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Huge abdominal cystic mass: A diagnostic dilemma

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Abstract

Huge abdominal cysts are an uncommon. Frequently preoperative imaging is not sufficient to provide a certain diagnosis. Differential diagnosis of abdominal cystic lesion is very complex and in most of cases only surgical exploration and histological examination can provide a definitive diagnosis. This case report describes the case of a woman with a giant cystic abdominal mass with particular regard to differential diagnosis of this condition.

Keywords

cystic mass; ovarian cystadenomas; huge; giant cyst

Case Presentation

We present the case of a 54 years old woman consulted our institute in September 2018 for the presence of mild abdominal pain since six months. The previous medical history was unremarkable. At clinical examination respiratory and cardiovascular system findings were normal, while a huge abdominal solid mass extending from supra-umbilical region to pelvis could be felt. Blood tests were normal with no signs of anemia or inflammation. The patient was investigated with Ultrasound and abdominal CT scan that showed the presence of giant cystic lesion of 300 x 240 x 200 mm (Figure 1). The cyst extended from the pelvis to the supra-umbilical region, with a compression of the small bowel into the left side of abdomen. Due to the size of the cyst was not possible to determine its nature. Midline laparotomy was performed revealed deep huge right ovarian cyst. No major abdominal vessels were traversing the lesion. There was no evidence of inflammatory reaction or infiltration of surrounding structures or tissues. This well demarcated huge mass lesion was compressing the bowel loops rather than infiltrating them; however, no extension of the mass lesion was seen to the retroperitoneal spaces. A right salpingo-oophorectomy was performed (Figure 2-3). For the preoperative finding of cholelithiasis, contextual cholecystectomy was performed. No intra-operative complications were recorded. The patient recovered completely and was discharged five days after surgery. Pathological examination confirmed that the cyst was a benign serous cystadenoma.

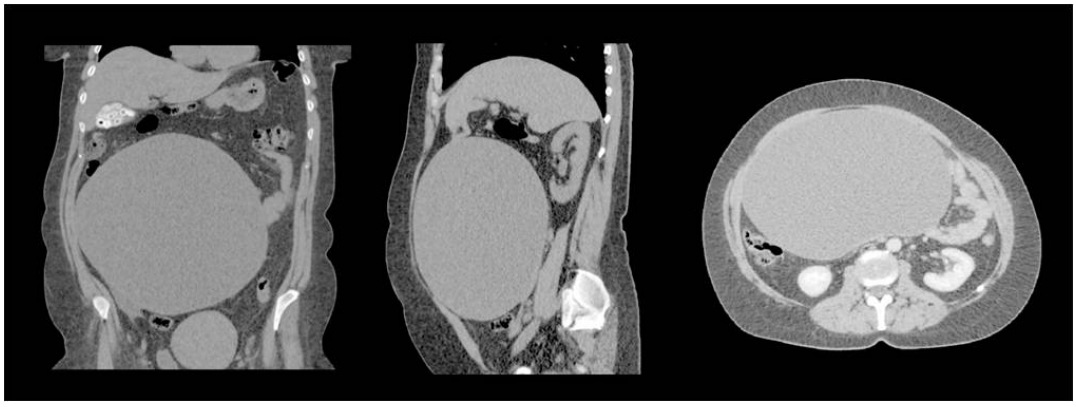

Figure 1: Preoperative CT scan

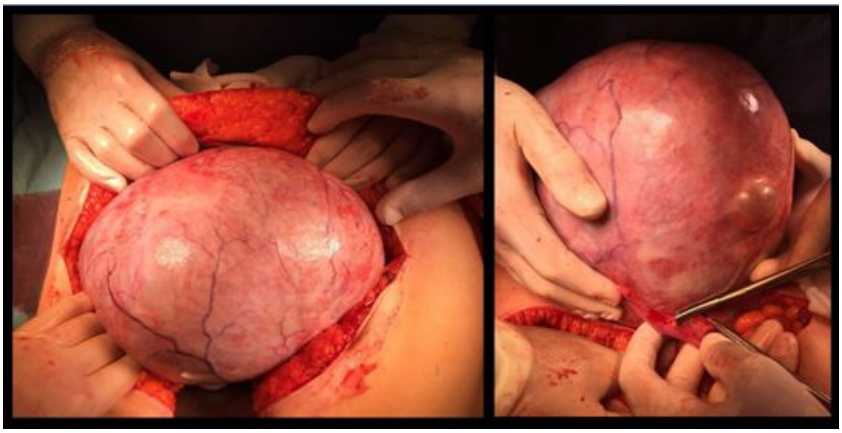

Figure 2: Intraoperative images

Figure 3: Surgical specimen

Discussion

Abdominal cysts are rare intra-abdominal lesions mostly found incidentally however patients with abdominal cystic masses may present with symptoms such as feeling heavy or full in the lower abdomen, acute or chronic pain, and bowel symptoms such as constipation or bloating and increased abdominal circumference [1-2]. Abdominal cysts should be evaluated with complete medical history, clinical examination, blood investigations and radiological investigations. Ultrasounds (US), computed tomography (CT-scan) and in selected cases Magnetic resonance imaging (MRI) are important to reach a provisional diagnosis. Abdominal cystic lesions are a very heterogeneous disease and often preoperative imaging is not sufficient to provide a certain diagnosis. In most of cases only surgical exploration and histological examination can provide a definitive diagnosis.

