



Giant ovarian mucinous cystadenoma in a 71-year-old woman: a case report

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Abstract

Giant ovarian mucinous cystadenoma becomes rare in the current medical practice. We report a 71-year-old post-menopausal woman with complaints of severe abdomen distention since one year ago. This case was interesting because of the patient morbidly post-menopausal woman with giant ovarian mucinous cystadenoma. On physical examination, abdominal girth at pubic symphysis was 60 cm with a dull note on percussion. Her vulva, vagina, and cervix were grossly normal and on pelvic ultrasounds, examination showed a large well-defined cystic lesion of about 25×20×20 cm. Then we did laparotomy surgery on the patient. During the laparotomy salphingo-oophorectomy procedure, we found a cyst that weighs 5.5 kg in the left ovary. We also found a sub-serous leiomyoma with a size of 7×7×4.5 cm. from the histopathologic examination, the result showed mucinous cystadenoma ovary and uterine leiomyoma. It can be concluded that laparotomy with giant ovarian mucinous cystadenoma is successful without any complications during pre-operative until post-operative.

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Introduction

In recent years, giant ovarian tumors have become rare in the current medical practice. Giant tumors of the ovary presenting with diameters greater than 10 cm.¹ The most common ovarian tumors seen during the reproductive period are serous and 50% of them occur before the age of 40 years.² The chance of cyst malignancy is around 8%–45% in post-menopausal women and about 7%–13% in premenopausal women. Ovarian cysts' clinical symptoms are usually progressive vaginal bleeding, abdominal distention, nonspecific diffuse abdominal pain. The other symptoms related to splanchnic organs compression are organs

compression i.e. constipation, frequent micturition, vomiting and can mimicking ascites.³

The surgical management of these ovarian cyst tumors is associated with many complications, including severe hypotension, cardiac failure, respiratory failure, intestinal distention and hypovolemic shock.⁴

Case Presentation

A 71-year-old post-menopausal woman came to our hospital in July 2019 with a rapidly increasing severe abdomen distention for the last one year. She came to our clinic due to the distention causing shortness of breath.

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For the last year, the distension increased dramatically which ultimately start restricting the patient's daily activities. The patient became bedridden, sometimes use a wheelchair for her movements, and was finding it difficult to carry out her routine activities. There was a change specifically on dietary habits because she was easily full of the distention of her abdomen. Whereas urinating and defecating are still normal. The patient and her family had no history of the previous medical, or malignancy.

On examination, her general condition was fair, revealed a compos mentis, and pale skin. Her weight was 44 kg, height 145 cm, and the Body Mass Index (BMI) was 20,9 (normal). The vital sign was stable; her pulse counted 80 times per minute, blood pressure 120/70 mmHg, and her respiratory rate counted 22 times per minute. The abdomen was massively distended and tensed with superficial dilated veins (**Figure 1**). Abdominal girth at pubic symphysis was 60 cm with a dull note on percussion. Her vulva, vagina, and cervix were grossly normal. Fullness was felt in the pouch of Douglas. Vaginal and rectal examinations indicated fullness.

The results of laboratory blood tests are normal. Chest X-ray shows infiltrate on both pericardial and increases vesicular breath sounds. The interpretation was bronchopneumonia. ECG (Echocardiogram) was normal. Ultrasound is done two times. First in 2017 was found cystic mass

measuring 16×10 cm and a normal uterus. Then in 2019 was an ultrasound done suggested a large well-defined cystic lesion of about 25×20×20 cm arising from the pelvis.

Open laparotomy was preferred than laparoscopy, due to great mass obstacles for operators, and it wasn't possible for anesthesia because the patient is at high risk. Before laparotomy, she got normal saline IV fluids up to 1500 L and got spinal anesthesia. The total operation time was 150 minutes. The surgery is done in a supine position. Due to the enormous size of the mass and the high risk for malignancy, the midline incision was performed (**Figure 2**)

A giant multi-cystic tumor arising from the left ovary was seen occupying the abdomen, from the pelvis up to the diaphragm. Decompression of the cyst was done by controlling drainage of 9 L of fluid intra-operatively after which the tumor measuring. Our gynecologist performed left salphingo-oophorectomy on the patient. During the exploration, we found a sub-serous uterine leiomyoma, about 7×7×4,5 cm, and the operator performed myomectomy on it. Histopathological examination results confirmed mucinous cystadenoma and uterine leiomyoma.

The postoperative recovery was uncomplicated. Furthermore, the patient is monitored post-operatively in the ward for three days and then prepared to go home

