# Rare presentation of giant ovarian cyst

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## ABSTRACT

A 32-year-old unmarried female on an atypical antipsychotic presented with massive abdominal distension and progressive difficulty in breathing and ambulation. Imaging revealed a giant ovarian mass originating on the right side. A fertility sparing laparotomy was carried out, without complication. Histopathological evaluation revealed a seromucinous cystadenoma. Giant ovarian cysts are seldom encountered in current medical practice secondary to easy availability of imaging modalities and treatment facilities. In spite of their considerable size, such tumors are usually benign and have a good prognosis.


**Keywords:** Fertility sparing laparotomy; giant ovarian cysts; Seromucinous cystadenomas.

## INTRODUCTION

Ovarian cysts are a common gynecological finding with an incidence of 5 to 15%.[1] Rarely they may grow to an enormous size. Giant ovarian cysts (GOCs) are those presenting with a diameter greater than 10cm.[2] This is a rare presentation due to the availability of better imaging modalities which permit early detection. Mucinous tumor is one such tumor known to reach an enormous size.[3] Surgery is the main modality of treatment and since the majority are benign, cystectomy or salpingo-oophorectomy may suffice.[2] We present here a case of giant ovarian cyst that was removed successfully with fertility sparing surgery.

## CASE REPORT

A 32-year-old unmarried female presented to our OPD with complaints of abdominal distension for two years, that was rapidly increasing in size for the past year. She had bilateral leg swelling since the past nine months and experienced shortness of breath and orthopnea for the past five months. She had concurrent diffuse abdominal pain. She previously visited another health facility where she was planned for further evaluation and surgical management. However, she was lost to follow up due to her mental illness. Treatment for her mental illness was started thereafter. On examination, her abdomen was significantly distended, tense and tender. Abdominal examination revealed a dull note on percussion and her bowel sounds were diminished. She had bilateral pitting pedal edema and diminished breath sounds.

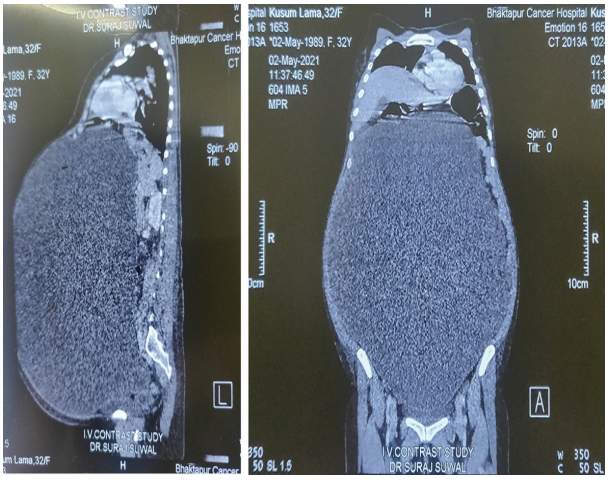


**Figure 1. Image of abdomen and pelvic contrast enhanced computed tomography showing large size of cyst.**

A CECT of abdomen and pelvis revealed a huge intraperitoneal cyst possibly of ovarian origin with thin internal septations and no solid components within. There was minimal ascites with no significant lymphadenopathy. Tumor markers were within normal limit (CA19.9 <1.4U/ml, CEA= 2.18ng/ml, CA-125= 40.2U/ml). Biochemical and hematological investigations were within normal limits. Laparotomy was planned and a midline vertical incision extending from the xiphisternum to the symphysis pubis was given. There was no ascites. A huge right ovarian cyst measuring

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60x60 $cm^2$ was present, that was densely adherent to the inferior surface of liver and surrounding abdominal wall along with omentum. Following adhesiolysis, the cyst was removed en masse with no disease deposits on the surface. The cyst weighed approximately 35 kg. A fertility sparing staging laparotomy was done with right salpingo-oophorectomy, left ovarian wedge biopsy, infracolic omentectomy, pelvic and retroperitoneal lymph node sampling and appendectomy. Peritoneal wash was sent for cytology which was negative for malignancy. Histopathological examination reported a seromucinous cystadenoma of the right ovary.

