pp. 32-34 (2014)

Giant ovarian cyst: a diagnostic and therapeutic challenge

Florin Savulescu[1], Ovidiu Albita[1], Ovidiu V. Nicodin[2], Victor Virjoghe[1], Teodor Rogin[1], Cristian Cirlan[1], Mircea Tampa[3]

1. Second Surgical Department, "Carol Davila" Central Military Hospital, Bucharest (Romania)
2. Gynecology Department, "Carol Davila" Central Military Hospital, Bucharest (Romania)
3. Department of Dermatology, "Carol Davila" University of Medicine and Pharmacy, Bucharest (Romania)

Correspondence: Dr. Florin Savulescu
e-mail: savfl@yahoo.com

Abstract

Nowadays giant ovarian tumors are rare neoplasms and represent a great diagnosis and therapeutic challenge. We present the case of a 68-year-old woman admitted to our department with a history of progressive abdominal distension, constipation and polakiuria. Based on clinical findings, laboratory evaluation and imaging investigations our suspicion of diagnosis was: giant abdominopelvic mass. Exploratory laparotomy revealed a large cystic mass arising from the right adnexa. Bilateral salpingo-oophorectomy was performed. Histologically, the specimen was a 26 kg benign ovarian cystadenoma measuring 40/30/20 cm, the largest ovarian tumor operated in our surgical department. The main goals of optimal surgical management were: carefully organizing all the procedure steps, anticipating any possible complications and being able to deal with them.
Keywords: *giant ovarian tumor, salpingo-oophorectomy*

Introduction

Ovarian tumors are a common finding in female patients and about 80 percent of them are benign. The exact incidence of ovarian cysts in asymptomatic women varies from 5 to 15 percent. Histologically ovarian cysts are classified in functional and neoplastic. It is often difficult to distinguish preoperatively malignant from benign conditions despite the patient's age, clinical manifestations, size of the cyst, laboratory and imaging findings[(1)]. After menopause the incidence of malignant disease is directly correlated with patient's age and the cysts size. In a patient with giant abdominopelvic tumor is also very difficult for the physician to determine with accuracy the exactly origin of the mass[(2)]. This report illustrates the case of a woman with a giant benign ovarian cyst weighing 26 kg.

Case report

A 68-year-old nulipare postmenopausal woman was referred to our surgical clinic with gradually weight gain, increasing abdominal size, abdominal pressure sensations, dyspareunia, lower abdominal and pelvic pain, frequent urination and constipation. The personal and familial histories were unremarkable. She was not smoking and her vital signs were all within normal limits (Figure 1). The clinical examination was normal, except a protuberant abdomen with visible collateral circulation (Figure 2).

Abdomen was circumferentially distended from a mass of cystic consistency, mat to percussion with regular surface. It was not possible to distinguish any abdominal viscera on palpation and percussion. No abdominal tenderness was present. Bowel sounds were heard in the flanks. There was no generalized enlargement of lymph nodes. Breast examination was normal. On the speculum examination the uterine cervix was deviated and the vaginal fornices were full. Bimanual pelvic examination revealed a very large, cystic, mobile mass that filled the pelvis and abdomen, but was difficult to specify the origin of tumor.

The result of the hematological panel revealed a normochromic, normocytic anemia. The results of the clinical biochemistry laboratory tests, of the serum electrolytes and tumor markers were normal. Tomographic evaluation was useful for diagnosis. Computed tomographic scan of the abdomen and pelvis reveals the presence of a large, well-encapsulated cystic mass without solid areas, with regular contour which filled the entire abdominal cavity, probably with a genital origin (Figures 3 and 4).

Figure 1. Female patient, 68 years old, large abdominal tumor. Notice the collateral circulation

Received: *September 12, 2013*
Revised: *November 24, 2013*
Accepted: *January 02, 2014*

Figure 2. Side view of the abdomen

There were no omental implants or lymphadenopathy. In the light of the clinical examination, laboratory and imaging findings, giant genital tumor was the most likely diagnosis, but the exact origin and nature were unclear.

The next step for this patient was an exploratory laparotomy. After obtaining the informed consent, the patient was taken to the operating room and positioned in the left lateral decubitus position to prevent cava vein compression (Figure 5).

Under a general anesthesia, an abdominal midline xiphopubian incision was made which provides a large surgical field that allows us good ability to manipulate pelvic organs. Intraoperative was found a voluminous cystic tumor arising from the right adnexa, which filled the entire abdomen. The tumor compressed the abdominal organs and had multiple intra-abdominal adherences. The entire peritoneal cavity was systematically explored. The left adnexa had multiple cysts. After a difficult dissection of the multiple adhesions, with diffuse hemorrhage, a bilateral salpingo-oophorectomy was performed. The right ovarian mass was removed intact and submitted to pathology (Figures 5 and 6). The specimen was a 26 kg benign ovarian cystadenoma measuring approximately 40/30/20 cm.

For the hemorrhagic complications that occurred in the first postoperative day, a surgical reintervention was necessary to achieve a good hemostasis. Other intraoperative and postoperative possible complications such cyst ruptures, injury to adjacent organs, wound infections were avoided using adequate surgical management and carefully perioperative care (Figure 7).

After surgery, the patient was refered in ICU. 24 hours later a new intervention was necessary due to a diffuse bleeding from the right paritocolic flank, controlled by Argon beam laser coagulation. Postoperative evolution was uneventful and she was discharged from our department 10 days later (Figure 8).

