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Cystic Degeneration of Uterine Leiomyoma Misdiagnosed as Ovarian Malignancy: A Case Report

Kossi Edem Logbo-Akey[1*], Kignomon Bingo M'bortche[2], Pierre Yendoubé Kambote[1], Kibandou Noe Patidi[3], Dédé Régine Diane Ajavon[4], Abdoul-Samadou Aboubakari[1]

[1]Department of Gynecology and Obstetrics of the University Hospital of Kara, University of Kara, Kara, Togo
[2]Togolese Association for Family Welfare (ATBEF) Clinic, University of Lomé, Lomé, Togo
[3]Department of Gynecology and Obstetrics of the University Hospital Sylvanus Olympio, University of Lomé, Lomé, Togo
[4]Department of Gynecology and Obstetrics of the Regional Hospital Center of Tomdé, University of Kara, Kara, Togo
Email: *edemattis@yahoo.fr, mbortche@yahoo.fr, pierrekambote@gmail.com, ddajavon@yahoo.fr, anourislam@yahoo.fr

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Abstract

Background: Massive cystic degeneration of the uterine myoma might mimic an ovarian tumor, especially a malignant ovarian tumor, causing misdiagnosis. We present a case of a woman with marked cystic degeneration of a uterine leiomyoma mimicking an ovarian neoplasm. **Case:** A 65-year-old woman (gravida 6, para 6) visited us due to an abdominal tumor. Clinical examination and radiology exploration suggested the presence of an ovarian tumour. The patient underwent a total abdominal hysterectomy with bilateral adnexectomy. Histopathology confirmed a final diagnosis of a degenerated leiomyoma. The patient's postoperative course was uneventful and she was discharged on her 5th post-operative day. **Conclusions:** When a patient has a huge abdomino-pelvic mass, mimicking an ovarian tumor, cystic degeneration of uterine myoma should be considered as a differential diagnosis.

Keywords

Leiomyoma, Cystic Degeneration, Ovarian Tumor

1. Introduction

Uterine leiomyoma, which arises from uterine smooth muscle, is the most common gynecologic benign néoplasm. Its prevalence is increasing in women of childbearing age with 20% - 40% of cases diagnosed in women above 35 [1] [2] [3]. Usually, its diagnosis is easy with clinical examination or radiological exploration. But sometimes, leiomyoma can mimick an ovarian tumor by degenera-

tive changes, then making diagnosis difficult. Cyst degenerative rates from 4% [4]. In this case, we report a huge subserosal leiomyoma misdiagnosed as an ovarian tumour and will review.

2. Case Report

A 65 years old, gravida 6, para 6, was admitted at our tertiary care center for complaints of abdominal distension and discomfort for one year ago. She has been menopausal for about 20 years. She had no known medical co-morbidities or other significant past histories. On examination, her general condition was deteriorated with significant weight loss and asthenia. The blood pressure, pulse rate, breath frequency and saturation on room air were normal. There was no evidence of any lymphadenopathy. On abdomen examination, there was a large palpable abdominopelvic mass reaching up to the xiphisternum (**Figure 1**). The mass was firm in consistency with a smooth surface and with restricted mobility. On vaginal examination, the cervix was normal. The mass was tipped through all the fornices. The movement of the mass was not transmitted to the cervix. Trans-abdominal ultrasound showed a thick-walled cystic mass, multi-partitioned, and intracystic vegetations measuring approximately 4875 ml without internal vascularity (**Figure 2**).

In addition, the uterus was enlarged, with lobulated fibroids. Tumour markers assays showed an increase in CA-125 to 71.88 kU/L, which is more than 2 times normal. CA 19-9 and CEA were normal. The thoracic-abdominal-pelvic scan was suggestive of the ovarian tumour with peritoneal carcinosis and ascites (**Figure 3**, **Figure 4**).

Patient was planned for an exploratory laparotomy. Intraoperatively, there was presence of peritoneal fluid which was sent for cytology. A huge mass filling the entire abdominal cavity was seen (**Figure 5**). The mass was decompressed and 4 L of serous fluid were drained. The masse was attached to the fundic wall of the uterus with clinical appearance of degeneration. The uterus was enlarged

Figure 1. A huge pelvic-abdominal mass extended above the xiphisternum.

