CLINICAL CASE

A CASE OF BOCHDALECK'S HERNIA AND A GIANT OVARIAN CYST IN A GERIATRIC PATIENT

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Abstract

Some authors define a giant ovarian cyst as having more than a 10 cm diameter . Huge cysts are usually benign or have a low-degree of malignancy . Laparoscopy is considered the gold standard approach to manage benign ovarian cysts but a major factor that will make the surgeon decide to perform or not perform a laparotomy is the size of the ovarian mass. We describe the case of an 86-year-old female patient diagnosed and treated for a giant ovarian cyst. The patient presented with complaints of recently aggravated pain in the left hypochondrium. The main symptom was a giant pelvic and abdominal mass that occupied all the quadrants. The CT scan identified the giant tumor as an ovarian cyst and also revealed a Bochdaleck hernia. Other investigations revealed: arterial hypertension, right bundle branch block, and chronic cardiac failure. The surgical treatment of choice was minimal laparotomy followed by suction of the content of the cyst, excision of the cyst's wall and left adnexectomy. Despite the advanced anesthesiological risks, the patient developed no postoperative complications. Patients can be operated on successfully even in old age and in complicated cases with good perioperative anaesthetic evaluation and careful election of the surgical technique.

Keywords: *giant ovarian cyst, adnexectomy*

Introduction

Abdominal cysts are defined as sacs or lumps surrounded by a thin membrane consisting of fluid or semi-fluid material [1]. A particular type of abdominal cysts are ovarian cysts which can be malignant or benign. Large ones are more likely to be malignant while giant cysts, defined as having more than 10 cm in diameter, are usually benign or have a low-degree of malignancy [2].

In case of a complication, such as: torsion, bleeding or infection, discomfort due to size, or when malignancy is suspected, surgery is the recommended treatment.

Materials and Method

The patient was an 86-year-old female who arrived at the hospital complaining of recently aggravated pain in the left hypochondrium. She had a history of progressive abdominal distension over the last few years with no signs of digestive or urinary tract abnormalities or breathlessness. However, she experienced

abdominal discomfort due to size. Her personal medical history revealed nothing uncommon.

In which concerns clinical examination, her abdomen was diffusely distended, involving the right iliac fossa, the left iliac fossa, and also the hypogastric, mesogastric, left and right hypochondrial areas, with a circumference of 146.6 cm, while the umbilicus was stretched and reverted. The presence of a pelvic and abdominal mass, painful to touch, dull to percussion was noted. However, no adjacent lymphadenopathy was noticed.

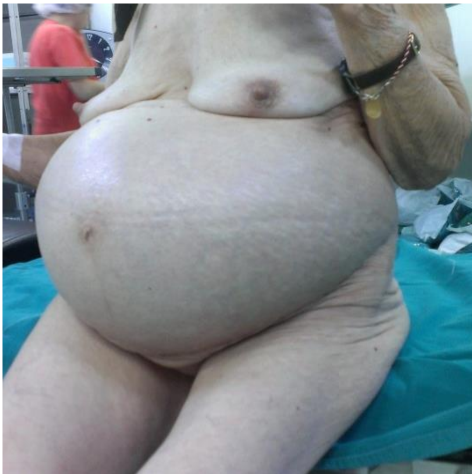

Figure 1 – Abdomen diffusely distended involving all quadrants (circumference = 146.6 cm)

The pulmonary evaluation revealed hydroaeric sounds in the right basal pulmonary field. When referred to a cardiologist, untreated arterial hypertension, right bundle branch block and cardiac failure (class III NYHA) were found.

Her EKG showed a sinus rhythm with a heart rate of 69 beats/min. and most of the criteria encountered in right bundle branch block.

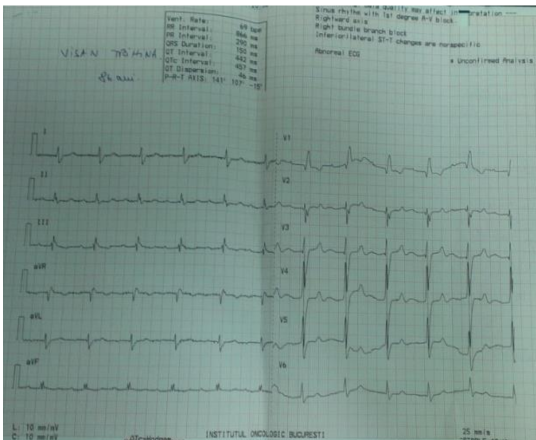

Figure 2 – EKG findings - right bundle branch block

The standard pre-op battery tests were within normal range. Immunologic findings indicated a CA125 value of 29.0 U/ml (normal).

