

## Successful Management of Giant Mucinous Borderline Ovarian Tumors in A 40-Year-Old Woman: A Case Report

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### Abstract

The case of giant mucinous ovarian tumors is rarely described in the literature, with different clinical manifestations. We report the case of a 40-year-old woman with a giant mucinous ovarian tumor, measuring the size of a pregnant at term. The patient underwent an exploratory laparotomy in which a giant cystic mass was found with a solid lesion measuring 19 cm. Was performed with unilateral salpingo-oophorectomy. There were no complications during or at the end of the operation. Histological studies show borderline mucinous neoplasms.

**Keywords:** Giant ovarian tumor, Mucinous borderline ovarian tumor, Salpingo-oophorectomy

### Introduction

Pathologic ovarian cysts are classified into benign and malignant. Nearly all types of ovarian cysts are 90% benign. Ovarian cysts can contain liquid, solid, or a mixture of liquid and solid. Ovarian cysts are in the fourth rank of gynecological cases that cause patients to come to the hospital, but ovarian cysts cannot be detected if they are small in size and asymptomatic. Benign ovarian cysts can arise asymptotically or, cause complaints due to abdominal enlargement, menstrual disorders, and hormone disturbances.<sup>1</sup>

Epithelial ovarian cancer has five main histological subtypes (serous, mucinous, endometrioid, clear cell, and Brenner type). Nearly 10% of ovarian epithelial tumors are mucinous. Most of the mucinous neoplasms are benign (75%), 15% are invasive carcinomas and 10% borderline tumors.<sup>2</sup> The first complete report on mucinous borderline tumors appeared in 1973, just before WHO classification publications. two bases borderline mucin tumor types are described: intestinal-type and resembles the endocervix (Mullerian) type.<sup>2</sup>

Giant ovarian tumors are tumors that have a diameter of more than 10 cm and fill the entire abdominal cavity. The type of tumor that commonly occurs in women under 40 years of

age is serous, about 50%. The potential to become malignant is higher in postmenopausal women, namely 8 - 45% compared to pre-menopausal women, namely 7 - 13%.<sup>3</sup>

### **Case Presentation**

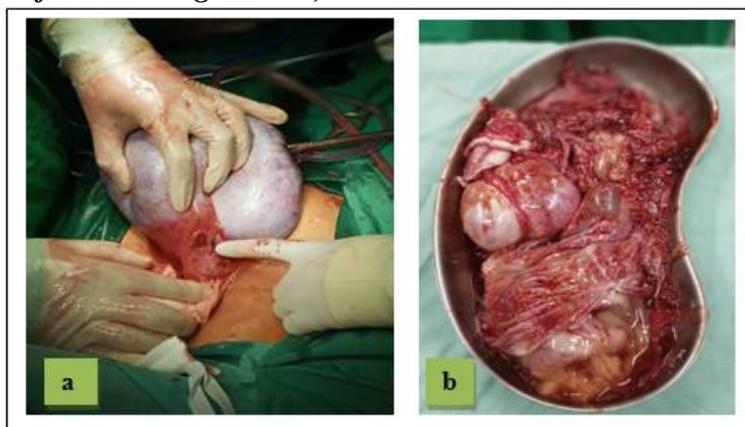
A 40-year-old P1A1 woman came to our outpatient clinic with a stomach complaint that lump since 2 months ago which was getting bigger and bigger. Complaints are felt to be heavy during activities. Physical examination showed that the general condition was good, composmental awareness, blood pressure was 133/88 mmHg, pulse 97 beats per minute, breathing 20 times per minute and a temperature of 36.<sup>0</sup> C. Abdominal examination revealed a cystic mass with a solid 2-finger height below the xiphoid process, Flat mass surface, limited mobility, tenderness in the lower left quadrant.

Laboratory results showed Hb levels 13.7 g/dL, hematocrit 41.6%, leukocytes 7000/ $\mu$ l, urea 11.5 mg/dL, creatinine 0.7 mg/dL, aspartate aminotransferase 16 U/L, alanine aminotransferase 14 U/L, natrium 139 mmol/L, kalium 4 mmol/L. Other laboratory tests are normal. CT scan of the abdomen with contrast showed a multi-loculated cystic mass with a well defined, regular edge with fat-stranding around (size 16 cm  $\times$  11.94 cm  $\times$  19.48 cm) in the dominant left abdominal cavity, which was post-injection of contrast appears to be an enhancement in the septa. The mass appears to push intestinal air to the right side and uterus inferiorly, the superior aspect of the mass is attached to the colon and the mass appears to touch a. The left common iliac corresponds to a cystic ovarian tumor [Fig.1].

