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Case Report

When size deceives: a giant 23 kg ovarian tumor mimicking malignancy in a young woman

Moly Sam Kodiplackal, Emil Rose Johnson*, C. M. Sidhiq

Department of Obstetrics and Gynecology, Government Medical College, Kozhikode, Kerela, India

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*Correspondence:

Dr. Emil Rose Johnson,

E-mail: emilrosejohnson@gmail.com

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ABSTRACT

Mucinous borderline ovarian tumors are epithelial ovarian neoplasms characterized by epithelial proliferation and nuclear atypia in the absence of stromal invasion and commonly occur in women of reproductive age. We reported the case of a 25-year-old woman with progressive abdominal distension over two years. She had a height of 157 cm, weight of 115 kg, and a body mass index of 46.7 kg/m². Clinical examination revealed a massive abdominopelvic mass measuring approximately 40×40 cm occupying the entire abdomen. Magnetic resonance imaging demonstrated a 40×28×28 cm multiloculated cystic lesion extending to the epigastrium, containing enhancing solid components, papillary projections, and a large enhancing solid plaque measuring 15×6 cm. Loculated ascites with focal peritoneal thickening was also noted. Serum CA 19-9 was markedly elevated at 1950 U/ml, while other tumor markers remained within normal limits. Staging laparotomy revealed a giant 45×45 cm solid-cystic ovarian mass weighing 23 kg along with approximately 100 ml of straw-colored ascitic fluid, without evidence of gross peritoneal deposits. Histopathological examination confirmed the diagnosis of a mucinous borderline ovarian tumor. This case highlights the rare occurrence of giant mucinous borderline ovarian tumors in contemporary clinical practice and demonstrates the association of markedly elevated CA 19-9 levels with mucinous ovarian neoplasms. Complete surgical excision remains the cornerstone of management and is associated with an excellent prognosis when the disease is confined to the ovary.

Keywords: Mucinous borderline tumor, Giant ovarian tumor, CA 19-9, Ovarian neoplasm, Abdominopelvic mass

INTRODUCTION

Borderline ovarian tumors account for approximately 10-20% of epithelial ovarian neoplasms and are characterized histologically by epithelial proliferation and nuclear atypia without stromal invasion.^{1,2} The mucinous subtype is frequently unilateral, commonly presents in younger women, and is often diagnosed at an early stage.³ Because of their slow-growing nature and vague early symptoms, mucinous tumors may attain large dimensions before diagnosis.⁴ Although CA-125 is commonly associated with epithelial ovarian malignancies, CA 19-9 elevation is frequently observed in mucinous ovarian tumors and may correlate with tumor size.^{5,6} We reported a rare case of a giant mucinous borderline ovarian tumor weighing 23 kg in a 25-year-old woman with markedly elevated CA 19-9.

CASE REPORT

A 25-year-old woman presented with progressive abdominal distension for two years. There was no history of abdominal pain, altered bowel or bladder habits, or menstrual irregularities. She was well built and nourished with a height of 157 cm and weight of 115 kg. Her BMI was 46.7 kg/m² consistent with class III obesity.

Clinical examination

Abdominal examination revealed a massive abdominopelvic mass measuring approximately 40×40 cm, filling the entire abdomen and causing marked stretching of the overlying skin with umbilical eversion. The mass was firm with variable consistency.



Figure 1: Preoperative image.



Figure 2: Clinical examination.

Radiological findings

MRI pelvis and abdomen (contrast study) showed a huge cystic lesion extending from pelvis to epigastrium with an approximate size of 40×28×28 cm with multiple enhancing solid components, papillary projections and a large enhancing solid plaque measuring 15×6 cm. There was loculated ascites posterior to cyst measuring

approximately 80×70 mm and few areas of peritoneal thickening within ascites. Uterus was displaced posteriorly, normal sized (56 mm) with an endometrial thickness 3-4 mm. Left ovary was normal.

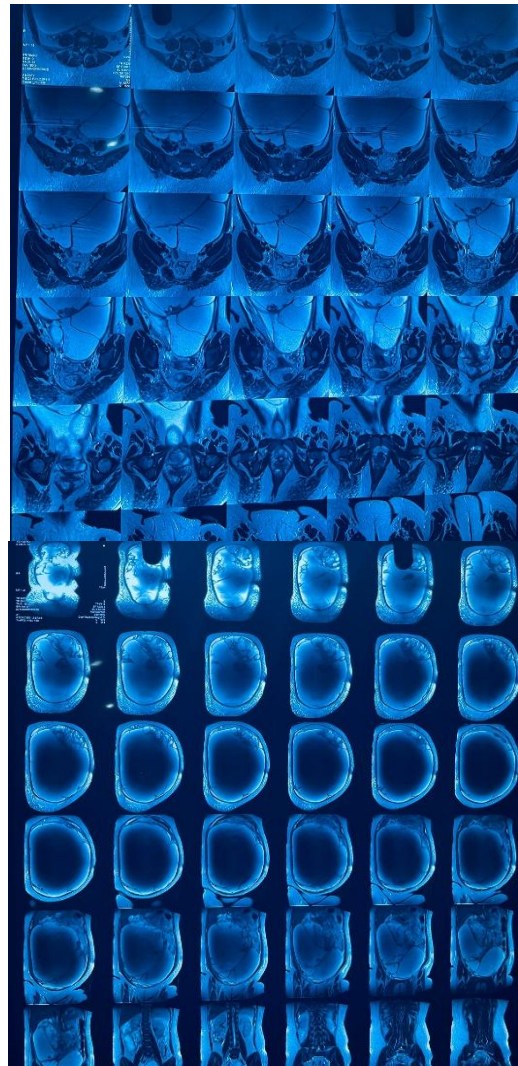


Figure 3: MRI images depicting the lesion.