On her CT scan, the following pathologic aspects were pointed out:

- Thoracic level: the protrusion of the bowels through the posterior-lateral orifice of the diaphragm, known as Bockdalek hernia. Also, calcification of the aortic valve.
- Abdominal level: large mass with axial diameter of 29/15 cm and a cranial-caudal diameter 25 cm originating in her left ovary, overlapping the pubic symphysis.

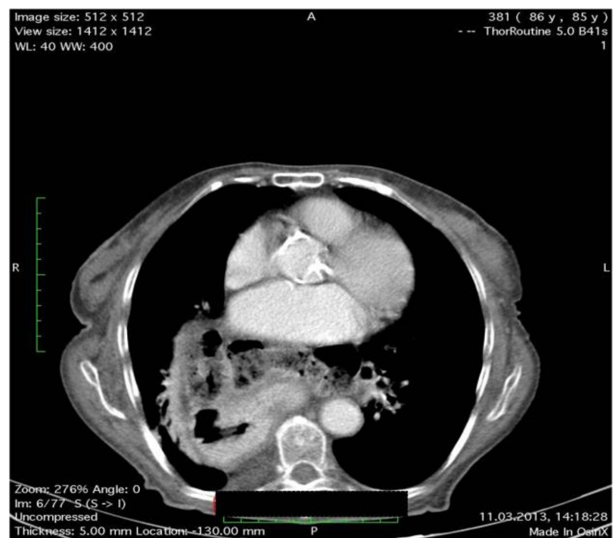

Figure 3 – CT aspect - protrusion of the bowels through the diaphragm and calcification of the aortic valve

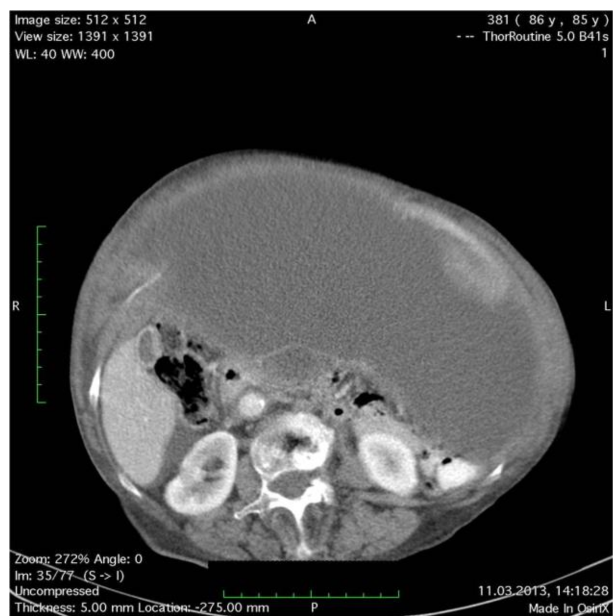

Figure 4 – CT aspect - Abdominal level: large mass with axial diameter of 29/15 cm and a cranial-caudal diameter of 25 cm, originating in her left ovary

