

A gigantic ovarian cyst – a case study

Dominika Hudziak¹ (ABCDE), Adam Dyrda¹ (ABDF), Krzysztof Nowosielski² (CDEF)

¹ Oddział Ginekologiczno-Położniczy Centrum Zdrowia w Mikołowie
Ordynator: dr. n. med. Adam Dyrda

² Oddział Ginekologii i Położnictwa Śląskiego Instytutu Matki i Noworodka, Chorzów
Ordynator: dr hab. n. med. Krzysztof Nowosielski, prof. WSM

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SUMMARY

The paper presents the case of 68-year-old patient with a benign ovarian tumor weighing 42 kg. Diagnostic difficulties due to the large size of the tumor and its histopathological picture (a combination of serous cystadenoma and fibroid tumor) were presented. The patient's condition and the treatment of symptoms secondary to the size of the cyst and surgical procedure were also described. Spectacular photos of the patient before and after surgery were enclosed. The patient was discharged in good condition on the 4th day after the operation. The 6 month follow-up revealed no complications and was uneventful.

Key words: gigantic ovarian cyst; diagnosis; surgery; follow-up

Address for correspondence:

Krzysztof Nowosielski, MD, Prof. WSM
Oddział Ginekologii i Położnictwa Śląskiego Instytutu Matki i Noworodka, ul. Strzelców Bytomskich 11, 42-500 Chorzów
Tel: +48 502 027 943; fax: +48 32 700 11 48
e-mail: krzysztofnowosielski@simin.pl

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INTRODUCTION

Epithelial tumors account for 85% of benign ovarian tumors, most of them being serous cystadenomas [1,2]. Approximately 10% of ovarian neoplasms are germ-cell tumors and 5% are sex cord tumors, nearly a half of which are fibromas [1,2].

The aim of the paper is to present a case of a gigantic ovarian tumor and clinical challenges associated with it.

CASE REPORT

On 18 May 2015, a 68-year-old patient was referred to an internal medicine ward by a primary care physician due to ascites. The patient was in a severe clinical condition. She was walking but complained about resting dyspnea that had been intensifying for 2 months. At admission the patient presented with edema of the lower extremities and increased abdominal circumference (for 9 months). The medical



Photo 1. Gigantic ovarian cyst

history revealed arterial hypertension, one natural childbirth and the last menstruation at the age of 55.

The physical examination conducted at admission revealed: gigantic enlargement of the abdominal wall with the elevated dome of the diaphragm up to the 5th intercostal space, positive fluid thrill test, a net of dilated collateral venous vessels (Photo 1), edema of the lower extremities, systolic murmur over the whole heart and split second heart sound. The pelvic examination showed: normal vagina, cylindrical vaginal portion and smooth ectocervix. The uterus and adnexa were impalpable due to increased tension of the abdominal wall. The abdominal circumference at the umbilical level was 150 cm, the patient weighed 110 kg with the height of 163 cm. Upon medical consultation with several physicians in the Admission Room, the patient was admitted to the Ward of Gynecology and Obstetrics of the Regional Hospital in Mikołów, Poland, with an initial diagnosis of an ovarian neoplasm.

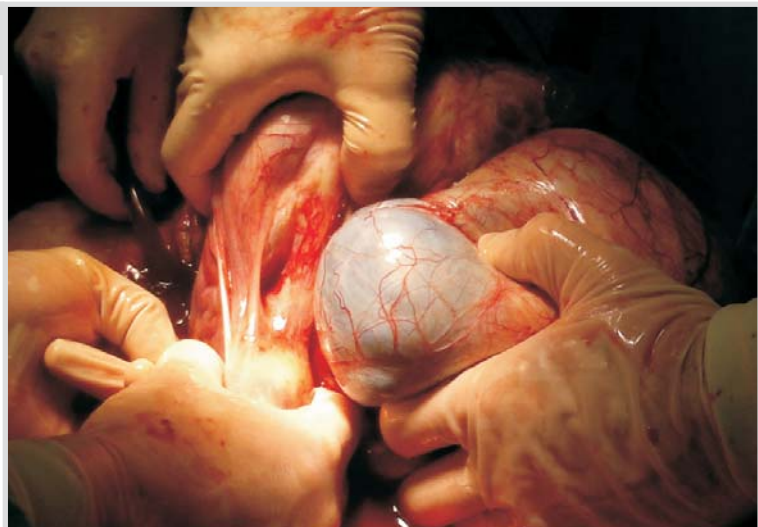
A transvaginal ultrasound examination revealed: ascites, heterogeneous uterus with uneven contours measuring 10x6 cm, and a multilocular tumor of mixed echogenicity extending beyond the pelvis. Normal ovarian structure could not be seen. Additional imaging examinations were ordered. An abdominal ultrasound scan showed a gigantic amount of fluid in the abdominal cavity, which hindered assessment of internal organs. Computed tomography of the abdomen and pelvis demonstrated an extensive suspicious-looking solid-cystic lesion, probably originating from the adnexa and causing internal organ transposition. Moreover, simple

cysts were found in the liver and kidneys. There were no metastatic lesions within the pelvis or abdomen and no enlarged para-aortic and iliac lymph nodes.

