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Case report

Giant Ovarian Mucinous Cystadenoma in Derna, Libya

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ABSTRACT

Giant mucinous cystadenomas of the ovary are seldom documented in literature within developed countries, primarily due to the widespread availability of diagnostic technologies. However, in developing nations, such situations pose a challenge owing to limited access to diagnostic tools and constrained resources. Herein, we present the case of 35-year-old women, who reported a three-year history of a progressively enlarging giant mucinous cystadenoma which was initially mistaken for obesity, accompanied by abdominal distension and pain, and was not diagnosed during the cesarean section performed three weeks prior to the significant increase in size. Cystectomy performed, the resected cyst measured 25x23x17 cm, with no evidence of ascites. Subsequent histopathological analysis confirmed the diagnosis of mucinous cystadenoma. The patient experienced a complete postoperative recovery without any complications. Notably, the presence of vague gastrointestinal symptoms unrelated to the actual diagnosis underscores the importance of considering giant ovarian cysts as a potential differential diagnosis for ambiguous abdominal symptoms, given the varied clinical presentations they may manifest. This case underscores the necessity for multidisciplinary collaboration among various specialists to facilitate early diagnosis. Furthermore, it emphasizes the indispensable role of histopathological examination in ensuring accurate diagnosis and appropriate management of ovarian cysts.

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INTRODUCTION

Ovarian cysts represent the predominant etiology of enlarged ovaries, with giant ovarian cysts being particularly prevalent among individuals aged thirty to sixty. These cysts, characterized by a diameter exceeding 10 centimeters, are considered rare occurrences. Notably, the delayed diagnosis of giant ovarian cysts is frequently observed in low-income countries, attributable to various socioeconomic factors [1,2]. While the majority of ovarian neoplasms are benign in nature, a comprehensive understanding and accurate identification of these entities have significant implications for public health and survival rates [3].

Ultrasound typically serves as the initial modality of choice for evaluating ovarian neoplasms. However, MRI and CT scans offer valuable insights into the characterization, origin, and presence of distant metastases. Features suggestive of a benign ovarian neoplasm include a smaller diameter (less than 4 cm), thin septations (less than 3 mm), and a cystic nature without papillary projections. Additionally, the absence of infiltration into surrounding tissues, lymphadenopathy, and ascites is considered indicative of benign characteristics [4,5]. Recognition of radiological

features of ovarian neoplasms is invaluable for guiding surgical decisions and preoperative planning [5]. Cysts pose significant challenges for gynecological oncologists and pathologists alike. Therefore, histopathological examination is imperative to ascertain the nature of ovarian cysts, and proper classification is essential to facilitate appropriate therapeutic interventions [6].

Case presentation

A 35-year-old perimenopausal woman, Para 6, hailing from Derna City, Libya, presented with a three-year history of progressive abdominal swelling. She observed a gradual distension of her abdomen accompanied by intermittent symptoms such as constipation and a sensation of incomplete rectal emptying. She attributed these symptoms to her obesity, a condition prevalent among her family members. Notably, the patient had no history of chronic illnesses and no personal or familial occurrences of gynecological, bowel, or breast cancer.

The patient, a teacher residing in a rural area, has delivered five children via normal vaginal delivery, with the exception of her most recent delivery one and a half years prior, which was via cesarean section. All children were alive and well, except for one who died shortly after birth due to birth asphyxia.

Last year, the patient missed a menstrual cycle but did not seek medical attention. During the final month of her recent pregnancy, she attended a private clinic for antenatal care and subsequently underwent a cesarean section for delivery. Notably, no cyst or mass was noted during the operation by the attending gynecologist.

Two weeks post-cesarean section, the patient presented with severe abdominal distension, pain, and vomiting. Upon consulting another gynecologist, a trans-abdominal ultrasound scan (USS) was performed, revealing a large pelvic cystic lesion. The discovery of this cystic lesion was surprising given that it had not been identified during the cesarean section procedure.