One month later, the good evolution of the patient was confirm at the control, with normal abdominal wall healing (Figure 9).

Discussion

Cystic ovarian masses are one of the most frequent gynecological disorders. Serous ovarian tumors are common and represent 30 percent of all ovarian tumors (most of them are benign conditions). Lesions affecting the ovary are often asymptomatic and found incidentally during pelvic examination, imaging or surgery. Ovarian cysts are difficult to palpate unless they are large. Large tumors may cause pelvic pain and

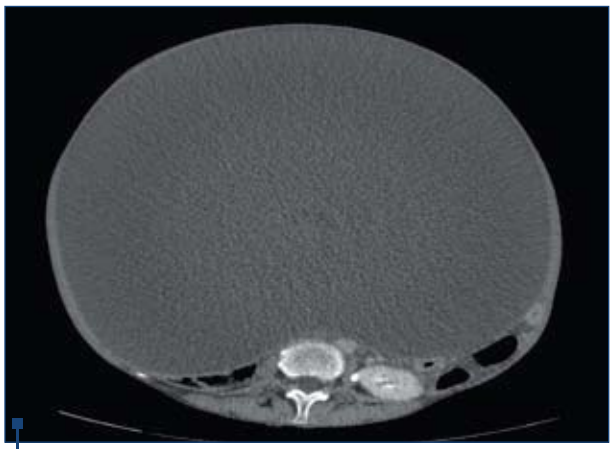

Figure 3. Abdominal CT, cross section. The tumor occupies the entire peritoneal cavity displacing the colon and small intestine towards the back

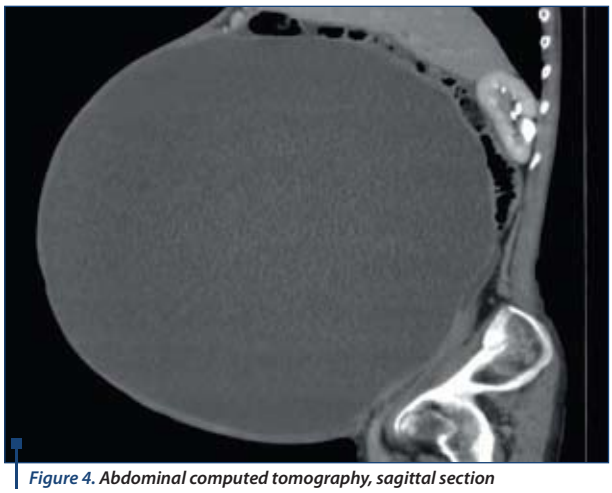

Figure 4. Abdominal computed tomography, sagittal section

Figure 5. Intraoperative position, left lateral decubitus

Figure 6. Extraction of the operative piece (40/30/20 cm, 26 kg)

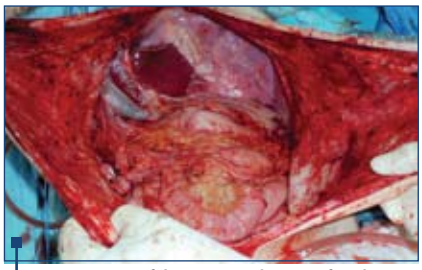

Figure 7. View of the peritoneal cavity after the excision of the ovarian tumor

Figure 8. Immediate postoperative view

Figure 9. View of the abdomen one month after surgery

abdominal pressure sensations, abnormal bleeding, gastrointestinal and urinary symptoms[2].

Clinical and pelvic examination, hematological and metabolic data, tumor markers and medical imaging were very helpful for diagnosis and treatment. Therapeutic management of ovarian cysts depends on the patient's age, the symptoms severity, the cysts size and the intraoperative findings. Surgical intervention is reasonable in postmenopausal women with very large and symptomatic ovarian cysts because of the risk of malignancy, torsion, rupture or infection (oophorectomy should be preferred to cystectomy)[3]. In this case that we reported, the risk of malignancy and the intraoperative accidents (such cyst injury with intraperitoneal spillage of cyst content) exceeds the benefits of ovarian tissue preservation.

To achieve the optimal management of surgical treatment it is mandatory to organize carefully all the steps of the procedure. Operative team must have a large number of surgeons in order to efficiently manipulate the tumor and the surgeons need to be skilled in all possible complications involving intraperitoneal viscera[4]. Another important component involves the appropriate anesthesiological team. Sufficient reserve of blood is imperative.

Conclusions

Laparotomy is recommended because allows a very good surgical field (a very important aspect in case of very large pelvic masses or extensive adhesions) who reduced the risk of intraoperative and postoperative morbidity. In the operating room the patient was positioned in the left lateral decubitus position to avoid intraoperative hemodynamic and ventilatory possible complications associated with inferior vena cava syndrome.

Time is crucial in this kind of procedures because the bleeding is diffuse and comes from small neovascular adherences between tumor and the abdominal walls. Even small, this large amount of vessels is producing important blood lose. It is better to use a Ligasure like device which provides quickly haemostassis and progression of dissection.

After removal of the specimen, a large cavity will remain. This must be carefully inspected for bleeding or any visceral damage.

In conclusion, despite the very late presentation, such giant tumors can be successfully treated only with appropriate management that involves multiple stages, starting with diagnose, carefull preop. preparing, blood reserve, well skilled surgical team and postoperative intensive care. ■

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