Spontaneous Rupture of Omental Teratoma Mimicking a Ruptured Ovarian Teratoma

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A 35-year-old woman, gravida 0, was sent to our emergency department because of progressive upper abdominal pain for several days. She had developed upper abdominal pain and distension for weeks. She denied other associated gastrointestinal and gynecologic symptoms or weight loss. Her menstrual cycle was normal, and there was no history of trauma or accident. Pelvic and abdominal examinations revealed a huge, mobile and tender mass with muscle rigidity and rebounding tenderness. A huge pelvic complex mass with moderate amount of ascites was found on transabdominal ultrasound scan. Plain abdominal X-ray finding was suggestive of ileus. Computed tomography scan demonstrated a large heterogeneous and multiloculated complex mass measuring up to 15 cm, with focal areas of soft tissue, fat and calcification in the peritoneal cavity. Ascites and diffuse mesentery infiltration with calcified foci were also found (Figure 1). Preoperative laboratory assessment showed only leukocytosis (white blood cells, 13,660/μL; 1% band, 74% neutrophil; hemoglobin, 13.6 g/dL). Measurement of serum tumor markers revealed the following: CA-125, 70 U/mL (normal value, < 35 U/mL); α-fetoprotein, < 2.76 ng/mL (normal value, < 6.00 ng/mL); and β-hCG, < 5 mIU/mL (normal value, < 5 mIU/mL). Emergent laparotomy was performed with a lower midline incision owing to suspicion of a ruptured ovarian teratoma with intra-abdominal peritonitis. At laparotomy, a huge and irregular-shaped tumor attached to the greater omentum was found (Figure 2). Diffuse small white implants at the intestine and mesentery, severe adhesions, along with moderate amount of ascites were noted. The uterus, right fallopian tube, and both ovaries were normal. Left hydrosalpinx was also observed. Frozen section showed a mature omental teratoma. The tumor was then removed smoothly. Microscopic examinations revealed contents of skin, adipose tissue, thyroid gland, bone and hollow organ-like structures, thus confirming the diagnosis of a mature teratoma. The patient made an uneventful recovery and was discharged on the seventh postoperative day. No tumor recurrence was detected on ultrasound scan over a 4-year follow-up period.

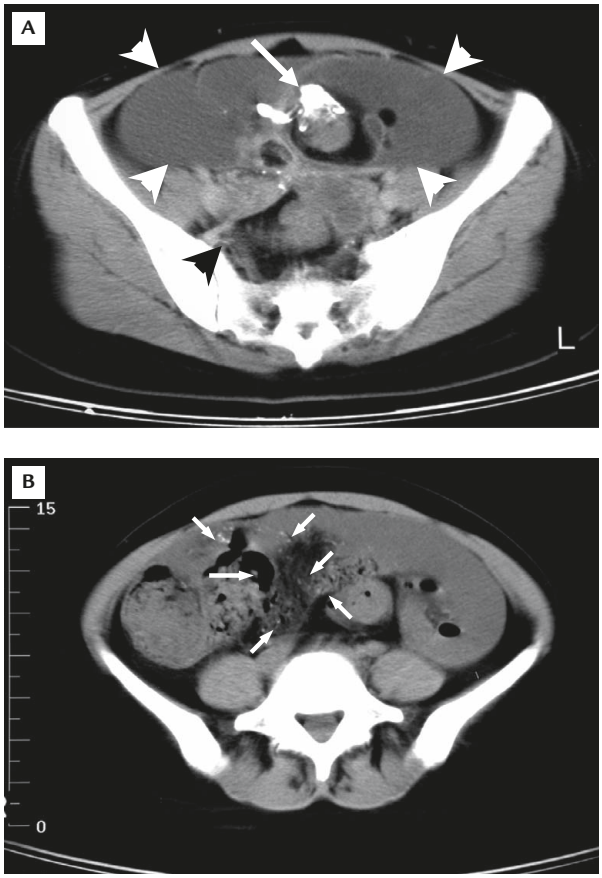

Figure 1. Abdominal computed tomography scan shows: (A) a large heterogeneous multiloculated mass (arrowheads) with areas of soft tissue, adipose density and calcification (arrow) within it; and (B) disseminated calcified spots (arrows) on the mesentery.

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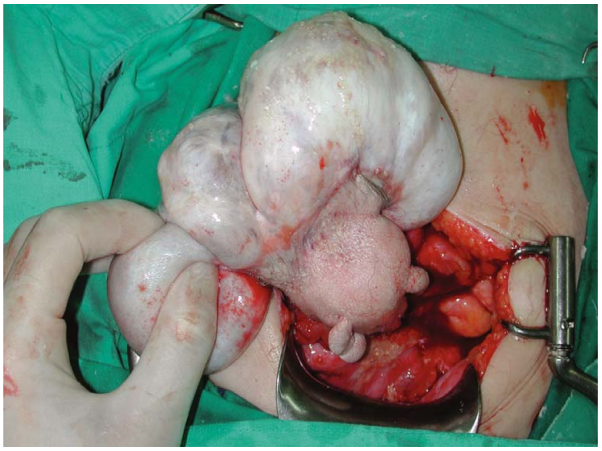

Figure 2. A huge omental teratoma at operation.

