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RESEARCH ARTICLE

# Mistoid Cystic Degeneration of a Leiomyoma: About a Case with Intramyometric Evolution in the Gynecology Department of the Owendo University Hospital (Gabon)

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## Abstract

**Objective :** We report a case of mixoid cystic degeneration of a FIGO 4-rated uterine fibroid simulating a polymyomatous uterus.

**Observation :** 48-year-old patient, paucipare and a myomectomy 3 years ago, received on March 11, 2025 for abdominal distension evolving for 4 years associated with lumbopelvic pain. This symptomatology had motivated several consultations and the diagnosis of ovarian tumor evoked. On general examination, we find a mucocutaneous pallor, the blood pressure was 125/75 mmHg, and the weight was 67kg. The abdomen was very distended by a firm, regular, and mobile mass. The haemoglobin level was 9.9 g/dl, the hepatorenal balance was normal and the CA 125 was positive.

Abdominal ultrasound revealed a mixed echogenicity tumor with a thick shell without vegetations. Computed tomography (CT) had noted the presence of a large, hypodense, fluid mass with no visible septa. A laparotomy reveals a large uterus with regular parities without visible cystic structure, the ovaries are atrophied. A sagittal section had shown a uterine wall blown by a smooth-walled cystic structure and containing a citrine fluid. The diagnosis of mixoid proliferation of myomatous cells without cellular atypia had been retained by pathological anatomy.

**Conclusion :** Mixoid cystic degeneration of uterine fibroids is rare. Forms with intramyometrial evolution are exceptional. This must be considered in view of the globular and regular nature of the uterus with no apparent lesions.

**Keywords:** Myomas, Cyst, Mixoid, MRI, Benign.

## 1. Introduction

Uterine fibroids are the most common benign tumor in women and the leading cause of hysterectomy in several countries [1]. In our institution, hospital data show that myomatous pathology accounts for 28% of surgical interventions. The main clinical manifestations are menometrorrhagia and, in our context, excessive enlargement of abdominal volume [2, 3]. Haemorrhages are by far the main complication and next to them myomatous degeneration [3, 4, 5]. It occurs in cases found when the myoma is pedicled or submucosal [6, 7]. Despite the advent of ultrasound, suspecting or evoking its diagnosis is difficult [8, 9]. MRI and pathological anatomy are of great contribution to diagnosis [10,11].

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We report the case of mixoid degeneration of a fibroid classified type 4 by IFOG [12]. The aim was to describe this exceptional complication and a review of the literature.

## 2. Clinical Observation

Mrs. M.C, Gabonese, single, social communication inspector, 48 years old and living on the outskirts of Libreville. It was a paucipare and a laparotomy in 2002 for myomectomy. She had consulted for a progressive abdominal distention for four years, recently associated with lumbopelvic pain. This symptomatology had motivated several consultations in various structures in the square where the diagnosis of ovarian tumor had been mentioned. The general examination revealed emaciation, mucocutaneous pallor, anorexia and mild dyspnea. In the supine position, the abdomen was generally enlarged with a pelvic starting point up to the epigastric region, suggesting a full-term pregnancy. The umbilicus is unfolded. There was a transrectal scar and mild collateral venous circulation. The abdominal palpation revealed a firm, round, smooth, well-limited, painless and mobile mass. It ran from the pelvic region to the xiphoid appendage and measured 34 cm in a long axis (figure 1). The vulva was clean and speculum examination showed healthy vaginal walls and a pale pink retrosymphyseal cervix. No analysis had been carried out. On vaginal examination combined with abdominal palpation, the cervix was retracted, under symphyseal, short, firm and smooth. The literal cul-de-sacs were filled in as well as the posterior cul-de-sac. The lymph node areas, the heart and the rest of the examination were not contributive. We mentioned a myomatous uterus. The essential biological markers are shown in Table 1

