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Case Report

An Extremely Giant Ovarian Mucinous Cystadenoma

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Abstract

Ovarian mucinous cystadenomas are cystic neoplasms lined by mucin–producing epithelial cells. They are mostly benign (80%) and frequently asymptomatic at early stages. The average diameter of ovarian mucinous cystadenomas ranges from 15 to 30 cm. Herein, we report the case of a giant benign ovarian mucinous cystadenoma in a 53-year-old postmenopausal woman. The patient presented with a very huge pelvi–abdominal distention that started ten months ago and was progressively increasing in size. It was associated with on–off abdominal pain, nausea and urinary retention. The case was discussed with a multidisciplinary team. Subsequently, the patient was consented for exploratory laparotomy. The origin of the mass was identified to be the right ovary, and right salpingo–oophorectomy was done. The resected mass measured 73 x 51 x 42 cm and weighed 108 kg. The left ovary had a multilocular mass of 15 cm in diameter, and left salpingo–oophorectomy was successively performed. There was no ascites. Histopathological examination confirmed the diagnosis of bilateral benign mucinous cystadenoma. At a postoperative 9–month follow–up in the outpatient clinic, the patient showed up in good condition without evidence of recurrence. To the best of our knowledge, we report the largest benign ovarian cyst in Saudi Arabia, and one of the largest (probably the third) in the English medical literature. It is technically feasible to manage an extremely large–sized benign mass with satisfactorily perioperative outcomes. This should be done through a multidisciplinary approach that demands an orchestrated collaboration between different specialists to yield an optimized perioperative care.

Keywords: Ovary; mucinous cystadenoma; giant ovarian cyst; case report

Introduction

Ovarian mucinous cystadenomas are cystic neoplasms lined by mucin–producing epithelial cells. They roughly account for 15–20% of all ovarian neoplasms. They are approximately 80% benign, 10% borderline and 10% malignant.¹,² They are frequently asymptomatic at early stages; however, pressure–related symptoms may occur when the cysts reach massive dimensions.³ The average diameter of ovarian mucinous cystadenomas ranges from 15 to 30 cm.⁴ Ovarian cysts with more than 10 cm in diameter are most often referred to as “giant” ovarian cysts.⁵ Herein, we report the case of a giant benign ovarian mucinous cystadenoma which measured 73 x 51 x 42 cm and weighed 108 kg. To the best of our knowledge, we report the largest ovarian cyst in Saudi Arabia, and one of the largest (probably the third) in the English medical literature.

Case Presentation

A 53–year–old postmenopausal woman presented with a huge pelvi–abdominal distention that started ten months ago and was progressively increasing in size. It was associated with on–off abdominal pain, nausea and urinary retention. Systemic review was remarkable for severe decreased appetite, cachexia and immobilization with bedsores. Past medical and surgical history were unremarkable. Social history was notable for low socio–economic status and living in a rural area.

On physical examination, vital signs were remarkable for tachypnea. Upon admission, the body weight was 172 kg. On general examination, the patient looked ill, lethargic, cachectic and lying on her right side with a huge
abdominal distention (Figure 1 and Figure 2). Abdominal examination was remarkable for a cystic, diffuse, tense and palpable mass with scattered foci of pressure ulcers. The abdominal circumference was 181 cm. On per–vaginal examination, vulva, vagina and cervix were normal.

Laboratory tests were remarkable for elevated CA–125 level (298 U/mL). Abdominal–pelvic ultrasound revealed a huge multi-loculated cyst occupying the whole abdomen with multiple thick septi (12 mm) and fine internal echoes. There was minimal free intraperitoneal fluid.

The case was discussed with a multidisciplinary team. Subsequently, the patient was consented for exploratory laparotomy. The patient remained on her right side throughout the entire procedure as it was difficult to mobilize the mass. Away from the pressure ulcers foci, a midline incision of about 35 cm in the healthy skin was performed (Figure 3). The mass was resected (73x51x42 cm) and 84 liters of mixed serous–mucinous fluid were drained from it through multiple holes (Figure 4). A frozen section biopsy was consistent with benign mucinous cystadenoma. The origin of the mass was identified to be the right ovary, and right salpingo–oophorectomy was done. The left ovary had a multilocular mass of 15 cm in diameter, and left salpingo–oophorectomy was successively performed. There was no ascites; abdominal organs and omentum were normal (Figure 5). Finally, the midline incision was closed (Figure 6). The estimated blood loss was 1100 ml and the surgery went uncomplicated. Histopathological examination confirmed the diagnosis of bilateral benign mucinous cystadenoma.