Computed tomography (CT) imaging of the abdomen and pelvis, encompassing pre- and post-intravenous contrast administration axial and coronal cuts. The CT scan revealed a large, well-defined, thin-walled, abdomino-pelvic cystic lesion with thin septations. It measured approximately 16 x 24 x 22.5 cm in anterior-posterior, transverse, and cranio-caudal dimensions, respectively. The lesion extended from the region of the left adnexa superiorly to the pancreatic region, exerting compression and displacement of the bowel loops laterally. No calcifications or evident solid components were observed. In the post-contrast study, the lesion displayed no significant enhancement of septal structures. Furthermore, no loco-regional lymph node enlargements were identified, as depicted in figure 1.

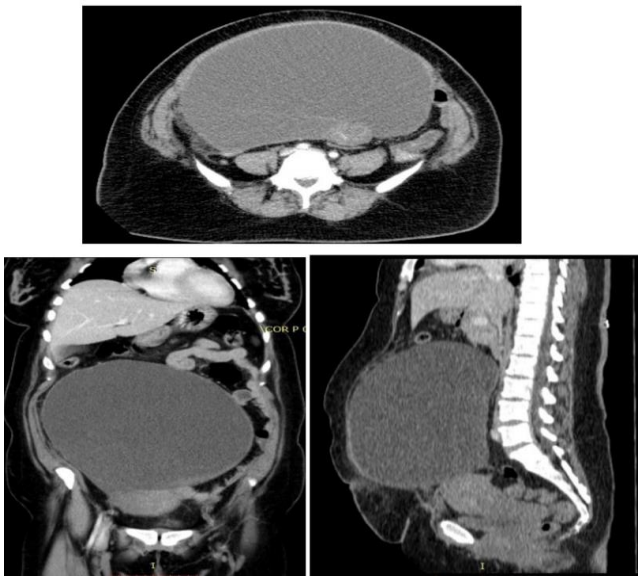

Figure 1. Axial, coronal & sagittal CT sections of abdomen and pelvis with IV contrast.

Subsequently, the patient was admitted to Al-Najah Clinic for preoperative preparation, during which both the patient and her relatives received counseling regarding potential complications. Results of investigations revealed microcytic anemia, with a hemoglobin level of 10.5 g/dl, a white blood cell count of 6.5 x 10^3/µl, and a platelet count of 250 x 10^3/µl. Urea and electrolyte levels were within normal limits, and the patient exhibited normal blood pressure, with a body temperature of 36.7°C. Upon chest examination, bilateral equal air entry was noted, and her cardiorespiratory and neurological systems were found to be normal. Furthermore, liver and kidney function tests returned normal results, and

tumor marker levels were within the normal range. During laparotomy, performed via a left paramedian incision, a large abdominopelvic cyst was encountered. The cyst was excised intact, with no evidence of rupture, as depicted in figure 2.