Serum CA 19-9 was elevated to 1950 U/ml.

Surgical findings on staging laparotomy showed a large right ovarian solid-cystic mass of size 45×45 cm, weighing 23 kg with approximately 100 ml straw-colored ascitic fluid. There were no gross peritoneal deposits. Liver, omentum, uterus, bowel, and contralateral ovary appeared normal.

Histopathology of right ovariectomy revealed a 45×45×15 cm nodulocystic mass with stretched out fallopian tube, with cut section revealing multiloculated mass with solidified mucin and multiple tiny papillary projections.

Final diagnosis was mucinous borderline tumor of the right ovary.

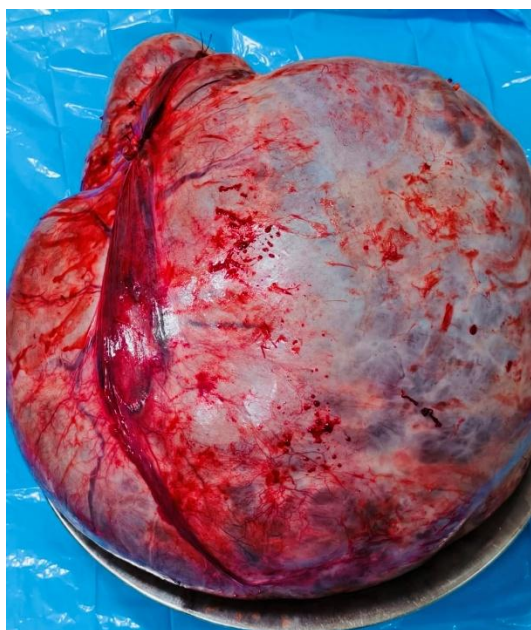


Figure 4: Gross appearance of the ovarian mass.

DISCUSSION

Mucinous borderline ovarian tumors commonly occur in women of reproductive age and are usually confined to the ovary at the time of diagnosis.³ Their indolent growth permits attainment of enormous sizes before the onset of compressive symptoms.⁴ Giant ovarian tumors exceeding 20 kg are uncommon in contemporary gynecological practice because of widespread availability of imaging and earlier detection. In the present case, the tumor measured 45 cm and weighed 23 kg, likely reflecting delayed presentation. CA 19-9 is frequently elevated in mucinous ovarian tumors and has been reported to correlate with tumor size; however, markedly elevated levels do not necessarily indicate invasive malignancy.^{5,6} Despite concerns regarding radiological features, including solid components and papillary projections, histopathology confirmed a borderline mucinous tumor without stromal invasion. The presence of minimal ascites in the absence of peritoneal implants was consistent with early-stage disease. More than 90% of mucinous borderline ovarian tumors present as stage I disease, and prognosis is excellent, with reported 5-year survival rates exceeding 95%.^{3,7} This case highlights the paradox of an extreme tumor burden with favorable histopathological findings and outcome.

CONCLUSION

Giant mucinous borderline ovarian tumors, although rare, should be considered in young women presenting with progressive abdominal distension. Elevated CA 19-9 may support a mucinous histology but does not confirm malignancy. Complete surgical excision remains the cornerstone of management and is associated with an excellent prognosis when disease is confined to the ovary.

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REFERENCES

1. Fauvet R, Boccara J, Dufournet C, David-Montefiore E, Poncelet C, Darai E. Borderline ovarian tumors: clinical features and management. *Obstet Gynecol Surv.* 2005;60(6):405-14.
2. Thomassin-Naggara I, Darai E, Cuenod CA, Fournier L, Toussaint I, Marsault C. MRI of borderline ovarian tumours. *Radiographics.* 2022;42(4):1048-67.
3. Ureyen I, Karalok A, Tasci T, Turan T, Boran N, Tulunay G, et al. Mucinous borderline ovarian tumors: analysis of 75 patients from a single center. *J Obstet Gynaecol.* 2016;36(6):769-73.
4. du Bois A, Ewald-Riegler N, du Bois O, Harter P. Borderline tumors of the ovary: a systematic review. *Geburtshilfe Frauenheilkd.* 2009;69(10):807-33.
5. Kelly PJ, Archbold P, Price JH, Cardwell C, McCluggage WG. Serum CA19-9 as a predictor of malignancy in primary ovarian mucinous tumors. *Gynecol Oncol.* 2010;118(1):22-6.
6. Ruangkhaw C, Chittithaworn S, Srisomboon J. Serum CA19-9, CA125 and CEA as tumor markers for mucinous ovarian tumors. *J Obstet Gynaecol Res.* 2020;46(11):2287-94.
7. Borderline ovarian tumors: Guidelines from the French National College of Obstetricians and Gynecologists (CNGOF). *Eur J Obstet Gynecol Reprod Biol.* 2021;256:492-501.

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