Giant Ovarian Mucinous Cystadenoma in Premenarchal Girl

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Abstract

Ovarian cysts are an extremely common gynecological problem in adolescent. Ovarian Mucinous cystadenoma are rare in children. A 14-year-old presented with a history of increasing abdominal distension and pain for approximately six months. An adnexal mass measuring 24x18x13 cm was detected by abdominal ultrasonography and computed tomography. She underwent laparotomy and after surgical removal. Histopathology findings showed that the tumor was diagnosed as a mucinous cystadenoma (MCA) of the ovary. Epithelial tumors should not be forgotten in the differential diagnosis. We present a case of giant MCA of the right ovary in a 14-year-old pubertal girl and a review of the supporting literature.

Keywords: Mucinous cystadenoma, premenarchal girl, oophorectomy, epithelial tumor

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Introduction

All of the ovarian tumors has been estimated to be the incidence around 2.6 cases per 100,000 in girls younger than 15 years of age [1]. Epithelial tumors account for 8–10% of all ovarian tumors and are histologically classified as mucinous or serious in pediatric population. The most common benign epithelial ovarian tumor is cystadenoma of which 75% are serious and 25% are MCA [2,3]. Generally Mucinous tumors of the ovary occur principally in mostly occur in middle adult life and are exceedingly rare prior to menarche [4]. They relatively rarely occur in premenarchal girls.

We present here the case of immense mass of the right ovary by histology the tumor was diagnosed as MCA that was a very rare entity in a premenarchal 14-year old girl.

Case report

A 14-year-old, premenarchal, previously healthy girl presented with slowly increasing abdominal distension over six months. The swelling was accompanied by vague abdominal pain and constipation since three months before admission. There was no history of vomiting or other gastrointestinal attacks, fainting attacks, colicky pain. She had no previous history of operations any illnesses or allergies. Huge abdominal cystic mass that occupied all of the abdomen and pelvic cavity based on sonographic examinations was noted. Hematologic and biochemical profiles, tumor markers (AFP, CA-125, CEA, CA 19-9, and HCG) all were within the normal range.

On general examination her vital signs were normal, weighed 50 kg. Abdominal tomography examination of the abdomen showed an enormous intraabdominal mass extending from the pelvis to the xiphoid process (Figure 1). Laparotomy was performed by midline incision. There was no free fluid in the abdomen. The tumor was found to originate from the right ovary at surgical exploration. The left ovary and fallopian tube was explored and typically normal. Unilateral salpingo-oophorectomy with tumor removal was performed. The tumor measured 24x18x13 cm and weighed 5 kg (Figure 2). The histopathology findings showed that cysts are lined with columnar epithelium without atypical containing mucin in the apical part, the tumor was diagnosed as a MCA of the ovary (Hematoxylineosin stain, original magnification, X 40) (Figure 3). The postoperative period was uneventful and the patient was

discharged on the second day after the operation. The patient is followed up regularly; she is healthy with no recurrence of the disease at one year.