Our patient was a 35-year-old female and presented with distinctive symptoms of acute abdomen and peritonitis but without a preoperative diagnosis of omental teratoma. Primary teratoma of the omentum is an uncommon entity [1]. Primary omental teratoma occurs more commonly in females than in males, with the average age of the males being much younger than that of the females, and malignant transformation is rare. To date, at least 30 cases of omental teratoma have been reported [1–28] (Table). As shown in the Table, there are 28 female cases and the remaining three are male cases. The reported average age of the female patients was 41.8 years (range, 12–70 years), while that of male patients was 2.6 years (range, 8 months to

Table. Reported cases of omental teratoma

Authors	Age (yr)	Sex	Tumor size, maximal diameter (cm)	Associated findings	Characteristic of tumor	Management
Mumey [2]	35	F	5	–	–	NA
Love [3]	53	F	Cricket-ball size	–	–	NA
Lazarus et al [4]	48	F	85	Left ovarian dermoid cyst	–	NA
Judd et al [5]	52	F	5	Right ovarian dermoid cyst	–	NA
Warfield [6]	69	F	8	–	–	NA
Hogan et al [7]	21	F	11	–	–	NA
Printz et al [8]	23	F	5	Left ovarian cystic teratoma	–	NA
Ekbladh et al [9]	41	F	6	Hypotrophy of left ovary	–	NA
Bell et al [10]	53	F	32	Right ovarian cystic teratoma	–	Excision
Kearney [11]	70	F	7	Left ovarian cyst	–	Excision
Ordonez et al [12]	22	F	2	–	Immature omental teratoma	Chemotherapy + radiotherapy
Compton et al [13]	39	F	8	Left ovarian cystic teratoma	–	Excision
Leno et al [14]	66	F	8	Atrophy of left ovary	–	Excision
Ralls et al [15]	45	F	5	Left ovarian cystic teratoma	–	Excision
Spurney et al [16]	12	F	30	–	Immature omental teratoma	Chemotherapy + radiotherapy

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Table. *(continued)*

Authors	Age (yr)	Sex	Tumor size, maximal diameter (cm)	Associated findings	Characteristic of tumor	Management
Mercer et al [17]	34	F	18.5	–	–	Excision
Deppe et al [18]	31	F	11	–	–	Excision
Drut et al [19]	2	M	5	Agenesis of left testis	–	Excision
Besser et al [20]	47	F	7	–	–	Excision
Kriplani et al [21]	36	F	7	Agenesis of bilateral tubes and ovary	–	Excision
Furuhashi et al [1]	28	F	7.5	–	–	Excision
Mazumdar et al [22]	50	F	12, 4	–	Multiple omental teratomas	Excision
Moon et al [23]	57	F	8	Left ovarian cystic teratoma	–	Excision
Moon et al [23]	53	F	5	Left ovarian cystic teratoma	–	Excision
Ushakov et al [24]	36	F	10	Left ovarian teratoma	–	Excision
Ushakov et al [24]	27	F	5	–	–	Excision
Patankar et al [25]	5	M	NA	–	–	Excision
Ollapallil et al [26]	46	F	11	–	–	Excision
Yoshida et al [27]	36	F	5	Atrophy of left ovary		Excision
Baviskar et al [28]	8 mo	M	14	–	–	Excision
Present case	35	F	15	–	Ruptured omental teratoma	Excision

NA = not available.

5 years). The reported tumor size varied widely, ranging from 2 cm to 85 cm in diameter. Two cases involved histologically immature teratomas, and the patients required postoperative chemotherapy and radiotherapy. Yoshida et al [27] suggested that abdominal pain is the main presenting symptom in most cases of omental teratomas. However, omental teratomas may be asymptomatic; Patankar et al [25] described a painless benign cystic teratoma of lesser omentum in a 5-year-old boy. Computed tomography scans provide the advantage of demonstration of fat component and calcification in the teratoma, the localization of mass, and relationship between adjacent organs. Moon et al [23] reported successful preoperative detection of coexistent cystic teratoma of the omentum and ovary on computed tomography in two cases. In our case, computed tomography scan demonstrated a large teratoma with diffuse mesentery infiltration with calcified foci, mimicking an ovarian teratoma with intraperitoneal rupture.

In summary, we report the first case of a ruptured omental teratoma. We suggest that a ruptured omental teratoma should be included in the differential diagnosis of a pelvic teratoma with acute abdomen and disseminated calcified spots on the mesentery.

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