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Diagnostic Dilemma of a Massive Cystic Degeneration of Uterine Fibroid: Case Report.

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ABSTRACT

Background: Uterine leiomyomas are the most commonly seen gynecologic tumours. The prevalence of uterine leiomyoma is 25–40% in reproductive age. Degenerative changes of a leiomyoma may lead to unusual presentation resulting in diagnostic dilemma preoperatively. The final diagnosis may be made either intraoperatively or from histological evaluation.

Case: We reported a 31-year-old multiparous woman presented to our faclity with complaints of abdominal pain and abdominal swelling of 8 months duration. Abdominopelvic ultrasound scan noted a right adnexal complex dual multi-septated cystic lesions. Serum ca-125 was slightly elevated 64U/ml. She had exploratory laparotomy and sub-total hysterectomy. Histology revealed cystic degenerated leiomyoma.

Conclusion: Cystic degeneration of leiomyoma, though uncommon, should be considered as one of the differential diagnosis in cases of huge cystic abdominal mass.

INTRODUCTION:

Uterine leiomyomas are the most commonly seen gynecologic tumours; their prevalence is 25–40% in reproductive age[1]. Fibroids originate from the smooth muscle cells of the uterine wall. Their size varies from microscopic to giant, and they can be submucosal, intramural, or subserous. Though we encounter huge uterine myomas, they are rare in actual practice[1,2].

The precise cause of fibroids remains unclear, but they are believed to be influenced by estradiol and various growth factors[1,3]. Fibroids can surpass their blood supply as they grow, triggering inflammatory responses and ischemic changes. This can result in different types of degeneration, including hyaline (60%), cystic (4%), red (3%), myxoid (1-3%), calcified (4%), and a rare form known as sarcomatous degeneration (0.1-0.8%)[4,5].

The typical appearances of leiomyomas are easily recognised on imaging. However, the atypical appearances following degenerative changes may confuse diagnosis[6]. Appropriate clinical and radiologic examination, with by appropriate surgical management and proper peri-operative care is necessary for full resolution and rehabilitation[5]. The complaints of fibroids can be menstrual disturbances, pelvic pain, constipation, micturition problems, or some effects on fertility such as miscarriage and preterm labour[1]. Fibroids are diagnosed with ultrasound or MRI with reasonable accuracy. However, the diagnosis may be complex, as in cases of pedunculated giant myomas with thin stalks and fatty cystic degeneration, or can be misdiagnosed as uterine sarcoma or ovarian tumour[1]. The diagnostic dilemma arises when leiomyomas undergo degenerative changes.

This is a case report of giant leiomyoma with massive cystic degeneration resulting in diagnostic confusion with ovarian malignancy on clinical evaluation and radiological findings[7,8]. Women suffering from ovarian tumours usually have pressure-related symptoms. She presented to us with an initial suspicion of a suspected ovarian tumour, which became a diagnostic dilemma for both the clinicians and the radiologists.

CASE PRESENTATION

A 31-year-old multiparous woman presented with complaints of abdominal pain and abdominal swelling of 8 months, with associated constipation and fever. There was an associated history of easy satiety and weight loss. She had regular menstrual cycles and no significant medical or family history. On examination, she was in mild painful distress and warm to touch with mild pallor. Systemic examination was normal. Abdominal examination revealed a distended abdomen with mild tenderness and a cystic mass estimated to be about 34 weeks of gestation. There was difficulty palpating other abdominal organs due to the mass. A pelvic examination revealed normal findings. An assessment of a huge ovarian tumour with suspected ovarian malignancy was made. Full blood count was within normal range with a HB of 11.3g/dl, WBC of 9.1x 109, she was sero-negative to HIV 1& 2, serum electrolyte, Urea and Creatinine was normal. Abdominopelvic ultrasound scan showed a bulky-sized, non-gravid uterus in an anteverted position, with dual right adnexal multi-septate cystic lesions measuring 18.16cm x 14.50cm and 11.4cm x 10.03cm, respectively. Myometrium was extended and surrounded the cystic mass. An impression of dual right complex adnexal multi-septate cystic lesions was made. CA-125 was 64U/ml (0 - 35).