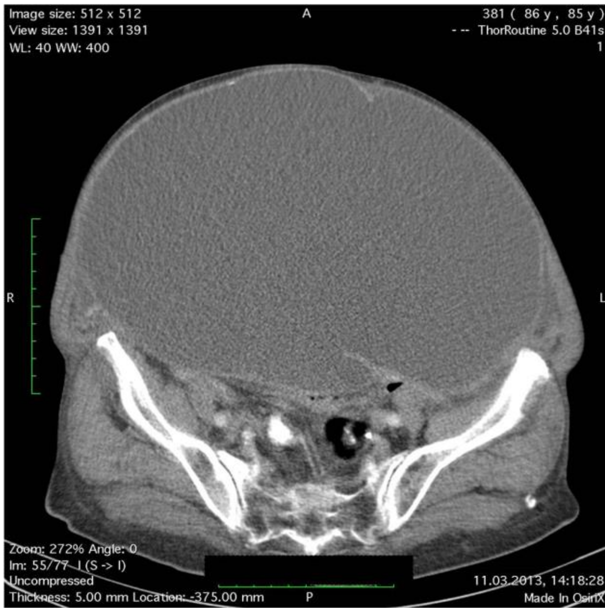

Figure 5 – CT aspect: a large mass at the abdominal level

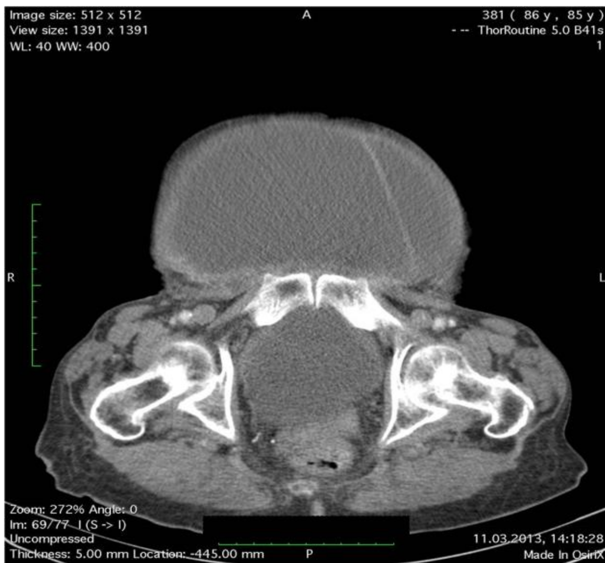

Figure 6 – CT aspect - the abdominal mass is overlapping the pubic symphysis

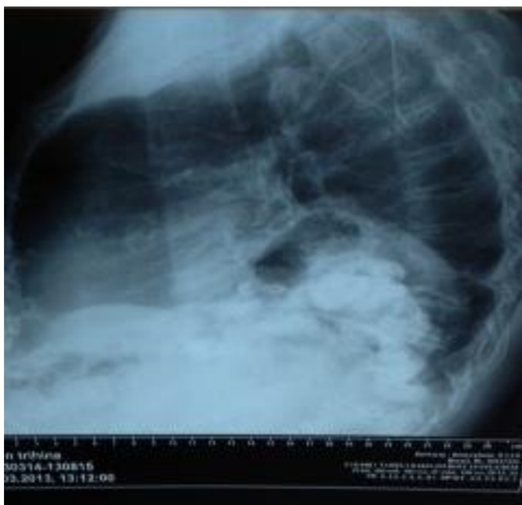
Figure 7 – Chest X-ray lateral incidence - the hernia occupied half of the right pulmonary field

The CT scan contributed to diagnosing the mass as a giant left ovarian cyst.

On the chest X-ray the diaphragmatic hernia occupied half of the right pulmonary field.

Results

Having taken all this into consideration, the recommended treatment was surgical and consisted of minimal laparotomy, intermittent suction of the content of the cyst (a total of 5.5l of serous transparent fluid), followed by isolation and excision of the cyst's wall with left adnexectomy. The Bockdaleck hernia remained unresolved, as multiple adhesions were found intraoperatively. Having in mind the multiple anesthesiological risks of this particular patient, taking time to solve the hernia would not have been indicated and the risk/benefit ratio would have been destabilized. There were no post-operative complications. After the operation there was a considerable reduction in her abdominal circumference (of approximately 50 cm).

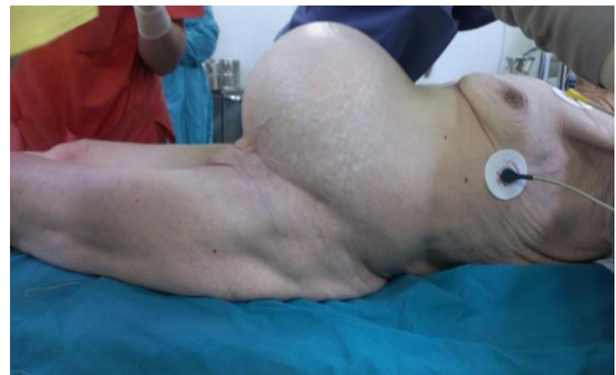
Figure 8 – Preoperative aspect of the patient's abdomen

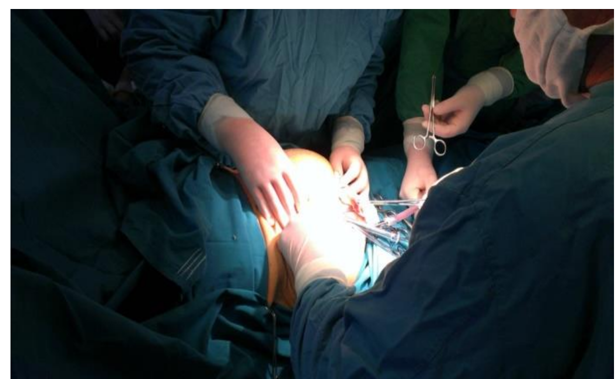
Figure 9 – Intraoperative aspect - intermittent suction of the content of the cyst