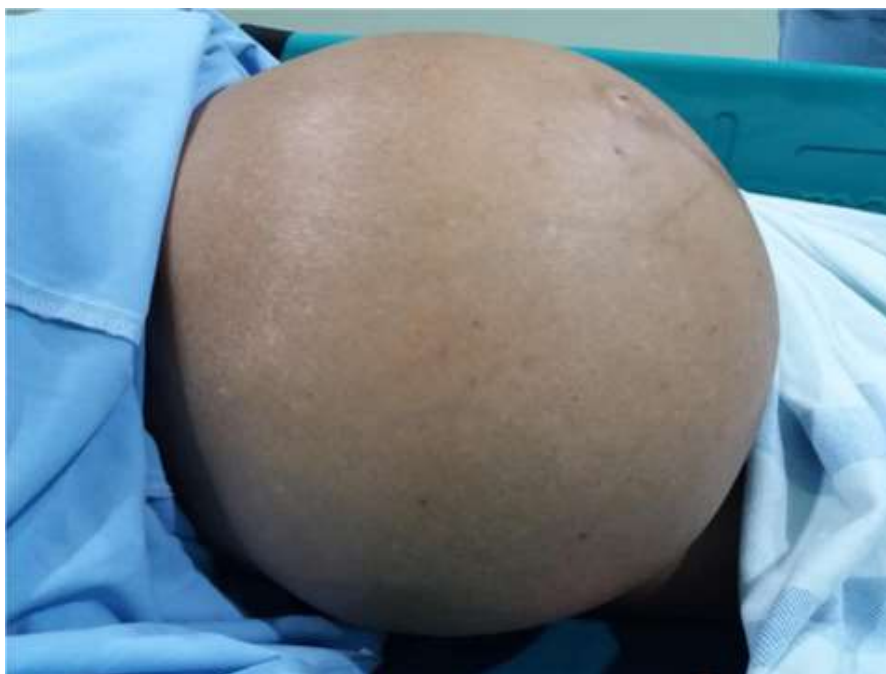


Figure 1. Massive distention of abdomen with dilated veins.



Figure 2. A midline incision was performed



Figure 3. Giant ovarian cyst after laparotomy

Discussion

A 71-year-old post-menopause woman, with a giant cyst adenoma measuring 20 cm in diameters, and 5,5 kg in weight. Based on Moolina et al., masses less than 8 cm in a pre-menopausal woman and less than 5 cm in a post-menopausal woman can be conservatively managed. However giant ones require resection because of their symptoms due to their size such as a respiratory compromise or abdominal pain and their inherent risk of malignancy.⁵ Therefore we decided to laparotomy and the tumor is resected without any complication. In our patient, there was not progressive vaginal bleeding caused on histopathological confirmed mucinous cystadenoma cyst, and based on Shanbhogue causing progressive vaginal bleeding is granulosa cystadenoma ovary. Ovarian tumors could be mimicking as an ascites. An abdominopelvic ultrasound scan may assist to exclude them in all women presenting with massive ascites. The volume of the cysts is a limit to the diagnostic ultrasonographic approach, giant ovarian cysts should be considered in the differential diagnosis of ascites.^{4,5,6}

Giant ovarian tumor induces respiratory disturbance, it caused the diaphragm rising and circulatory disturbance due to increases in intra-abdominal pressure. Following the administration of muscular relaxants, compliance between lung and diaphragm is impaired, making respiratory management even more difficult. High airway pressure may also lead to lung injury.⁷

Excision of giant masses may lead to bleeding and hypotension, electrolyte disturbances as well as morbidity and other serious problems. Pressure on vessels and positive pressure ventilation may lead the venous return to decrease. In association with the suppression of sympathetic activity by general anesthesia, symptomatic inferior vena cava syndrome and hypoxemia may develop.⁸ In these patients, the blood pressure is kept stable by maintaining a balance between the reduced cardiac output and peripheral vasoconstriction.

In this patient, we used spinal anesthesia. Compared to general anesthesia, spinal anesthesia has a lower risk than general anesthesia. Based on Kim and Sand Gorgile's study, general anesthesia decreased endogenous sympathetic, which may result in hypoxemia and compression of the inferior vena cava and aorta. Positive pressure ventilation may likely contribute to the decreased venous return from the chest and abdomen.^{9,10} However, based on Bamba K's case report, that they preferred using general anesthesia to avoid hemodynamic collapse and re-expansion edema after fluid extraction.¹¹

Supine position in giant ovarian cyst leads to several symptoms appear such as hypotension resulting from inferior vena cava compression by

the gravid uterus, also known as a supine hypotensive syndrome which may result in cerebral hypoperfusion and hypoxia lead to sudden death.¹² Our patient presented with an asymptomatic increase in abdominal girth, which was associated with a giant mucinous cystadenoma was found in the left ovary, the contralateral ovary was inspected to be normal, its concordance with the previous report that the predilection place is left ovary.¹³ Although asymptomatic, adhesion, bleed easily, immobile, bumpy wall, and fragile is generally found in malignancies, in these patients anatomically cysts do not have adhesions, do not bleed easily, mobile, and are not fragile. In laparotomy was found a large cyst, in the absence of adhesions, mobile, slippery walls, and on the anatomic histopathological examination found giant mucinous cystadenoma.¹⁴

Mucinous cystadenoma is a benign ovarian tumor. Histologically, mucinous cystadenoma is lined by tall columnar non-ciliated epithelial cells with apical mucin and basal nuclei. 80% of tumors are cystadenomas while the remaining 20% is of the borderline variety, non-invasive (intraglandular; intraepithelial) carcinomas, or invasive carcinomas. The borderline tumors may be of intestinal-type or Mullerian (endocervical-like) type. The intestinal-type tumors are by far the most common tumors that have been reported. Malignant tumors are more frequent to patients under 20 years old. 90% of all malignant ovarian tumors are found on patients over 60 years old with a 10-year survival rate of about 30-40%.^{15,16}

In our case because of the good management of the anesthesia and operative procedure, we can maintain the hemodynamic of the patient without any pre-shock sign. The patient then observed postoperatively in the ward for three days before going home.

Conclusion

Giant ovarian tumors are neoplasms that tend toward malignancy and require proper management. In this case, we have successfully performed surgery without complications during surgery or after surgery.

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