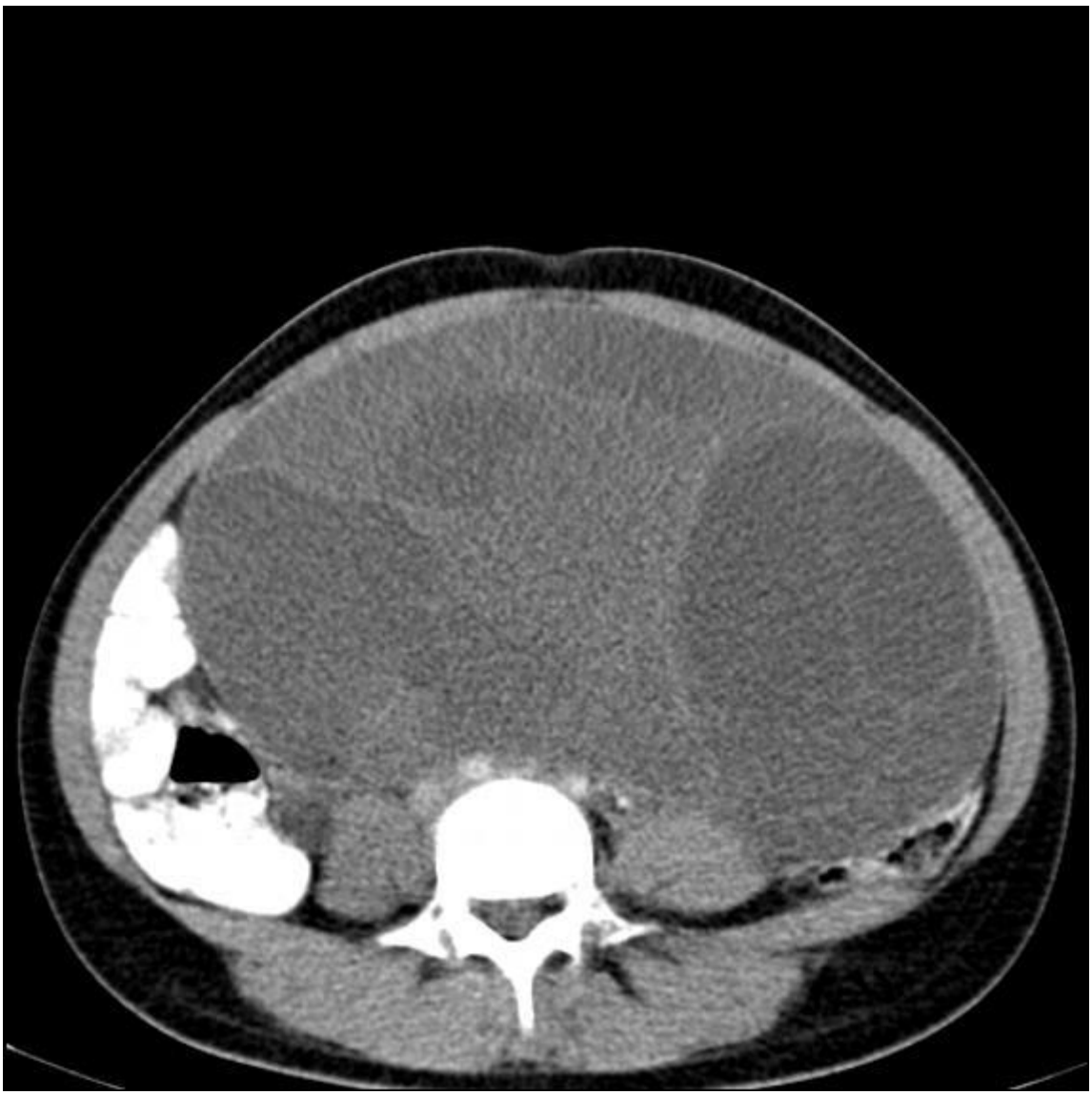

Figure 1. An enormous mass occupying almost the entire abdomen on CT.

Figure 2. Macroscopic appearance of mucinous cystadenoma.