An exploratory laparotomy with a subtotal hysterectomy and bilateral salpingo-oophorectomy was done with a midline incision. Intra-op findings showed a large cystic mass emanating from the uterus protruding through the fundus, occupying the entire upper abdominal cavity with dimensions of approximately 35cm x 30cm, and weighing 3.5kg (mass and uterus) [figures 1-3]. The blood loss at surgery was 1.2 litres. She was transfused with two units of fresh whole blood, one in the intra-operative period and one in the immediate post-operative. The recovery period was uneventful, and she was discharged home in a stable clinical condition on the fifth day post-operative. Histopathology revealed a leiomyoma with extensive cystic degeneration.

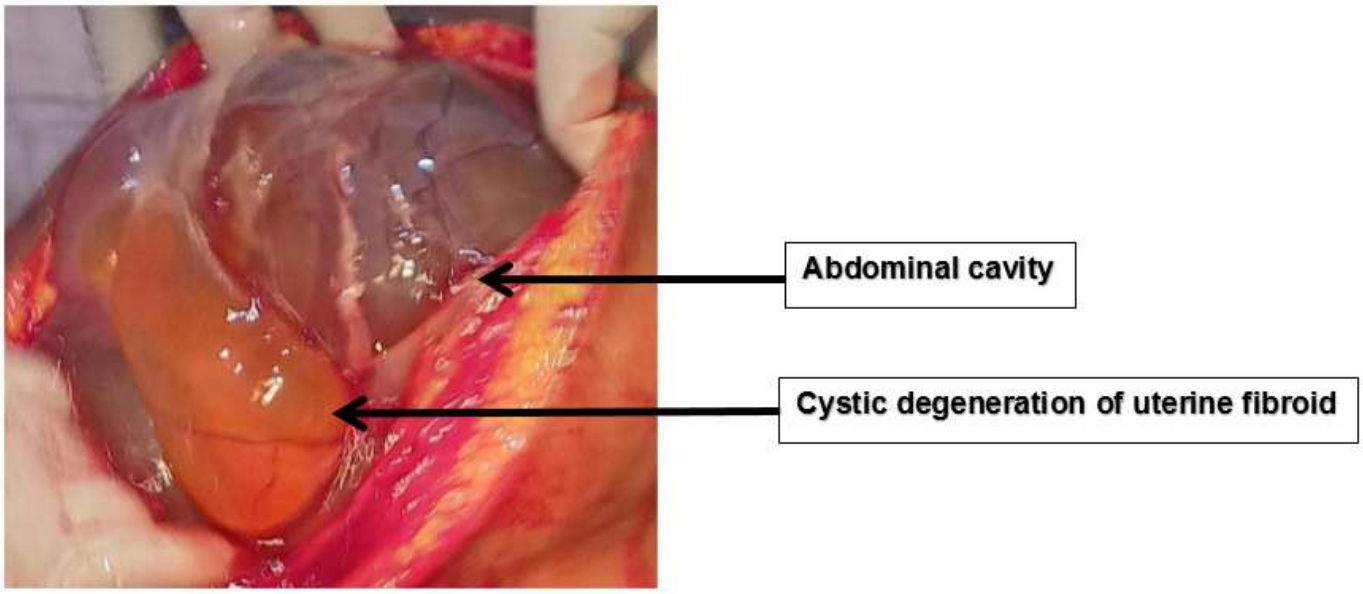

Figure 1: Mass occupying abdominal cavity

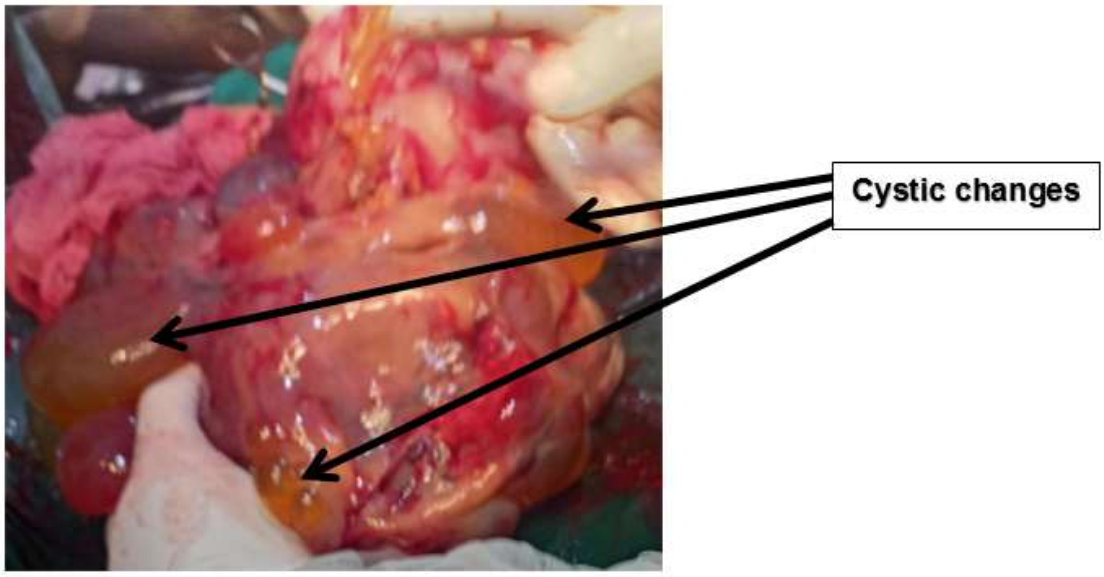

Figure 2: large uterine fibroid with cystic changes

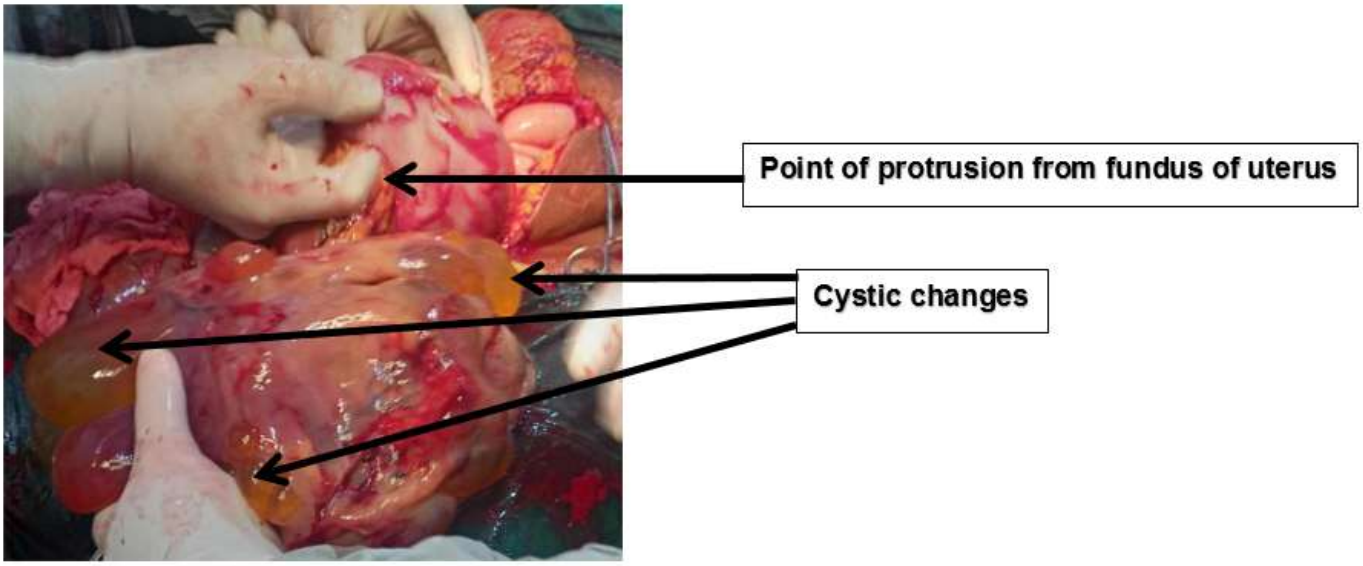

Figure 3: mass showing protrusion of cystic areas of uterine fibroid

DISCUSSION

Cystic degeneration of leiomyoma is a rare form of degeneration in uterine fibroids, representing a severe consequence of oedema[9]. As these fibroids grow, they may outstrip their blood supply, resulting in various degenerations, including hyaline, cystic, myxoid, red degeneration, or dystrophic calcification. Hyalinisation is the most common type of degeneration.