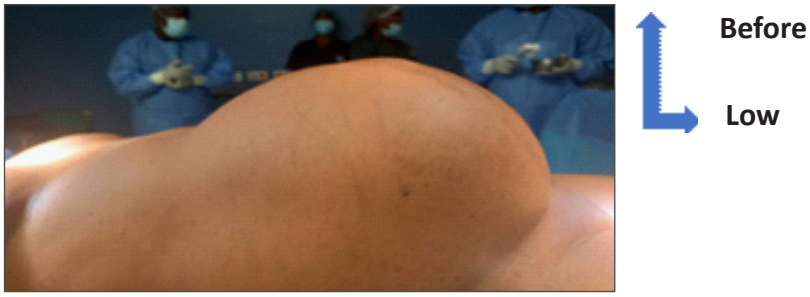


**Figure 1**. *patient in supine position, abdomen enlarged*

**Table 1.** *Essential biological markers*

| Parameters studied | Results | Meanings |
|---|---|---|
| Haemoglobin level | 9,9g/dl | Moderate anaemia |
| Platelet levels | 299.000/mm$^3$ | Normal |
| Reactive Protein C | < 4 ng/ml | Negative |
| RVS* | | Negative |
| Renal/Hepatic Function | | Normal |
| CA 125 | 176,3 UI/ml | Positive |
| Alpha-feto-protein | 1,62 ng/ml | Negative |
| Carcinoembryonic antigen | < 5 ng/ml | Negative |

## 3. Retroviral Serology

Morphologically, the abdominal-pelvic ultrasound showed a voluminous rounded mass, of mixed echogenicity, with a thick shell and measuring 240x110x86mm. No neovascularization had been found, nor had vegetation or septa been found. There are fine echogenic deposits in suspension and the uterus is not clearly identified. On abdominopelvic computed tomography (CT), the presence of a large hypodense, fluid mass of about 20 cm in length was noted, with thick walls that seemed to belong to the uterine body and suggested a reworked leiomyoma. The uterine body had not been identified (figure 2). The chest X-ray is normal, the electrocardiogram had found an enlarged physiological left ventricle. The results of the laboratory assessment are given in Table 1. The laparotomy performed revealed a uterus

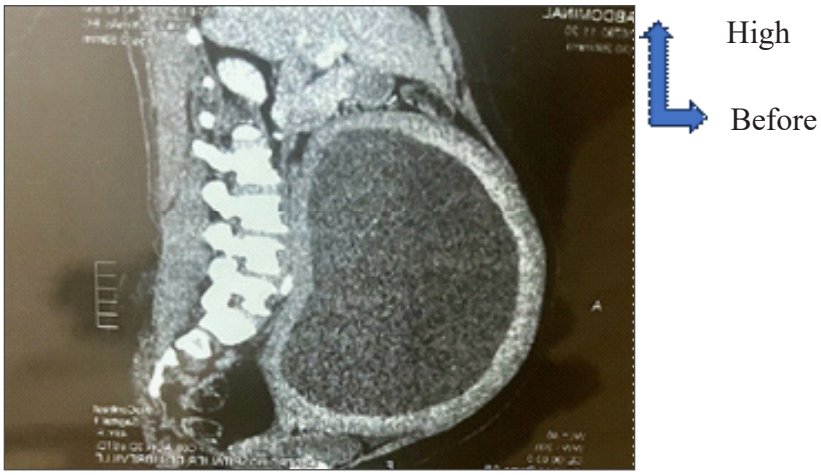


**Figure 2.** *Abdominal pelvic tomography in sagittal section objectifies a large hypodense fluid mass of about 40 cm with a thick wall occupying the abdominal cavity.*

that was generally enlarged, soft, resting, smooth and regular. The pelvis was free of all adhesions. There was no evidence of peritoneal carcinomatosis, visceral involvement, or pelvic and lumbo-aortic lymphadenopathy. We perform an easy total hysterectomy with appendectomy and omentectomy (figure 3). The puncture without dissection of the operative specimen had brought back an abundant homogeneous citrin fluid and the specimen had weighed 6350 g. The pathological anatomy of the uterus on a sagittal section showed the anterior wall of the uterus blown by a false cyst with a thick shell, smooth wall and containing a citrine fluid (Figures 3, 4). The uterine cavity was flattened and contained a blackish fluid (Figure 4). Cytologically, a slide of the uterine wall showed a mixoid proliferation of benign leyomyomatous cells towards the cystic lumen with a cleavage zone. Il n'existait pas d'atypies cellulaires ni d'activités mitotiques anormales ou de nécrose tumorale (figures 5, 6). The postoperative effects were simple and he was discharged from the hospital on Day 3.