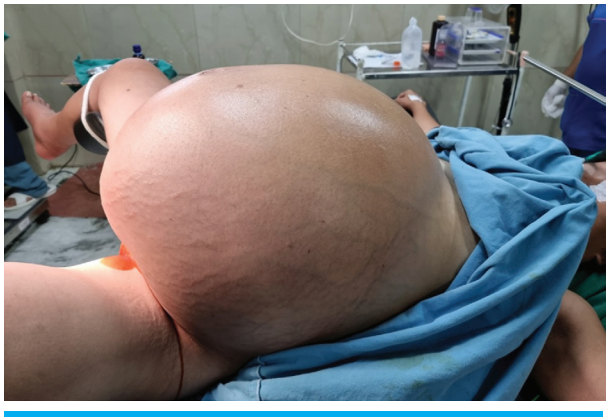

**Figure 2. Photograph taken immediately before surgery showing significant abdominal distension.**

In the post-operative period, following decompression of the distended abdomen, she developed hypotension and was managed with noradrenaline infusion. She was tapered off the infusion on the third post-operative day. The remainder of her hospital stay was uneventful and she was discharged on the seventh post-operative day.

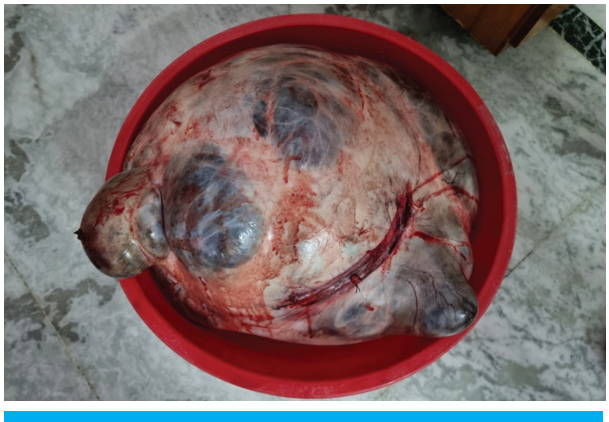

**Figure 3. Photograph of the specimen after right salpingo-oophorectomy.**

## DISCUSSION

Giant ovarian cysts are defined as cysts larger than 10cm in size or those extending above the umbilicus.[4] They are seen more frequently between the third and sixth decade of life.[5] They usually present with massive abdominal distension, pressure symptoms such as constipation, urinary retention, abdominal pain and shortness of breath.[6] Other differentials that should be considered are gross ascites, omental cysts, mesenteric cysts, choledochal cysts, cystic lymphangiomas and large uterine tumors.[2]

Among ovarian cysts, mucinous cystadenoma is one such tumor that can attain an enormous size. Mucinous tumors represent 8-10% of all epithelial ovarian tumors and are confined to the ovary in 95-98% of the cases. The most common types of epithelial neoplasms are benign cystadenomas, of which 75% are serous and 25% are mucinous.[7] Serous tumors are another group of tumors which may present as large abdominal masses.

Though giant ovarian cysts are a rare presentation, time and again such cases have been reported. The most remarkable one reported by Spohan in 1962, weighed 148.6kg.[8] Availability of better imaging modalities are the reason such cysts are less commonly seen these days. However, GOCs are encountered due to late presentation at the hospital, unavailability of proper health services, especially in rural areas, and poor socioeconomic status of the patient. In our case the cause of delay was the patient's mental illness and her lack of insight; she was under medication for the same. The poor socioeconomic status of her family was another cause.

Ultrasonography is an important diagnostic tool because of its simplicity, affordability and wide availability. In most cases sonography can typically characterize benign and malignant ovarian masses.[1] However, CT and MRI provide more information regarding the extent of the tumor, its origin and character. They play a major role in planning treatment in women with advanced ovarian cancer.[9] Tumor markers such as CA-125, CEA, CA 19.9, LDH, α-FP and ß-HCG also play a valuable role in diagnosing the type of tumor as well as help predicting the likelihood of malignancy.