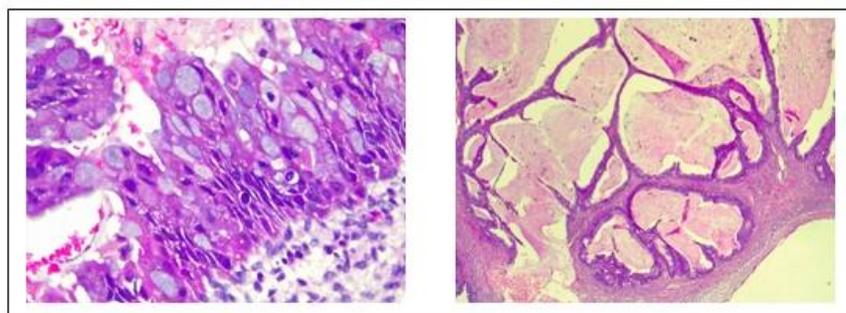
Exploratory abdomen laparotomy found a normal uterine cyst mass on the left ovary filling the entire abdominal cavity. The mass of the cyst is reduced after removing the fluid in it [Fig.2a]. Cyst fluid is clear yellowish and brownish with a volume of 2000 cc. There is the adhesion of the ovarian cyst to the omentum and intestine and then the separation is done sharply and bluntly. Subsequently, a unilateral salpingo-oophorectomy was performed. The tumor was successfully removed with a supple to solid consistency [Fig.2b]. There were no complications during surgery or post-surgery. Uterus, right adnexa and other organs within normal limits. The patient went home on the third day of hospitalization in good condition and healthy. The result of the histopathological examination was a mucinous borderline ovarian tumor [Fig 3].



**Fig. 1:** *CT scan of the abdomen with contrast showed a multi-loculated cystic mass with a well defined, regular edge with fat-stranding around, size 16 cm × 11.94 cm × 19.48 cm (arrows).*



**Fig.2:** *a. Mass of the cyst is reduced after removing the fluid in it. b: After removal, the macroscopic mucinous ovarian tumor consists of mucoid and other tissue resembling gelatin*



**Fig.3:** *Histopathological feature: Pieces of ovarian tissue appear to be composed of multilocular cysts lined with cells with an oval nucleus in layers, with the cytoplasm containing mucin, on the other hand, cysts are lined with cells with oval nuclei, hyperchromatic, with a slightly increased ratio of the cytoplasmic nucleus, forming a papillary structure. Conclusion: Mucinous borderline tumor*

## **Discussion**

Giant ovarian tumors can cause a state of emergency, which is to interfere with breathing because the pressure of the large tumor causes the diaphragm to rise press on the lungs and can even cause lung injury. Tumors also interfere with blood circulation due to increased intra-abdominal pressure.<sup>3</sup> Excessive mass expulsion that is too rapid can cause bleeding and hypotension, as well as electrolyte disorders and other serious disorders. Some authors considered necessary fluid aspiration before or during resection, to reduce operative time and risk related to sudden changes of intraabdominal pressure, during surgery and in postoperative phase.<sup>4,5,6</sup>

Besides, controlled fluid aspiration, described to reduce hypotension and low caval reload related to the sudden drop of abdominal pressure, may prolong operative time and increase anesthesiological complications. A drain of mass is an extreme option for the selected unresectable case, with high wall tension. Adequate supportive care, monitoring evolution during resection, is the best topic to safe resection of giant lesions. The basilar topic remains postoperative care, with reducing ileus, supporting respiration muscles and abdominal wall tension, and monitoring hemodynamic parameters.<sup>7</sup> The histopathology results of giant ovarian tumors can vary, there are also cystadenomas and carcinomas. Age and size do not affect the incidence of carcinoma.<sup>5,6</sup>

Borderline mucinous tumors usually appear as large cystic multilocular masses containing sticky gelatinous fluid. Most of them are unilateral, well-differentiated and, when diagnosed in Stage I, present a recurrence rate of 1%. This peculiarity complicates the differential diagnosis with mucosal ovarian cystadenomas, especially in giant masses.<sup>8,9</sup>

At the time of diagnosis, approx 82% of mucinous borderline ovarian tumors have clinical symptoms similar to serous borderline ovarian tumors with a survival rate of 5 years up to 99–100%.<sup>10</sup> Patients with this tumor rarely experience recurrence or death from the disease. Advanced mucinous limit (18%) ovarian tumors, however, may have died up to 50% depending on stage.<sup>10</sup>

In our case, we reported a mucinous borderline ovarian tumor on the left ovary, which was multilocular with a thick to solid consistency resembling gelatin. After 4 months of postoperative surgery and hospitalization, the patient was currently in good health.

## **Conclusion**

Giant ovarian tumors are rare. With a thorough examination with the use of sophisticated tools, the diagnosis can be determined quickly and treated appropriately. The risk of surgery is high that it needs special attention and caution. We found rare cases of mucinous ovarian tumors, these tumors have a good prognosis and rarely cause death in patients.

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## **Conflict of interest:**

The author declares no conflict on interest

## **Ethical clearance:**

The authors have obtained written consent from the patient to publish this case report.

## **Acknowledgement:**

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