Abnormal laboratory findings included: ESR – 20 mm/h, Ca-125 – 430.1 U/ml, fibrinogen – 4.93 g/l and prolonged PT up to 15.7 seconds. Upon anesthesiological consultation, the patient was deemed eligible for an emergency laparotomy due to severe general condition, mainly resulting from dyspnea caused by transposition of the diaphragm by a gigantic tumor occupying the abdominal cavity.

Upon opening the abdomen with an incision from the navel to the pubic symphysis, a hard and smooth tumor capsule occupying the entire abdominal cavity with adhesions with the parietal peritoneum was found. The capsule ruptured during tumor dissection. Approximately 40 liters of brownish fluid was aspirated. Following tumor dissection, it was found to contain solid structures (Photo 2). The tumor originated from the right ovary. The right adnexa were removed together with the tumor. The left ovary was assessed macroscopically as normal, and the uterus was found uneven and enlarged. The abdominal cavity was inspected: the parietal and visceral peritoneum were smooth, the intestine and omentum were normal, the stomach, liver and spleen presented no palpable lesions, and the iliac and para-aortic lymph nodes were impalpable. The excised tumor was sent for an intraoperative evaluation. Subsequently, the uterus and the left adnexa were removed in a typical manner. The greater omentum was biopsied. The intraoperative examination revealed a mild lesion of the right

Photo 2. Gigantic ovarian cyst – tumor dissection



adnexa. After a percutaneous drain was placed in the abdominal cavity, the abdominal wall was closed with a two-layer suture. The patient's condition was good during the surgery; she was cardiovascularly and respiratorily stable. In the postoperative period, the patient received low-molecular-weight heparin in prophylactic doses, electrolyte fluids and analgesics. In the first two days after surgery, approximately 500 mL of serosanguinous fluid was aspirated from the drain placed in the abdominal cavity. Mild secondary anemia was diagnosed and treated with iron supplements. The patient was weighed on the second day after the surgery and the body weight decreased by 42 kg. The patient was discharged on day 4 after the surgery in a good overall condition with recommendations.

The histological evaluation revealed: a multilocular serous cystadenoma of the right ovary with 1/3 of fibroid tumor; the chambers were filled with serous fluid and gelatinous contents. Moreover, hyalinizing leiomyomas of the uterus (up to 3 cm in diameter), tubal fibrosis and chronic cervicitis were found.

During a follow-up examination conducted 6 months after the surgery, the patient was in a good condition, without symptoms. She weighed 74 kg and the abdominal circumference decreased to 114 cm.

DISCUSSION

The case presented above is one of few gigantic ovarian tumors to be found in the literature. The largest tumors, weighing 148.6 kg, 136 kg and 79.4 kg, were reported in 1922 and 1963 [3,4,5]. Due to the capabilities of diagnostic and therapeutic methods available in the 21st century, ovarian tumors reaching such sizes occur occasionally. The largest serous fibrocystoma, weighing 86.5 kg, was reported in 2005. The second largest tumor (64 kg) was described in 2002 [6]. In a recent publication, bilateral mild ovarian tumors with their total weight of 107 kg were reported [2]. In the Polish literature, Stukan presented an ovarian tumor >40 kg (a 54 kg fibroid) in 2009 [7]. A smaller lesion was presented by Sikora-Szcześniak et

al. in 2013. It was a 21 kg serous cystadenoma of the left ovary in a 74-year-old woman [8].

The total weight of the tumor in the case presented above (i.e. the sum of ovarian material sent for a histological analysis and aspirated contents) was 42 kg. It was the largest tumor operated so far in the hospital in Mikołów. The wait-and-see attitude assumed by the patient lasted too long. The delay in treatment not only deteriorated diagnostic possibilities, but also increased the surgical risk.

This case draws attention to diagnostic challenges presented by ovarian tumors. Despite modern diagnostic tools at hand, the detectability index and 5-year survival of patients with malignant ovarian tumors have not increased. For years, the IOTA group (International Ovarian Tumor Analysis) has been conducting research to compare various diagnostic schemes. In 2009, The United Kingdom Collaborative Trial of Ovarian Cancer Screening was published – the largest randomized controlled trial on ovarian tumors based on over two hundred thousand postmenopausal women [9]. It revealed that both schemes based on ultrasound only (including the Doppler examination) and schemes that combine imaging with biochemical markers, patient's age and additional clinical cues bring a range of diagnostic benefits but an optimal diagnostic algorithm still remains unavailable [10–12]. This case was diagnostically challenging. The gigantic size and partly cystic structure with septa indicated a non-malignant epithelial tumor. The patient's age, mixed nature of the tumor (partly solid and partly cystic), suspicion of ascites on ultrasound and the level of Ca-125 indicated a malignant neoplasm.

CONCLUSION

1. Despite growing availability of modern diagnostic tools and laboratory tests, the nature of ovarian tumorous lesions is difficult to predict with certainty.
2. In gigantic lesions with massive ascites, the diagnosis is challenging and the scope of surgery must be adjusted to the patient's clinical condition.

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