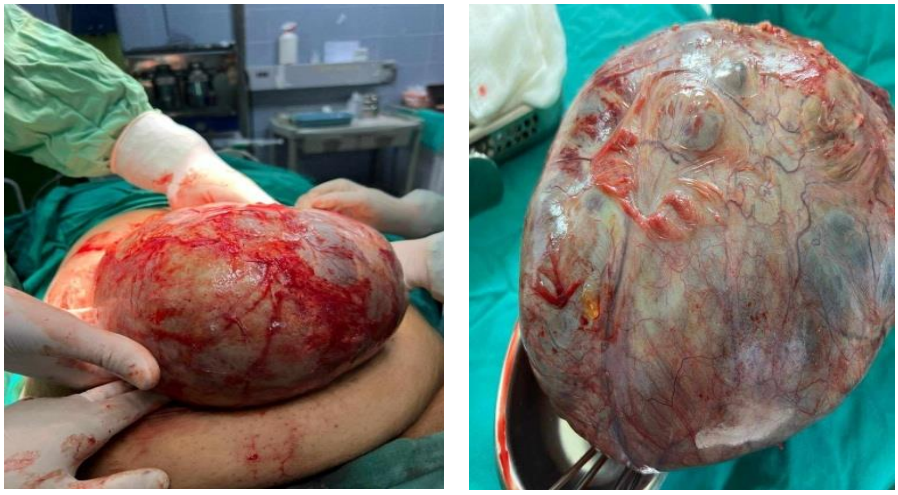

Figure 2. The gross picture of the found tumor, Intraoperative

On the second postoperative day, the patient exhibited improvement and was discharged in good condition. Subsequent follow-up appointments indicated that the patient's recovery was progressing well. Upon gross examination of the specimen, a large cyst measuring 25x23x17 cm was observed, characterized by a smooth external surface and congested blood vessels. Cut sections of the cyst revealed a multiloculated structure with smooth, thin inner walls, containing mucinous fluid, as depicted in Figure 3.

Figure 3. Cut section of studied case

Histopathological examination revealed; multiple cystic lesions with benign lining of mucin –secreting columnar cells, no stratification, no atypia, no dysplasia and no evidence of stromal invasion as shown in figure 4.

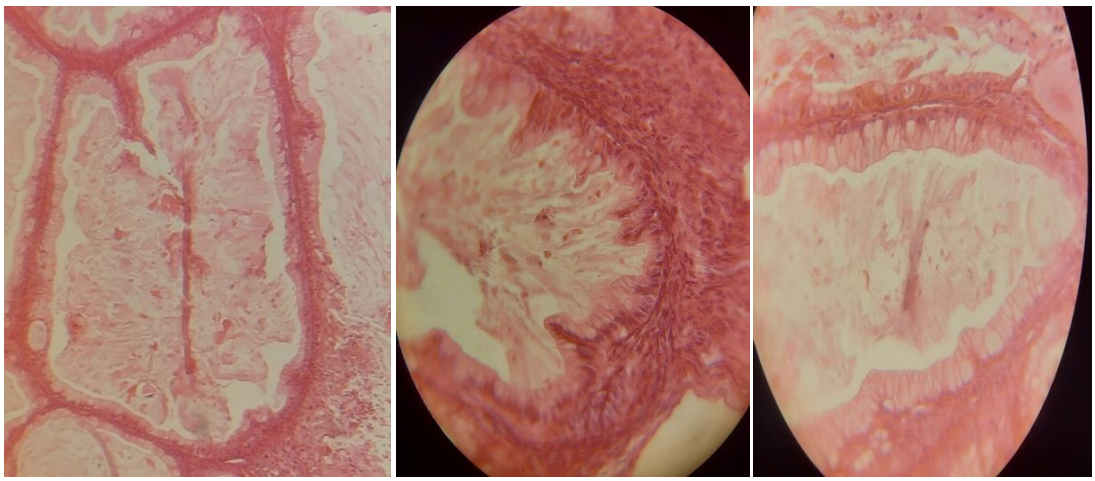

Figure 4. Hematoxylin &Eosin staining of studied case; (A)x40, (B)X100, (C) x400

DISCUSSION

Ovarian tumors come in various types and originate from different cell sources within the ovary, including the surface epithelium, germ cells, and sex cord-stromal tissue. Epithelial cells are responsible for the majority, around 95%, of gynecological cancers [7]. In general, tumors that secrete mucin comprise approximately 15% of all ovarian tumors [8]. Mucinous cystadenoma is a non-cancerous cystic tumor originating from the surface epithelium of the ovary and characterized by a lining of epithelial cells that secrete mucin. This type of tumor typically occurs most frequently spanning the third to fifth decades of life. [9]. Histopathological categorization of mucinous tumors includes benign, borderline or low malignant, and invasive types. Approximately 80% of these tumors are benign, while 10% are borderline, and the remaining 10% are malignant [10].