Uterine fibroids are usually asymptomatic, but symptoms may develop following degenerative changes. Degeneration causes fibroids to temporarily decrease in size, followed by an increase and subsequent degeneration. These changes lead to sequelae of symptoms, including acute stabbing abdominal pain, which may become chronic, fever, vaginal bleeding and abnormal menstruation[10]. Our patient presented with severe abdominal pain, fever, constipation, early satiety and weight loss. However, her menstrual cycle was regular and unaffected.

Diagnosis of cystic fibroid degeneration often presents significant challenges to both clinicians and radiologists, as they lead to unusual imaging presentations that may obscure proper diagnosis. Ultrasonography is the primary approach for diagnosing uterine fibroids, showing areas of minimal echogenicity, though irregular anechoic regions may be observed in cystic degeneration[11]. A transvaginal ultrasound offers greater clarity than a transabdominal approach, allowing for the identification of very small lesions and improving the differentiation between submucosal and mural lesions. However, the MRI remains the gold standard for determining the nature and origin of fibroids and is more likely to give an accurate diagnosis[12]. Our patient's abdominopelvic ultrasound scan showed dual right adnexal multi-septate cystic lesions.

Our patients had elevated CA-125, which is raised in malignancies, endometriosis, fibroid, PID, and cirrhosis[13]. Previous reports have documented similar findings. These studies suggested that the increased CA-125 levels were likely a result of the peritoneum responding to continuous stimulation from a large parasitic fibroid[14,15,16]. These elevated levels can complicate the differential diagnosis, highlighting the need for careful clinical evaluation to determine the underlying cause. Additionally, monitoring CA-125 may provide insight into the peritoneum's response to treatment.

The treatment plan should be tailored to each patient, taking into account factors such as age, symptom severity, fertility desires, concerns about malignancy, and closeness to menopause. Open surgical intervention is typically favoured for treating large fibroids, as it effectively addresses symptoms and eliminates the fibroids[17]. In cases where preserving fertility is a priority, less invasive options may be considered, allowing for a tailored strategy that aligns with the patient's specific circumstances and goals[18].

CONCLUSION

Cystic degeneration of leiomyoma, while uncommon, can profoundly affect a patient's well-being, as illustrated in our case. The range of symptoms, such as severe abdominal pain, fever, and weight loss, underscores the need for a thoughtful and compassionate approach to diagnosis and treatment. Advanced imaging techniques like MRI can help clarify the situation significantly when elevated CA-125 levels complicate the picture. Tailoring treatment plans to each person's unique circumstances, including age, fertility goals, and health concerns, is crucial. By focusing on each patient's individual journey, we can provide care that not only addresses their medical needs but also supports their overall quality of life, ensuring they feel understood and cared for throughout their healthcare experience.

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