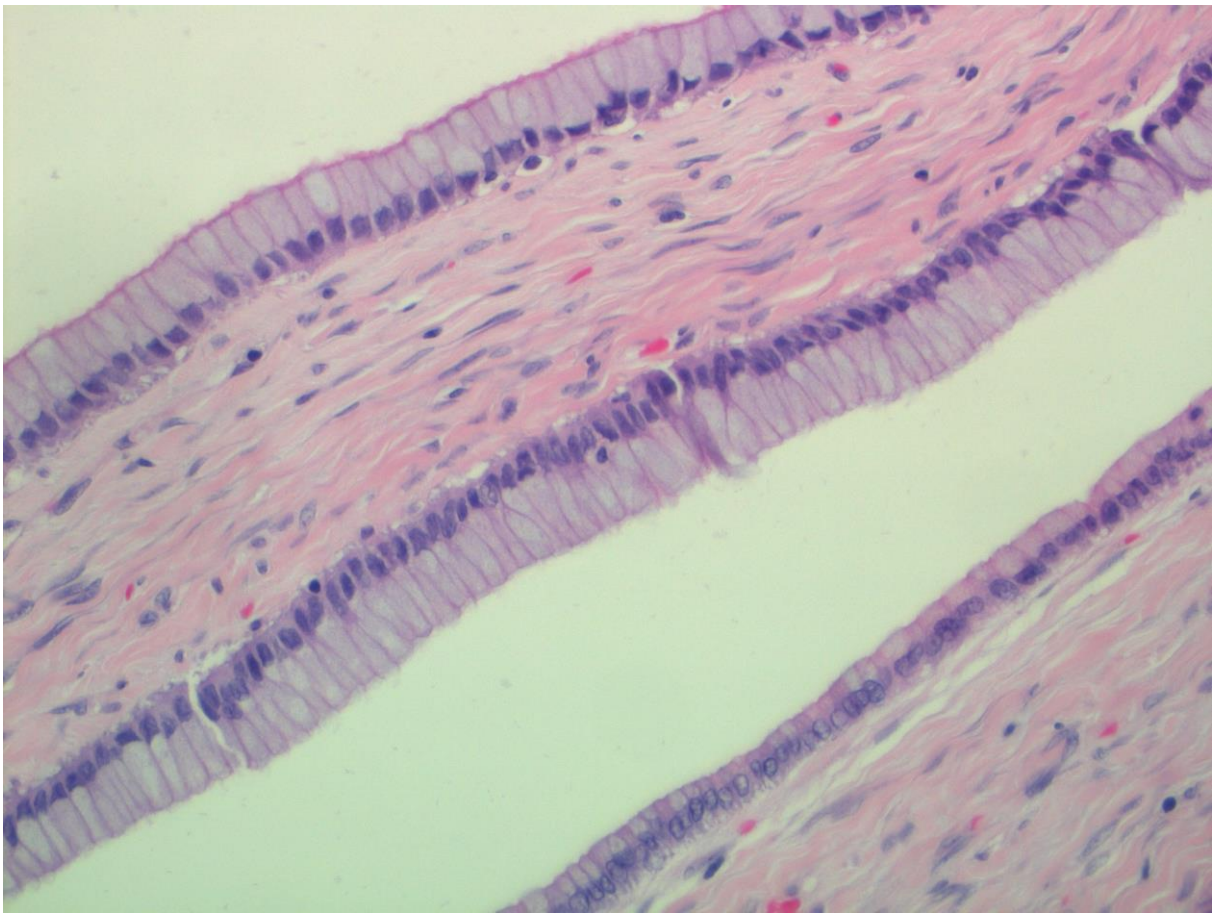

Figure 3. The cystic structure is lined with mucinous epithelium. Histopathologic examination (H&E ×40).

Discussion

Childhood ovarian masses are uncommon, and most are not malignant (3). The most common clinical presentations of ovarian cysts are nonspecific abdominal pain, of rapidly growing abdominal distension, nausea and vomiting, and a history of previous episodes of similar pain and low-grade fever [5-7]. Our patient has slowly increasing abdominal distension over six months.

The incidence rate of MCA was 0.3% of adolescents with ovarian tumors according to previous study [6]. MCA tumors are extremely rare. The incidence of epithelial tumors in childhood increases with age, and most occur in the period after menarche. The majority of

the cases (65%) involve 17-year-old adolescents. This finding suggests that ovarian epithelial tumors are stimulated by hormones [8,9]. Mucinous cystadenoma unilateral and benign [9] MCA tumors are extremely large, 76% are multilocular, and 24% are unilocular [2,3,10]. In our case presented with an exceedingly large, cystic, multilocular mass.

Differential diagnosis with functional cysts is mainly a unilocular and anechoic cyst with thin borders. Second differential diagnoses of ovarian cysts are omental cysts. But omental cysts occur in all age groups, most often they present in children and young adults. Anotherdiagnoses may be mesenteric cysts, cysts arising from retroperitoneal structures like pancreatic pseudocysts, bladder diverticulum, urinary retention, hydronephrosis, cystic lymphangiomas, choledochal cysts, splenic cysts, gastrointestinal duplication cysts and large uterine tumors, hematokolpos [12,13].

The choice of incision includes height, weight, and age of the patient; the size of the mass; whether the patient is premenarchal; avoiding rupture and contamination [6] Care should be taken during the operation to avoid rupture, which may lead to undesired peritoneal pseudomyxoma. Intraoperative rupture of the cyst is significantly associated with the likelihood of recurrence [11]. In conclusion, the outcome of MCA is good when the tumor is removed without ruptures. We should not be afraid to enlarge the incision while take out a great audience. In our case laparotomy was performed by midline incision. In literature has an article showing that a similar laparoscopic cases made [14]. However, in this regard first negative factor, a laparoscopic approach to giant ovarian cysts may be very difficult because of the risk of cyst rupture and second factor limited working space within the abdomen. Other methods internal drainage and marsupialization or simple aspiration are not recommended because of the increased incidence of recurrence and infection [15].

Physicians should be keeping in mind that causes abdominal mass and ovarian germ cell tumor in the differential diagnosis. As a result, we have known that germ cell tumors are the most important causes for giant ovarian masses in children. But epithelial tumors should not be forgotten in the differential diagnosis.

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