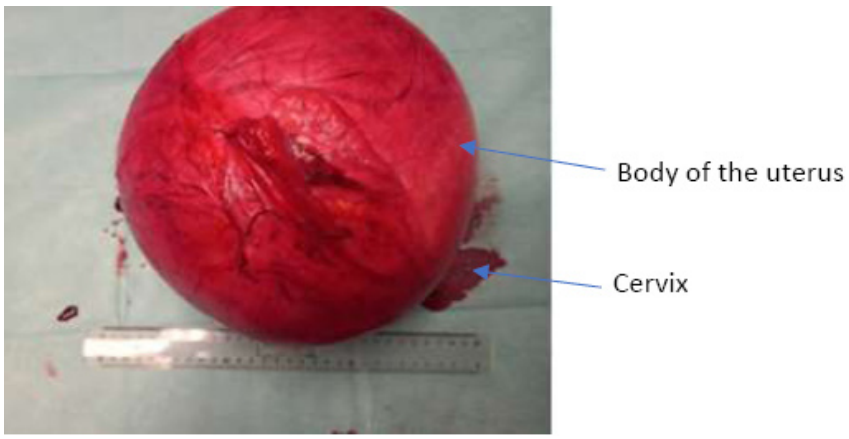


**Figure 3.** *macroscopic appearance of the total hysterectomy room*

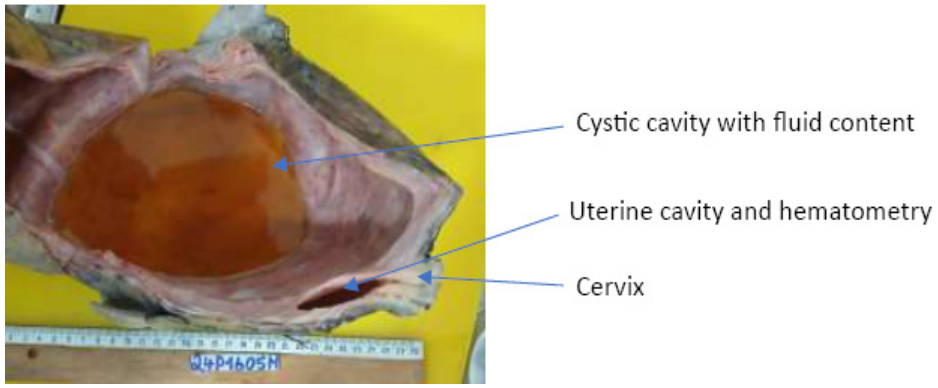


**Figure 4.** *macroscopic appearance of the hysterectomy piece in sagittal section*

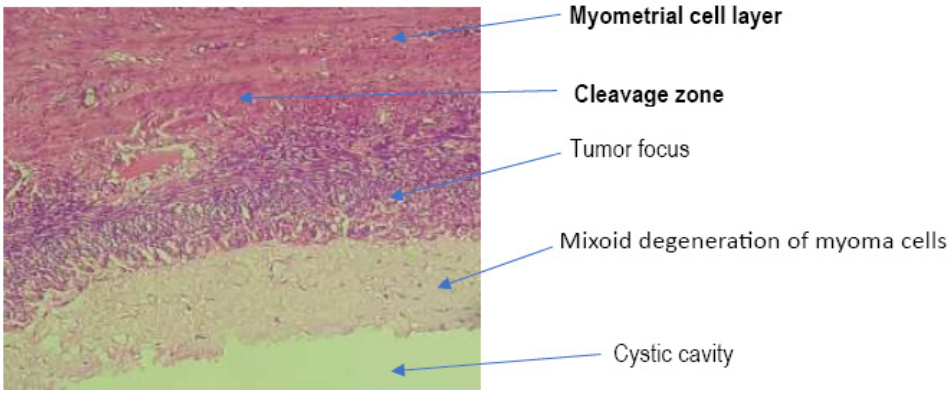


**Figure 5.** *Cytology slide of a section of the uterine wall towards the cystic lumen shows mixoid degeneration of leyomyomatous cells.*