Management of ovarian cyst mainly depends on the age of the patient, size and structure of the cyst and the menopausal status. Surgical removal along with comprehensive staging is the cornerstone of treatment for GOCs whether by laparotomy or laparoscopy.[7] There are few reports of laparoscopic removal of giant ovarian cysts and laparoscopic excision is preferred in cysts extending up to the level of umbilicus.[10] However laparoscopic removal of a cyst with considerable size, as in our case , may be difficult due to problems in creating pneumoperitoneum as well as decreased visibility and surgical mobility.[11] Moreover

laparotomy is preferred so as to prevent perforation and spillage of cyst fluid into the abdominal cavity.[12] In our patient, a laparotomy was performed due to the large size of the cyst and it was removed intact.

Although giant ovarian cysts are not frequently encountered nowadays due to better diagnostic facilities, they have been reported sporadically. Even though the size of the cyst can present as a challenge, majority of GOCs are reported as benign histopathologically. Moreover, in a developing nation like ours where good health services are yet to reach the rural parts of the country, awareness about such conditions must be created among the population, as they are easily treatable with conservative surgery and have a good prognosis.

## CONCLUSIONS

Ovarian neoplasms can present as giant ovarian cysts and are mostly either of serous or mucinous variants. Imaging modalities like CT/ MRI along with tumor markers are fundamental in evaluating the nature of these neoplasms and their relationship to other abdominal organs. Young patients can be treated conservatively as most of these cysts are reported as benign.

## ACKNOWLEDGEMENTS

The authors would like to thank the patient for consenting for her treatment at Bhaktapur Cancer Hospital and for this publication.

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**Competing interests:** None declared

## REFERENCES

1. Hoffman BL, Schorge JO, Halvorson LM, Hamid CA, Corton MM, Schaffer JI. Epithelial Ovarian Cancer. In: Williams Gynecology, 4e. New York, NY: McGraw-Hill Education; 2020.[Article]

2. Yeika EV, Efie DT, Tolefac PN, Fomengia JN. Giant ovarian cyst masquerading as a massive ascites: A case report. BMC Res Notes. 2017;10(1):8-11. [Article]

3. Berek JS, Kraus L, Professor L, Berek DL. Berek & Novak's Gynecology (Berek and Novak's Gynecology). Wolters Kluwer Health; 2020.https://lccn.loc.gov/2018052861

4. Kassidi F, Moukit M, Ait El Fadel F, El Hassani M, Guelzim K, Babahabib A, et al. Successful management of a giant ovarian cyst: a case report. Austin Gynecol Case Rep. 2017;2(1):1012-6. [Article]

5. Albers CE, Ranjit E, Sapra A, Bhandari P, Wasey W. Clinician Beware , Giant Ovarian Cysts are Elusive and Rare Case Presentation. 2020;12(1):1-8. [Article]

6. Fatema N, Mubarak M, Badi A. Case Report A Postmenopausal Woman with Giant Ovarian Serous Cyst Adenoma : A Case Report with Brief Literature Review. 2018;2018.[Article]

7. Moslemi MK, Yazdani Z. A huge Ovarian cyst in a middle-aged Iranian female. Case Rep Oncol. 2010;3(2):165-70.[Article]

8. Bhasin SK, Kumar V, Kumar R. Giant ovarian cyst: A case report. JK Sci. 2014;16(3):131-3.[Download PDF]

9. Tomczyk K, Izycka N, Wilczak M. iMedPub Journals Extirpation of a Giant Ovarian Tumor : A Case Report Abstract Case Presentation. 2019;3-6. [Download PDF]

10. Baradwan S, Sendy F, Sendy S. Case Report Complete Laparoscopic Extirpation of a Giant Ovarian Cyst in an Adolescent. 2017;2017:3-6.[Article]

11. Dubuisson J, Heersche S, Petignat P, Undurraga M. Laparoscopic Management of Giant Ovarian Cysts Using the Alexis Laparoscopic System ® : A Case Series. 2020;7(May):1-4.[Article]

12. De Lima SHM, Dos Santos VM, Darós AC, Campos VP, Modesto FRD. A 57-year-old Brazilian woman with a giant mucinous cystadenocarcinoma of the ovary: A case report. J Med Case Rep. 2014;8(1):1-5. [Article]