Case Report

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Massive Ovarian Serous Cystadenoma with Uneventful Postoperative Recovery

M.	Masashi	Hori ^a
A.	Atsushi	Imai ^b
T.	Teruyuki	Sugiyama ^a
S.	Saburo	Yamagiwa ^a
T.	Takehiko	Miyashita ^a
T.	Teruhiko	Tamaya ^b

^aDepartment of Obstetrics and Gynecology, Gero Municipal Hospital, Gifu; ^bDepartment of Obstetrics and Gynecology, Gifu University School of Medicine, Gifu, Japan

Key Words

Giant ovarian cyst
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Ultrasonography

Abstract

Removal of a massive ovarian cyst may be followed by **life-threatening** complications. We report the case of serous cystadenoma occupying most of the abdominal cavity, associated with uneventful postoperative course.

Atsushi Imai, MD, PhD, Department of Obstetrics and Gynecology, Gifu University School of Medicine, Tsukasamachi, Gifu 500 (Japan)

Ovarian cysts represent intra-abdominal neoplasms which attain a size large enough to fill the abdominal cavity [1–3]. There are some reports of the giant ovarian cyst weighing over 10 kg [1, 2, 4], and mucinous cystadenoma is the most common cause of them [3–5]. Serous cystadenoma may vary in size from a few centimeters to enormous dimensions where they come to occupy most of the pelvic cavity [6], whereas, to our knowledge, no case of massive serous cyst has been reported. More remarkable are the potential problems associated with removal of the giant cyst, including operative and postoperative complications of cardiovascular dysfunction or ventilatory inadequacy [7, 8]. The complications result from, in particular, a sudden reduction in intra-abdominal pressure and abdominal contents prolapsing into a large redundant abdominal cavity [1]. We describe a rare case of ovarian serous cystadenoma in size where it came to occupy most of the abdominal cavity, with the complete lack of operative and postoperative complications attending the removal of a cyst of this size.

Case Report

A 36-year-old Japanese woman, gravida 0, was referred to the Gero Municipal Hospital in December 1990 because of a progressive abdominal distention and a recurrent constipation for the past 3 years. Puberty and adolescence had been noncontributory.

The abdomen was generally enlarged and filled with a huge mass extending to the xiphoid process. The nontender mass was soft and cystic. Pelvic examination was unremarkable as was the rest of the physical examination. Her cardiovascular and respiratory systems

were normal. Investigations showed her urea and electrolytes, hemoglobin level, white blood cell count, blood glucose level and liver function tests to be within normal limits. The tumor marker CA 125 value was normal. Ultrasonography revealed a unilocular cystic mass with a smooth surface and a flat-fluid level (fig. 1). Those findings, combined with the physical findings, led to a diagnosis of probable epithelial cystoma of ovary.

Under general anesthesia, a longitudinal incision was made in the midline of the lower abdomen. Anesthesia was induced by intravenous ketamine and pancuronium, and subsequently maintained

Fig. 1. Ultrasonograph showing unilocular cystic mass with a smooth surface and a flat-fluid level. There were no papillary ingrowths or solid area.

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Fig. 2. Papillary lesion with tall columnar cells and basal nuclei. Cell boundaries were distinct. HE. $\times 320$.

on fentanyl, droperidol and gas-oxygen. The giant cystic mass was shown to fill the abdominal cavity. The mass contained serous-appearing fluid, and was observed to be involved in right adnexa. Its walls were thin and firm, and it was not attached to any alimentary, pelvic, or urological structures. There was no detectable ascites. No other lesions were noted; the uterus

and left adnexa were of normal appearance. It was simple to remove the cyst intact. During this procedure, her blood pressure and pulse were steady.

The removed cyst weighed 9 kg and measured 43 × 26 X 20 cm in size. This mass was a unilocular cyst filled with clear serous fluid. The internal surface was a pinkish-tan color and was smooth without intracystic papillary ingrowths or solid area. The mass was seen microscopically to consist of a fibrous layer surrounding a neoplastic epithelium. As shown in figure 2, the serosal layer consisted of tall columnar cells with basal nuclei. Cell boundaries were distinct and a histological diagnosis was benign serous cystadenoma.

Postoperative recovery was completely uneventful and the patient was discharged on the 12th postoperative day. The patient was feeling very well and much lighter, and there was no evidence of recurrence.

Discussion

This case represents the serous cystadenoma showing a giant ovarian cyst filling the abdominal cavity. In their book on pelvic neoplasms, Lynch and Maxwell [19] review the world's largest ovarian cysts; e.g. the largest ever reported weighed 169 kg. The giant ovarian cysts are encountered with mucinous cystadenoma, whereas serous cystadenoma is usually smaller than mucinous counterparts and uncommon in so massive ovarian cyst to fill most of the abdominal cavity [3–5]. Of the benign neoplasms, serous cystadenoma is a frequent neoplasm overall, which is the most common benign neoplasm at age 50 and above. In approximately 50% of cases the tumors are bilateral [3]. We believe ours to be the first case report where lateral serous cystadenoma weighed 9 kg and occupied the abdominal cavity. Excision of a giant cyst is associated with considerable mortality [7, 8]. Problems stem from the size of the cyst and the emaciated state of the patient. The main problems intraoperatively stem from a sudden reduction in intra-abdominal pressure, copious blood loss and the duration of surgery. Postoperatively, ventilatory inadequacy occurs and is probably caused by altered mechanics of ventilation, postoperative pain and pulmonary edema. This figure has been improved in more modern times, but a stormy postoperative course is usual. Our case was trouble-free, which may have been due to the exophytic nature of the cyst. The patient had the appearance of a thin woman attached at one point to a massive abdominal swelling. There was a complete absence of lower limb edema and flaring of the rib cage, and at operation the other abdominal contents showed little displacement. This is in contrast to other cases showing difficult postoperative course. Her general condition preoperatively is another indication of how well her body had come to terms with her cyst.

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