finding was suggestive of a uterine mass of 18 weeks size, and the entire lesion was cystic in consistency. Bilateral ovaries and Fallopian tubes were normal. Total abdominal hysterectomy



**Figure 1:** Ultrasound image showing the mass lesion in pelvis

was performed [Figure 2]. The specimen was cut open and about 1 L of straw-colored fluid was drained from within the lesion. The intraoperative findings were suggestive of cystic degeneration of fibroid [Figure 3]. The postoperative period was uneventful. Histopathological examination of the specimen was reported as fibroid uterus with cystic degeneration.

Uterine fibroids or leiomyomas are the most common benign pelvic neoplasms with the prevalence of 20%–40% among women belonging to the reproductive age group.<sup>[1]</sup> Fibroids can be a source of pain, bleeding, and can lead to infertility in many women. Intramural fibroids are the most common, while submucous fibroids produce the most

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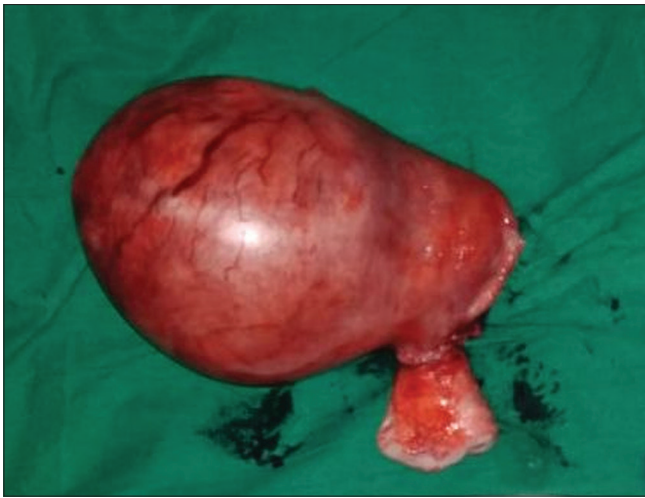
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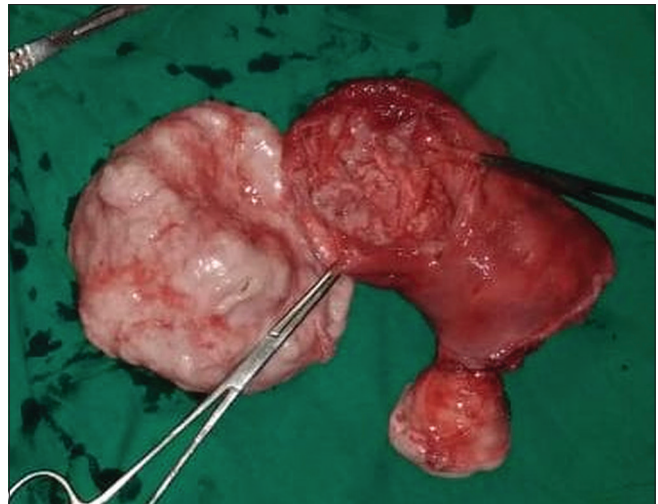
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**Figure 2:** Hysterectomy specimen

troublesome symptoms and subserous fibroids are most often asymptomatic. Fibroids have a typical appearance in ultrasound imaging, but atypical appearances can occur as a result of degenerative changes such as hyalinization and cystic degeneration making the diagnosis quite challenging.

Fibroids are benign uterine neoplasms predominantly composed of smooth muscle cells surrounded by a pseudocapsule.<sup>[2,3]</sup> Fibroids may be asymptomatic in 50% cases or can present with symptoms such as menorrhagia and dysmenorrhea, pain abdomen, mass abdomen, infertility, and pressure symptoms such as constipation, increased frequency of micturition, and urinary retention.<sup>[1]</sup> Fibroids can vary in size from microscopic to huge lesions. As fibroid enlarges, an imbalance between oxygen demand and supply can cause areas of degeneration.<sup>[2]</sup> The various types of degenerative changes observed include hyaline, myxoid, red, and cystic degenerations.<sup>[4]</sup> Hyaline degeneration is the most common type of degeneration, seen in 60% cases. Red degeneration most often occurs during pregnancy. Cystic degeneration is observed in about 4% of fibroid and is mainly a pseudocyst derived from liquefaction of hyaline changes.<sup>[5]</sup> Our patient presented with a huge mass of 18 weeks size without any menstrual symptoms. The preferred imaging modality for the initial evaluation of an abdominopelvic mass is pelvic ultrasonography, which is cost-effective as well as least invasive.<sup>[6]</sup> In ultrasound, fibroids typically present as hypoechoic, well circumscribed, homogeneous lesions localized in the submucosal, intramural, or subserosal region of the uterine body. Degenerative changes within the fibroid can produce atypical heterogeneous appearance in ultrasonography, thereby posing difficulty in the diagnosis. Cystic degeneration of fibroid generally manifests as a cystic lesion with solid areas and irregular walls. In the present case, ultrasonography was suggestive of an ovarian mass



**Figure 3:** Cut open specimen revealing cystic degenerated fibroid

due to the presence of predominantly cystic lesion. Besides ovarian neoplasm, other differential diagnosis should be considered in the evaluation of complex pelvic mass that include endometriomas, abscesses, adenomyosis, and uterine leiomyosarcomas.<sup>[2,3]</sup> In cases where diagnosis is doubtful, computed tomography or magnetic resonance imaging (MRI) can be done to appreciate the anatomy of the pelvic organs, but availability and cost of these imaging modalities are the limitations. MRI has shown to be extremely useful in the diagnosis of complex pelvic masses. Currently, MRI is the most effective method for the detection and classification of uterine fibroids, as it has good resolution for the demonstration of soft tissues and depiction of pelvic anatomy.<sup>[3]</sup>

Since, cystic degeneration of fibroid often contains fluid, it can be mistaken for an ovarian or adnexal mass, as reported in our case. Clinical dilemma will often result in unnecessary investigations, thereby further delaying the diagnosis. Hence, a sound knowledge about the complications of fibroid and a high index of suspicion is required for early and accurate diagnosis.

#### **Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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#### **Conflicts of interest**

There are no conflicts of interest.

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