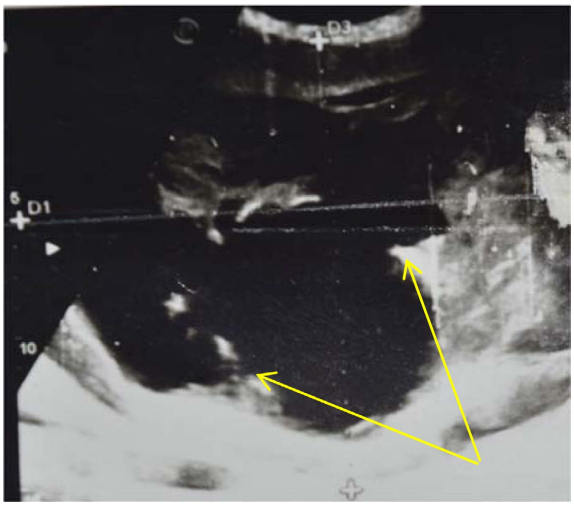

Figure 2. Ultrasound image showing cystic tumor with internal vegetation (arrows).

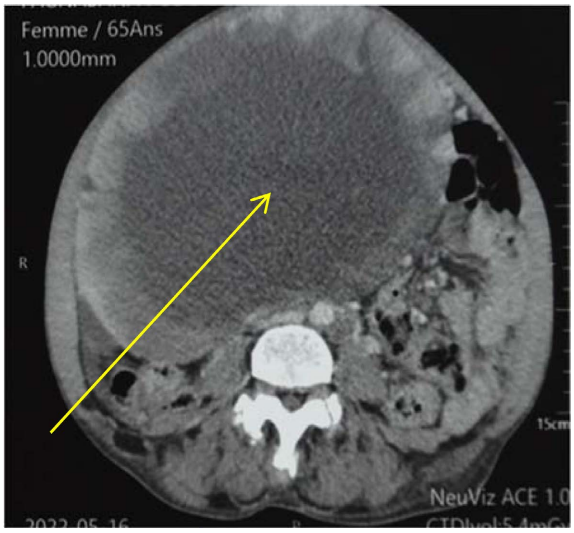

Figure 3. Axial tomography showing a large central hypodense mass (arrow).

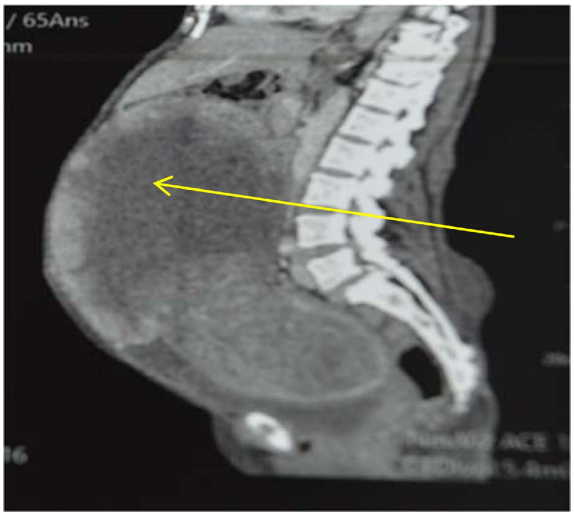

Figure 4. Sagittal tomography showing the mass connected to the uterus fundus (arrow).

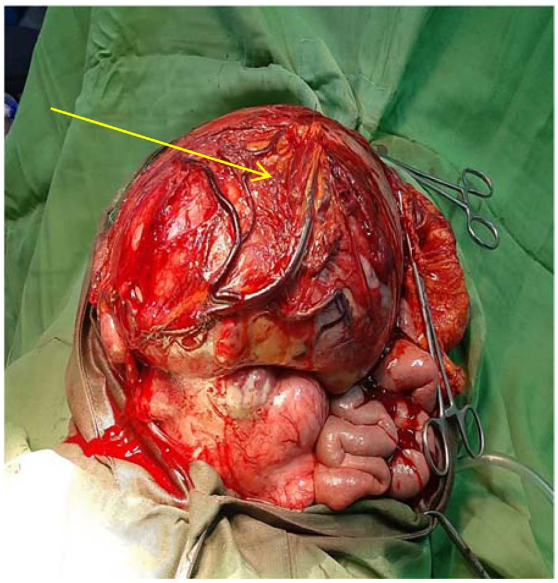

Figure 5. Subserosal fibroids (arrow).

