GIANT ABDOMINAL CYST – CASE REPORT

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We present a case of a 53-year old male patient who underwent elective surgery due to a giant abdominal cystic mass. Prior to the surgery, he complained of abdominal distention, growing abdominal mass and increasing nourishment problems. CT and ultrasonographic examinations revealed a giant abdominal cyst but failed to indicate the point of its origin. Intraoperatively a giant abdominal cyst was found, approximately 30x30x25 cm in size. The cyst was free-lying in the peritoneal cavity, except small area adherent to the stomach wall. Partial resection of the stomach wall was performed and the cyst was completely removed.

The postoperative course was uncomplicated. The pathological examination did not give an unequivocal answer as to the origin of the cyst, suggesting differentiation between a tumor of vascular origin and of stromal origin.

Key words: giant abdominal cyst, surgery, GIST

Giant cystic intraabdominal masses can have various etiology and can sometimes grow to achieve an enormous size. Among malignancies, fibrosarcomas of the extraperitoneal space are relatively the most common. This malignancy grows for a long time without causing any symptoms (1). The most common intraabdominal benign neoplasms that grow to achieve large size include: cysts of various organs (liver, pancreas), while large ovarian cysts occur most commonly in women. According to the list published by Einenkel et all. (2), the largest ovarian cysts have been reported by: Spohn (148.6 kg) and O’Hanlan (137.4 kg). Other common intraabdominal cysts include: hydatid cyst, pancreatic, hepatic, splenic pseudocysts (3), mucus secreting tumors (4), lesions originating from mesothelial cells (5), myxomas of the appendix and gastrointestinal stromal tumors (GIST) (6).

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We present a case of a patient with an atypical, giant intraabdominal cystic mass that underwent surgical treatment in our clinic.

CASE REPORT

A patient J.S., aged 53 (medical record number 8527/176/2006), was admitted to our clinic on 29.05.2006 with a diagnosis of giant intraabdominal cyst.

Four weeks before admission the patient noted gradual increase of abdominal circumference and feeling of abdominal “fullness” after meals. Laboratory tests conducted in the outpatient setting (complete blood cell count, urinalysis, electrolytes, total protein, animotransferases) were normal. A report of the abdominal ultrasound examination read: “The liver is not enlarged, no focal lesions were demonstrated. The gall-bladder has thin walls, contains no concrements. Common bile duct, biliary tract are not enlarged. In the anatomical projection of the pancreatic head, an area is visible that has echostructure similar to the pancreatic parenchyma with a few cysts of
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Diameter up to 2-3 cm and one giant fluid space occupying the right half of abdominal cavity and extending to the pelvis. A giant cysts originating from the pancreas is suspected? The lesion compresses the gall-bladder and intestinal loops. The spleen is not enlarged. The left kidney demonstrates mild urinary retention. The urinary bladder is empty. No free fluid in the peritoneal cavity was revealed. Abdominal CT (examination number 33893) confirmed presence of a large intraabdominal cyst: “a cyst of 19x15x25 cm in size, located in the abdominal cavity and the pelvis, predominantly on the right side, compressing the liver and gall-bladder. The lesions extends from the visceral surface of the liver, laterally to the right from the duodenum, shifts the stomach superiorly and to the left, the pancreas to the left and slightly posteriorly, shifts the intestinal loops. It extends to the aorta and inferior vena cava posteriorly. Calcifications are evident in the upper part of the cyst wall. In the upper part of the cyst, near its anterior surface, solid fragments are evident and septa that undergo slight contrast enhancement. Apart from this area, the cyst has thin walls. No continuity between the cyst and abdominal organs was demonstrated. Mesenteric cyst?”. Computed tomography image of abdominal organs was normal.

The patient was qualified for surgical treatment. After the abdominal cavity was opened, a giant cyst was visualized that compressed and shifted the visceral organs and was loosely covered by the greater omentum. The cyst was adherent to a small area of prepyloric gastric wall and had linear adhesions to the greater omentum (fig. 1). After the omental adhesions were sectioned, a cyst weighing approximately 4.5 kg was completely taken out of the abdominal cavity (fig. 2), was cut off from the stomach along with a fragment of its wall and completely resected (fig. 3). The gastric wall was sutured using a bilateral continuous suture. No other intraabdominal lesions were detected.

The postoperative period was uncomplicated; the patient was discharged from the clinic with the wound healed by first intention and was advised to undergo further follow-up in an outpatient setting.

Report of biopsy specimen examination (no. 480168-84): “A cyst, size 35x25 cm, filled with bloody-watery fluid. The cyst wall, approximately 10-15 cm, contains solid-jelly foci of 3 cm in size. Microscopic examination: a cyst with fibrous wall with segmental calcifications, without epithelial lining, adhering to the stomach (2-3 cm, normal muscular membrane). Macroscopic solid-cystic area demonstrate spindle cell structure, with vascular system. Routine H+E, trichrome examination and multiple immunohistochemic reactions: AE1/AE3 (-), S-100 (-), Vim (+), CD34 (+), Ki 67 – occasional; microscopic presentation is equivocal; the tumor requires differentiation between a tumor of vascular origin and gastrointestinal stromal tumor (GIST) with low proliferative activity”.

During follow-up examinations performed 3, 6, 12 and 18 months after the surgery, the patient reported no gastrointestinal complaints. Follow-up ultrasound examinations did not reveal any pathology, too.
DISCUSSION

Large abdominal tumors require rapid surgical treatment whatever their etiology. Progressive increase of abdominal circumference, coexisting symptoms of compression of parenchymal organs and intestines, progressive nutritional difficulties, suspected malignancy— all are worrisome for the patients. In such cases preoperative imaging diagnostics does not always provide information on the etiology of the lesion. Surgical treatment usually results in radical cure in patient with benign lesions, while in other patients, especially these with malignancies, leads either to complete cure or at least symptomatic improvement. Pathological examination in such patients allows to plan further adjuvant therapy.

Pathological examination was equivocal with regard to etiology of lesion in our patient. We assumed that the resected large cyst could have been a malignancy of GIST type.

Gastrointestinal stromal tumors most commonly are found in the stomach (approximately 60%), small intestine (approximately 20-30%), and less often in other abdominal organs (7, 8, 9). As with other gastrointestinal tumors, clinical symptoms are often related to the tumor location. The most common include: dysphagia, gastrointestinal bleeding, pyloric stenosis and ileus. Thirteen percent of patients undergo primary surgery due to massive bleeding or peritonitis (10). Surgical treatment plays dominant role in the treatment of GIST patients: radical cure is possible in more than 90% patients with malignancies of low and moderate grade (11). Patients with tumor recurrence of dissemination undergo chemotherapy with imitamibe.

Pathological examination demonstrates spindle cell structure in GISTs. Immunohistochemistry, in particular positive CD177 reaction, plays a major role in the differential diagnosis (12). CD117 immunohistochemistry was not performed in the specimen from our patients since our Department of Pathology did not have specific antibodies.

The surgery turned out to be curative in our patient. A lesions demonstrating properties of non-aggressive tumor was completely resected, which, as of today, resulted in satisfactory outcome. No tumor recurrence was observed within 18 months of follow up.

References

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