Despite being a benign tumor, mucinous cystadenoma has the potential to reach enormous proportions, with the largest documented case, reported in 1963, weighing 148.6 kg.[11]. The size of resected mass from the case in this report was a large cyst measuring 25x23x17 cm and weighting 15 kg that is consistent with the size which considered large cystadenoma which is more than 10cm.

Typically, they are discovered inadvertently through imaging scans or during routine gynecological examinations [12]. However, complaints may involve symptoms of compression, such as shortness of breath, feeling full quickly after eating, heartburn, and increased need to urinate. In our case, the patient experienced gradual abdominal distension over 3 years, initially attributing it to obesity and then pregnancy, the distension is accompanying with vague abdominal pain. However, the distension significantly increased and the pain worsened two weeks after undergoing a cesarean section. Conversely, severe complications may arise, including torsion, hemorrhage, or rupture of the adnexal mass, which could potentially lead to fatal outcomes [10]. Particular acute life-threatening complications encompass pleural effusion and small bowel obstruction, with the possibility of venous thromboembolism occurring as well [7]. Upon evaluation, the physical examination findings in our patient suggested the presence of an adnexal mass rather than ascites. The abdomen exhibited a palpable firmness, with the absence of shifting dullness.

On the other hand, vague symptom may be reported such as the case discussed in the study by Khadayat et al [14] which presenting complaining of menorrhagia with iron deficiency anaemia.

In low and middle-income countries, diagnosing giant ovarian cysts presents a notable hurdle due to resource constraints. Nonetheless, the advent of advanced imaging techniques has led to a reduction in the incidence of giant ovarian cysts as early diagnosis and management become more achievable. This case report seeks to highlight how a substantial cystic ovarian mass can result in misdiagnoses of conditions such as multiple pregnancies, ascites, and obesity among reproductive-aged women in settings with limited resources or neglect, the patient is from rural area and the routine antenatal visits are not crucial in her opinion, that leads to missed diagnosis during pregnancy.

Likewise, a study illustrated the case of a 36-year-old woman, para 4, who presented at a healthcare center with a notably distended abdomen. Initially, the condition was erroneously interpreted as indicative of either multiple pregnancies, extensive ascites, or intestinal tuberculosis. Despite undergoing evaluations at multiple healthcare facilities, an accurate diagnosis remained elusive. Subsequent abdominopelvic ultrasound scanning revealed the presence of a sizable left ovarian cyst. Following by exploratory laparotomy which led to the successful excision of the cyst, resulting in an uncomplicated postoperative recovery. The histopathological examination confirmed the presence of a mucinous cystadenoma [15].

The occurrence of ovarian tumors post-cesarean section was estimated at about 1 in every 200 cesarean deliveries, whereas the incidence of ovarian tumors following pregnancy termination was approximately 1 in every 594 cases. In a clinical scenario similar to this report, a third gravida patient with a history of two previous cesarean sections presented emergently with persistent abdominal pain at a gestational age of 35 weeks. Subsequent surgery revealed a cyst measuring 40×30×15 cm and weighing 20 kg [16].

Most of the adnexal masses are discovered incidentally during pregnancy because of the routine use of ultrasound [17]. As the abdominal distension severely worsened 2 weeks after cesarian section was performed, in addition to it is was missed during pregnancy due to neglecting the visits, the impotence of antenatal visits and routine ultrasonographical examination should be emphasized. Furthermore, it is crucial to emphasize the importance of conducting a thorough inventory of the abdominal cavity during cesarean sections following fetal and placental extraction, which includes evaluating the uterine tubes, ovaries, and peritoneum. Reviewing the abdominal cavity enabled the detection of a small tumor that had not been previously detected through ultrasound examination. Recently, a case was reported where a young patient was found to have a low-grade tumor in the cecal appendix during a cesarean section. Another case involved the identification of bilateral dysgerminoma during a cesarean section performed on a young patient following failed induction [18]. Conversely, Incidental Discovery of Ovary Cyst-adenofibroma during Cesarean procedure in young patient was reported [19].