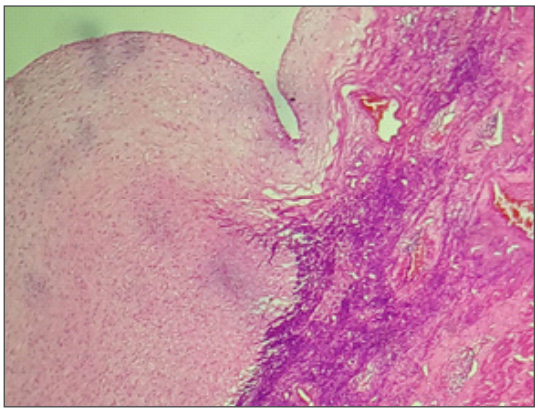

**Figure 6.** *Cytology slide of a mixoid degeneration zone of leyomyoma cells at high magnification.*

## 4. Discussion

Uterine fibroids are the common benign tumor. It is a pathology of black women [1, 13]. Its symptomatology is varied and in our context as elsewhere it is often seen at the stage of complications in the absence of treatment. These complications are dominated by menorrhagia or even menometrorrhagia [3, 14, 15]. Other complications are described [16]. Among them, cystic degeneration. This is a rare complication. The most common is hyaline degeneration (60%). Mixoid degeneration is exceptional (10%) [4, 5]. Case of our patient. This is a first in our practice and no similar national publication has been found in the literature. She is a 48-year-old patient with a previous myomectomy. This age is close to the median of discovery of uterine myomas and degeneration always occurs in the context of myomatous uterus [2, 5, 14, 15]. The symptoms are variable and genital bleeding is not always found [9, 17]. Abdoul-Samadou Aboubakari Ka describes recurrent menometrorrhagia [7]. In other cases, no genital bleeding is reported as in ours [9]. The common point is an excessive and rapid increase in the volume of the abdomen and most authors refer to an ovarian tumor with an abdominal evolution [18, 19]. In our case, the firm, smooth, round, well-limited, painless and mobile character of the abdominal mass led us to think of a uterus with a large myoma with an abdominal evolution. Abdominal ultrasound is the essential diagnostic test in this case [8]. However, some authors emphasize the non-specific nature of the pelvic mass when the pelvic mass evolves towards the abdomen [4]. Thus, in all the cases reported, none suggested a uterine tumor at the end of the ultrasound [9, 4, 20]. In case of diagnostic doubt, multiple fibroids or as part of the pre-therapeutic assessment (conservative treatments), several authors emphasize the performance of pelvic MRI in this pathology for the quantity and location of fibroids [11, 21]. We were unable to perform the MRI for technical reasons. The CT scan made us think of a tumor of uterine origin. Like Anuradha Panda, we believe that the imagery is inconclusive due to the uncharacteristic appearance of the images [4]. At the end of the hysterectomy, the macroscopic appearance of the operative specimen does not make us think of a cyst. After a mid-section of the latter, a cystic organization with fluid content without a clean shell was discovered that had blown away the anterior wall of the uterus without any identified mixoid structure. In the reported cases, the macroscopic appearance is that of a thin-walled cystic structure with fluid content and a uterine starting point [5, 7]. A cytological section

comforts us because there is a mixoid degeneration of myomatous cells towards the cystic lumen. Detailed cytological analysis is decisive for the diagnosis [5]. Our myomatous nucleus was probably intramural, hence this intramural evolution. Cystic degeneration mainly affects the pedicled subserous nuclei, which may suggest an ovarian rigine tumor on clinical examination [6, 7]. No particular mitotic activity, tumor necrosis or vascular emboli was found. This made us eliminate a malignant tumor. However, the tumor markers represented by the CA125 were positive. The values of these markers appear normal in cystic myoma [10, 18]. After discharge from the hospital, no additional treatment was instituted and the follow-up to date is simple.

## 5. Conclusion

Cystic degeneration of the uterine myoma, although rare, can be enormous and simulate ovarian cancer despite the diagnostic support of medical imaging. This must be considered in the clinical context of uterine myoma.

### Declaration of Interests

The authors declare that they have no links of interest.

### Authors' Contribution

B. Sima Ole, S. G. Mba Edou, Ntoutoume Sima[2], Ntsame Elsie[3] designed the research protocol and wrote this manuscript. Mounguengui Odilon[1], Madi Tigani Guirema[1], Reindah Thomas[1], collected the data. J.A Bang Ntamack, S. Mayi Tsonga et J. F Meye gave form to this manuscript. All authors approved the final version.

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