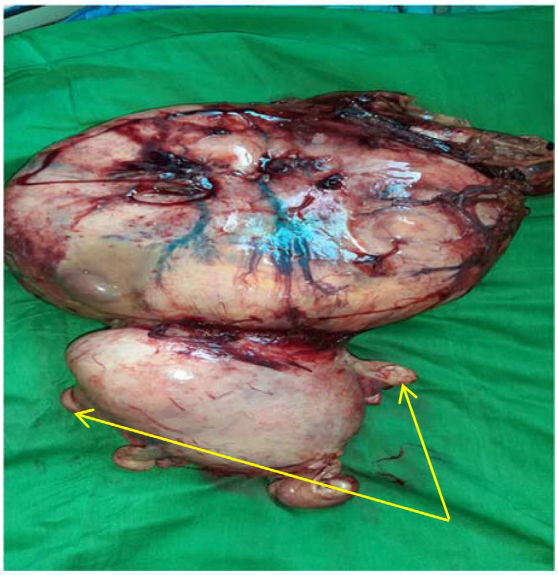

Figure 6. Uterus with bilateral ovaries (arrows).

fibroid with normal bilateral ovaries and fallopian tubes (**Figure 6**). There was no evidence of peritoneal carcinosis. Patient underwent a total abdominal hysterectomy with bilateral adnexectomy. The pelvic and para aortic lymph nodes were not palpable. There were no neoplastic cells on cytology. The histopathology confirmed of leiomyoma with focal myxoid and hyaline degeneration and multiple intramurals, submucosal and sub-serosal fibroids. Postoperative period of the patient was uneventful and she was discharged on the 5th post-operative day. Regular follow-up of the patient up to one year after the operation was normal.

3. Discussion

Uterine leiomyoma is the most common gynecologic benign néoplasm. It diag-

nosed in approximately 20% à 40% of reproductive-age women [1] [2]. Uterine leiomyomata can undergo degeneration, which is detectable in approximately 65% of cases. Hyaline degeneration is the most common type of degeneration, accounting for 60% of cases. Myxoid degeneration is observed in 19% of leiomyomas, calcification in 8%, cystic in 4%, fatty metamorphosis in 3%, and red degeneration in 3% [5] [6] [7]. Most fibroids are asymptomatic and undiagnosed. Symptoms vary according to the location, volume and degenerative changes of the fibroid (menometrorrhagia and/or pelvic pain, or fertility disorders [8]. Its potential to grow to an extreme size before causing symptoms is quite remarkable. This is likely due to the relatively large volume of the abdominal cavity, the distensibility of the abdominal wall and the slow growth rate of these tumors [9]. Giant myomas can cause emergencies due to genital haemorrhage or compression of the diaphragm or surrounding organs [10]. In our case, as reported by Guleria S and al [9], despite the massive size of the fibroid the patients had no complaints in regard to the fibroids, their location and size. There were no menstrual complaints, urinary complaints, bowel dysfunction, and pressure symptoms except for slight abdominal discomfort. Ultrasound is employed as the primary diagnostic imaging modality for typical appearances. It gives information on leiomyoma size, characteristics and complications [11]. However, the atypical appearances that follow degenerative changes can cause confusion in diagnosis such as adenomyosis, hematometra, uterine sarcoma and ovarian masses [12] similar to other previous reports [9] [10]. Cystic degeneration is then difficult to distinguish from ovarian cysts. Thus cross-sectional imaging is reserved for patients with diagnostic uncertainty or suspected complications. In the case of large degenerative leiomyoma, Magnetic Resonance Imaging and CT scan confirms the mixed nature of the tumour, and the multilocular appearance of the predominant cystic component. It specifies the presence or absence of ascites, regional adenopathy and distant metastasis [10]. Tumour markers can guide the diagnosis. In leiomyoma degenerative, ovarian specific tumour markers are normal [13]. In our case, these markers are normally similar to other previous reports [9] [11]. Elevated cancer antigen-125 of 71.88 kU/L (normal range 0 - 35 kU/L) in our case as reported by Sobey N and al [11] would just be related to peritoneal irritation due to abdominal overdistension.

4. Conclusion

Uterine leiomyoma is the common gynecologic benign néoplasm of reproductive-age women. It's cystic degenerative making diagnosis difficult. Clinicians should bear in mind that pedunculated uterine leiomyomas can mimic an ovarian tumor, and it can be associated with an increased preoperative serum CA-125 level whenever there is a pelvic-abdominal mass. Diagnosis is made during laparotomy and confirmed on histology.

Consent for Publication

The consent for publication was obtained from both the patient.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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