It is vital to highlight that the nonspecific symptoms associated with ovarian cysts and underscores the significance of thorough gynecological history in diagnosing conditions and determining treatment strategies. It underscores the potential for gynecological issues to be overlooked and emphasizes the necessity for physicians to investigate gynecological causes of systemic illness when patients present with symptoms unrelated to gynecology. Comprehensive history-taking and physical examinations are essential for narrowing down potential diagnoses and minimizing the requirement for excessive testing and treatment delays.

CONCLUSION

Accurately and promptly diagnosing giant ovarian cysts (GOC) in women of reproductive age poses several challenges. Routine abdominal ultrasound scans may contribute to achieving an "early diagnosis" and addressing these challenges.

Conflicts of Interest

The authors declare no conflicts of interest

REFERENCES

1. Chipo G, Annie F, Thulani M, Zvavahera MC, and Mugove GM. Giant mucinous cystadenoma: a case report. J Med Case Rep. 2019; (13):181.
2. Abdulaziz A, Heba E, Mohammed A, Ahmed A. An extremely Giant Mucinous Cystadenoma. Gulf J Oncoloy.2019;1(29):83-86.
3. Taylor EC, Irshaid L, Mathur M. Multimodality Imaging Approach to Ovarian Neoplasms with Pathologic Correlation. Radiographics. 2021 Jan-Feb;41(1):289-315. doi: 10.1148/rg.2021200086.
4. Jung SE, Lee JM, Rha SE, Byun JY, Jung JI, Hahn ST. CT and MR imaging of ovarian tumors with emphasis on differential diagnosis. Radiographics. 2002 Nov-Dec;22(6):1305-25. doi: 10.1148/rg.226025033.
5. Nakai G, Yamada T, Yamamoto K, Hirose Y, Ohmichi M, Narumi Y. MRI appearance of ovarian serous borderline tumors of the micropapillary type compared to that of typical ovarian serous borderline tumors: radiologic-pathologic correlation. J Ovarian Res. 2018 Jan 10;11(1):7. doi: 10.1186/s13048-018-0379-y.
6. Dhakal R, Makaju R, Bastakoti R. Clinicomorphological Spectrum of Ovarian Cystic Lesions. Kathmandu Univ Med J (KUMJ). 2016 Jan-Mar;14(53):13-16.
7. Desai A, Xu J, Aysola K, Qin Y, Okoli C, Hariprasad R, Chinemerem U, Gates C, Reddy A, Danner O, Franklin G, Ngozi A, Cantuaria G, Singh K, Grizzle W, Landen C, Partridge EE, Rice VM, Reddy ES, Rao VN. Epithelial ovarian cancer: An overview. World J Transl Med. 2014 Apr 12;3(1):1-8. doi: 10.5528/wjtm.v3.i1.1.
8. Mondal SK, Banyopadhyay R, Nag DR, Roychowdhury S, Mondal PK, Sinha SK. Histologic pattern, bilaterality and clinical evaluation of 957 ovarian neoplasms: a 10-year study in a tertiary hospital of eastern India. J Cancer Res Ther. 2011 Oct-Dec;7(4):433-7. doi: 10.4103/0973-1482.92011.
9. Kamel RM: A massive ovarian mucinous cystadenoma: A case report. Reprod Biol Endocrinol. 2010; 8: 24
10. Crum CP, Lester SC, Cotran RS: Ch 19. Pathology of female genital system and breast. In: Kumar V, Abbas A, Fausto N, Mitchell R (eds.), Robbins' Basic Pathology. USA: Elsevier Company; 2007.
11. Spohn AE: Multicystic ovarian tumour weighing 328 pounds. Texas Med J. 1905; 1273–74
12. Brown J, Frumovitz M. Mucinous tumors of the ovary: current thoughts on diagnosis and management. Curr Oncol Rep. 2014 Jun;16(6):389. doi: 10.1007/s11912-014-0389-x.