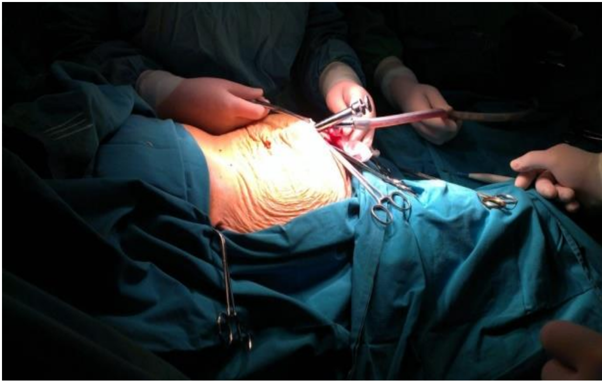

Figure 10 – Intraoperative aspect - part of the cyst's content was removed

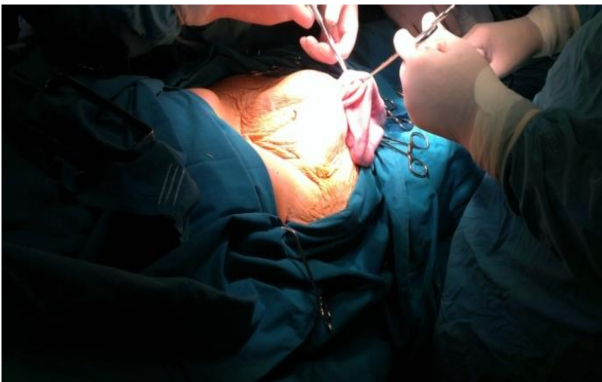

Figure 11 – Intraoperative aspect – isolation and excision of the cyst's wall

Figure 12 – Intraoperative aspect - isolation and excision of the cyst's wall with left adnexectomy

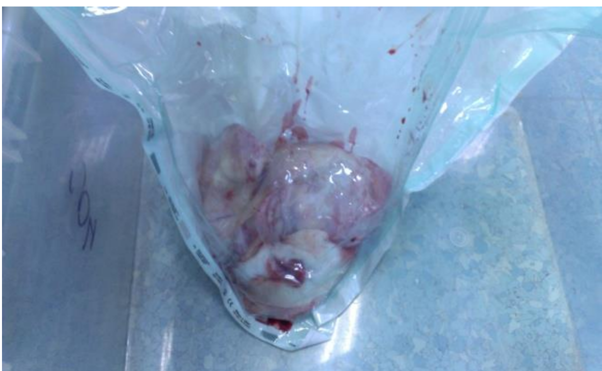

Figure 13 – Macroscopic aspect of the surgical specimen

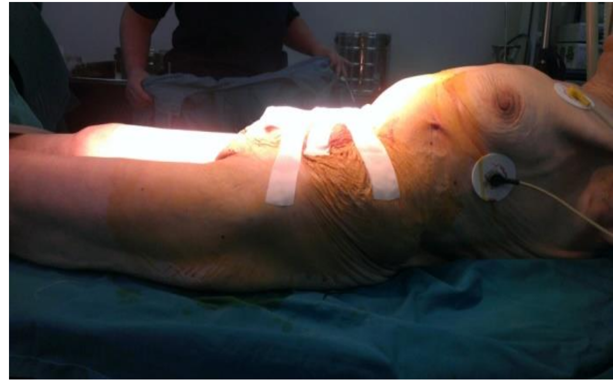

Figure 14 – Postoperative aspect. The patient's abdomen diameter reduced with approximately 50 cm

The histopathological examination revealed the benign aspects of the tumor: a mucinous cyst adenoma.

Discussions

Presentation of a Bochdalek hernia in an adult is exceptionally rare. In 1959, Kirkland published the first review of 34 cases of adult Bochdalek hernia and until 1992 only 100 cases of symptomatic adult Bochdalek hernia have been reported in the world's literature [3]. Since abdominal CT scan has become more and more accessible, the incidental finding of such a hernia in asymptomatic patients has increased. It can be discovered as a simple pathology or associated with complications.

In literature, there are described two main types of Bochdaleck hernia: congenital and acquired. We presume that our patient's hernia was precipitated by the growing intra-abdominal mass. Due to the patient's late arrival to the doctor there was enough time for adherences to be formed, thus making the surgical correction difficult and time-consuming.

Particularly, in our patient, the main pathology that caused the discomfort was the giant ovarian cyst, and it was the main reason for a surgical treatment. Giant ovarian tumors have become rare in current medical practice, as most cases are discovered early during routine check-ups. Detection of ovarian cysts causes considerable worry for women because of the fear of malignancies, but fortunately the majority of the ovarian cysts are benign [4].

Conclusions

What makes this clinical case so interesting are its particularities, such as: the giant diameter of the cyst, the presence of an acquired Bockdaleck hernia, and the multiple anesthesiological risks which limited the election of surgical technique. The choice of general anesthesia and minimal laparotomy was made having in mind the high risk of intraoperative complications that a larger incision might have triggered.

This case report emphasizes the importance of early detection and treatment of ovarian cysts, before they generate unsolvable complications. Although the condition is extremely rare, it is potentially dangerous in its bulky form. This complication (huge size of the cyst) is encountered especially in patients with poor addressability to the doctor's office, as the tumor has time to grow to impressive dimensions.

References

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