Ovarian cysts

- *Functional cysts*. Follicular and corpus luteum cysts are the most common ovarian cysts, they are usually harmless, rarely cause pain, and often disappear on their own within two or three months Usually surgery is not indicated for this kind of ovarian cysts.

- *Dermoid cysts or mature cystic teratoma.* They are the most common type of ovarian germ cell tumor. They are commonly multicystic and contain sebaceous fluid as well as tissue of three germ cell layers e.g. ectoderm (skin, hair, brain) mesoderm (muscle, fat, teeth, bone, and cartilage) and endoderm (mucinous and ciliated epithelium). The malignant transformation is a rare occurrence with 1-2% cases [3].

- *Benign ovarian cystic tumors: Ovarian serous/mucinous cystadenomas.* Ovarian serous and

mucinous cystadenomas are benign tumors and are commonest type of ovarian epithelial neoplasm. Serous cystadenomas are usually composed of unilocular cysts filled with clear watery fluid while mucinous cystadenomas are usually multilocular [4].

- *Malign ovarian cystic tumors: Ovarian serous/mucinous cystadenocarcinomas.* Serous cystadenocarcinoma is the commonest malignant ovarian tumour while mucinous cystadenocarcinoma is rare. Lesions are typically mixed solid/cystic masses and frequently bilateral. Giant cystadenocarcinomas of the ovary are rarely described and huge ovarian masses are mostly benign [5].

- *Endometriomas (chocolate cysts).* Ovary is the most common site of endometriosis. A chocolate cyst can affect one or both ovaries.

Mesenteric cysts

- *Simple mesenteric cyst.* Simple mesenteric cysts are often diagnosed in childhood or adolescence. Most common location is the small bowel mesentery [6]. Simple mesenteric cysts are usually asymptomatic but can be symptomatic due to compression to adjacent organs.

- *Cystic lymphangioma.* This cystic mass is only rarely found on the small-bowel mesentery or omentum [6-8]. Most lymphangiomas are benign lesions that result only in a soft, slow-growing mass. Since they have no chance of becoming malignant, lymphangiomas are usually treated for cosmetic reasons only [6].

Peritoneal cysts

- *Benign cystic mesothelioma.* It is known as peritoneal inclusion cyst because it is often associated with previous abdominal surgery or trauma [6]. This cyst is usually caused by accumulation of ovarian fluid that is contained by a peritoneal adhesion. The absorptive capacity of the peritoneum is diminished in the presence of inflammation and peritoneal adhesions. Peritoneal inclusion cysts range in size from several millimeters in diameter to bulky masses.

- *Malignant peritoneal mesothelioma.* It is a very rare malignant tumor usually found in older, male patients. It is frequently associated with exposure to asbestos [7].

- *Paraovarian Cyst.* They arises from the mesosalpinx. Paraovarian cysts can be very small to large enough to fill the pelvis [9]. Rarely, it may be complicated by torsion or hemorrhage.

Cystic-like lesions

- *Bladder Diverticulum*. It occurs when the bladder mucosa herniates through the muscle wall but maintains its continuity with the bladder, often by a narrow neck [9]. A large bladder diverticulum with a narrow connecting neck may mimic a thin-walled pelvic cyst. It is important to carefully examine the bladder walls for a connection with the diverticulum.

- *Pelvic Lymphocele*. It is a common complication of lymphadenectomy, which often is performed to assess lymph node status in patients with gynecologic malignancy.). A lymphocele is a fluid-filled cyst with no epithelial lining [9]. Pelvic lymphocele may mimic a thin-walled pelvic cyst.

Other

- *Omental cyst. O*mental cysts represent benign proliferations of ectopic lymphatics that lack communication with the normal lymphatic system. Lymphatic obstruction is another proposed etiology [10-11]

- *Enteric duplication cysts.* They are rare congenital gastrointestinal malformationabnormal with an extra-portion of the enteric tract that can occur anywhere in the intestinal tract from the esophagus to the rectum. They are called "duplications" because they are attached to the normal intestinal tract and shares its blood supply. These structures can either drain into the normal intestinal tract or not connect at all [12].

- *Cystic lesions of other organs*. Renal, hepatic or pancreatic cysts are frequent but these are usually easily radiologically recognized.

Conclusions

In conclusion abdominal cystic lesions are a very heterogeneous disease.

Frequently preoperative imaging is not sufficient to provide a certain diagnosis.

Differential diagnosis of abdominal cystic lesion is very complex and in most of cases only surgical exploration and histological examination can provide a definitive diagnosis.

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