13. Yeika EV, Efie DT, Tolefac PN, Fomengia JN. Giant ovarian cyst masquerading as a massive ascites: a case report. BMC Res Notes. 2017 Dec 19;10(1):749. doi: 10.1186/s13104-017-3093-8.
14. Khadayat P, Kayastha B, Koirala P. Mucinous Cystadenoma of Ovary with Vague Symptoms: A Case Report. JNMA J Nepal Med Assoc. 2022 Aug 1;60(252):747-749. doi: 10.31729/jnma.7513.
15. Nouh D, Dayoub M, Al-Janabi MH. Mucinous cystadenoma of the ovary with xanthogranulomatous oophoritis: the first case report in the literature. J Surg Case Rep. 2024 Mar 15;2024(3):rjae155.
16. Mishra S, Yadav M, Walawakar SJ. Giant Ovarian Mucinous Cystadenoma Complicating Term Pregnancy. JNMA J Nepal Med Assoc. 2018 Mar-Apr;56(210):629-632.
17. Hermans RHM, Fischer DC, Van der Putten Hwhm, et al., adnexal masses in pregnancy. Onkologie, 2003; 26:167-172
18. Inubashiri E, Watanabe Y, Akutagawa N, Kuroki K, Sugawara M, Deguchi K, Maeda N, Hata F. An incidental finding of low-grade appendiceal mucinous neoplasm during cesarean section: A case report. JGH Open. 2019 Aug 17;4(2):306-308. doi: 10.1002/jgh3.12232.
19. Matsuda K, Hashiguchi Y, Russo B, Bessa F, Madeira F, Wulf I, Zimmermmann J. Incidental Discovery of Ovary Cystadenofibroma during Cesarean Section: A Case Report. Asp Biomed Clin Case Rep. 2020 Jul 09;3(2):160-63.

ورم غدي كيسي عملاق في المبيض؛ تقرير حالة في درنة، ليبيا

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المستخلص:
اورام المبيض العملاقة نادرة الحدوث في البلدان المتقدمة، نظرًا لتوفر التقنيات التشخيصية الواسعة الانتشار. ومع ذلك، في الدول النامية، تشكل مثل هذه الحالات تحديًا بسبب الوصول المحدود إلى الأدوات التشخيصية والموارد المقيدة. هنا، نقدم حالة سيدة تبلغ من العمر 35 عامًا، والتي أبلغت عن تاريخ يمتد على مدى ثلاث سنوات من ورم مبيض عملاق متزايد تدريجيًا والذي كان معتبرا كسمنة، وكان مصحوبا بانتفاخ في البطن وألم ولم يتم تشخيصه اثناء العملية القيصرية التي سبقت ازدياد حجمه المفاجئ بثلاث اسابيع .أجريت عملية استئصال الكيس، وقياس الكيس المستأصل بأبعاد 25 × 23 × 17 سم، دون وجود أدلة على التجمع السائل في البطن. أكد التحليل النسيجي التشخيص انه ورم غدي كيسي بالمبيض. خلال فترة النقاهة بعد الجراحة، تعافت المريضة تمامًا دون حدوث أي مضاعفات. وجود أعراض هضمية غامضة غير متعلقة بالتشخيص الفعلي يؤكد على أهمية النظر في الأورام المبيضية العملاقة كتشخيص تفاضلي محتمل لأعراض البطن الغامضة، نظرًا لتنوع العروض السريرية التي قد تظهر بها. تؤكد هذه الحالة على ضرورة التعاون بين مختلف الاختصاصات لتسهيل التشخيص المبكر. علاوة على ذلك، فإنها تؤكد على الدور اللازم للفحص النسيجي لضمان التشخيص الدقيق والعلاج المناسب للأورام المبيضية.

الكلمات الدالة. ورم غدي كيسي موسيني، درنة، تشخيص خاطئ