Postoperatively, the patient was transferred intubated to the intensive care unit. In the first few days post–operation, there was about 6–8 liters/day of serous fluids draining from the abdominal cavity. Patient was extubated 8 days post–operation.

At discharge, the patient’s pressure ulcers improved with granulation tissue. The poor muscle power improved with physiotherapy. Nutritional assessment was done on a daily basis as she was given high–caloric and high–protein diet. Home care was arranged.

The patient was discharged home in good condition at 14 days post–operation. The pre–operative patient body weight was 172 kg, and the postoperative weight was 64 kg. Thus, it is believed that the tumor weighed about 108 kg. At a postoperative 9–month follow–up in the outpatient clinic, the patient showed up in good condition without evidence of recurrence.
Most patients with ovarian cysts are asymptomatic. However, space-occupying and compression-related symptoms may take place when the cysts attain large dimensions. Such symptoms may include: non-specific abdominal pain, early satiety, nausea, vomiting, constipation and urinary retention. Our patient developed some of these symptoms in addition to severe bedsores that are secondary to prolonged immobilization. Low socio-economic status, lack of nearby healthcare facilities as well as cultural-related fears of surgery and malignancy are substantial contributors to late presentation and diagnosis of ovarian cysts. Furthermore, some patients present to clinical attention only when cysts grow enormously, symptoms become greatly intolerable, or mobilization comes to be severely limited. The most common complications of benign ovarian cysts comprise: hemorrhage, torsion and rupture. A serious consequence of ruptured ovarian mucinous cystadenoma is the development of pseudomyxoma peritonei — a condition characterized by mucinous deposits on the peritoneum.

Our patient had a very large pelvi-abdominal distention. The differential diagnosis is broad and may include: ascites, accentuated obesity, pelvic endometriosis, abdominal cysts, hydronephrotic kidneys and a wide range of neoplasms of various origins (endometrial, gastrointestinal tract, retroperitoneal and others). Ascites appear to be a common finding in patients with ovarian cysts, however, our patient had minimal free intraperitoneal fluid on ultrasound.

A large-sized ovarian cyst does not automatically denote malignancy. In fact, malignant ovarian cysts account for roughly 10% of all ovarian cysts. Tumor markers such as alpha fetoprotein (αFP), beta human chorionic gonadotropin (β-HCG), cancer antigen 125 (CA-125) and carcinoembryonic antigen (CEA) may be clinically beneficial in early diagnosis, management and follow-up of patients with malignant ovarian cysts. However, conflictingly, several studies reported elevated levels of these tumor markers even in patients with benign cystic ovarian neoplasms. Relevant to our case, the CA-125 level was significantly elevated in our patient despite the benign pathology. Histopathological/immunohistochemical findings of the ovarian cysts provide the definitive diagnosis of malignant ovarian cysts.

Our patient had a giant benign ovarian mucinous cystadenoma which measured 73 x 51 x 42 cm and weighed 108 kg. Reports of giant ovarian cysts include those documented by Spohn of 148.6 kg, and O’Hanlan.
of 137 kg\textsuperscript{11}. To the best of our knowledge, we report the largest ovarian cyst in Saudi Arabia, and one of the largest ovarian cysts (probably the third) in the English medical literature.

Conservative surgery, such as ovarian cystectomy and/or salpingo–oophorectomy, is largely satisfactory for management of benign lesions\textsuperscript{3,12}. However, management of giant ovarian cysts can sometimes prove to be very challenging. Satisfactory management requires concentrated pre—, intra— and post–operative care. In our case, a multidisciplinary team was assembled, consisting of healthcare specialists from gynecologic oncology, anesthesia, plastic surgery, intensive care unit, cardiology, infectious diseases, psychology, nursing, physiotherapy, wound care and dietary care.

In conclusion, we report the largest benign ovarian tumor in Saudi Arabia, and one of the largest in the English medical literature. Also, we report that it is technically feasible to manage an extremely large–sized benign mass with satisfactorily perioperative outcomes.

Reference