

Mature mesenteric teratoma in an adult male

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Abstract:

Teratoma of mesentery is uncommon. It is a germ cell tumour which originates from the gonads, seen in females of reproductive age groups. Teratomas are usually found in the sacrococcygeal area in the gonads and less frequently at other sites and rarely in the mesentery (1). We report a case of mesenteric teratoma in a 17-year-old male patient. Mesenteric teratoma should be kept in mind while dealing with cystic lesions in abdomen. Clinical presentation is vague but radiology helps in pre-operative diagnosis.

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Introduction

Teratomas arise from totipotent primordial cells, present in the midline. These display mixture of tissues of tridermal or bidermal origin, foreign to anatomic site(1-2). It is seen in young population(3). Teratomas in the gastrointestinal tract are rare. Teratomas are usually found in the sacrococcygeal area (47.2%) in the gonads (31.6%) and less frequently at other sites and rarely in the mesentery (1). There are few case reports in the literature; this should be one of the differentials for cystic lesion in abdomen. Here we describe a case of mature mesenteric teratoma in adult male.

Case History

A 17-year-old-male presented with painless lump in right side below the umbilicus of 12 month duration, gradually increasing in size. No history of vomiting, fever, weight loss. On abdominal examination, intra-abdominal non-tender mobile lump of around 12 cm x 10 cm was palpable in the right iliac fossa. Ultrasonography (3-5 MHz probe) revealed intra-abdominal cystic lesion in right iliac fossa. Appendix visualized was normal, no evidence of abdominal lymphadenopathy. CECT abdomen (64 slice CT scanner) with intravenous and oral contrast showed a heterogeneous mesenteric lesion of size 12 cm x 6 cm x 10 cm with fatty, ossified, calcified and cystic components within. The most probable diagnosis given was mesenteric teratoma (Fig. 1).



Fig. 1: Well defined intra-peritoneal solid cystic lesion in right iliac fossa

Patient was explored with midline incision; intra-operatively a mass of size 20 cm x 10 cm x 8 cm was seen imbedded in a mesentery of ileum without any adhesions to adjacent bowel or other structures (Fig. 2).

The mass had cystic and bony hard areas. Complete excision of mass was done without compromising bowel vascularity. On cut section, bony and cartilaginous structures were seen (Fig. 3).

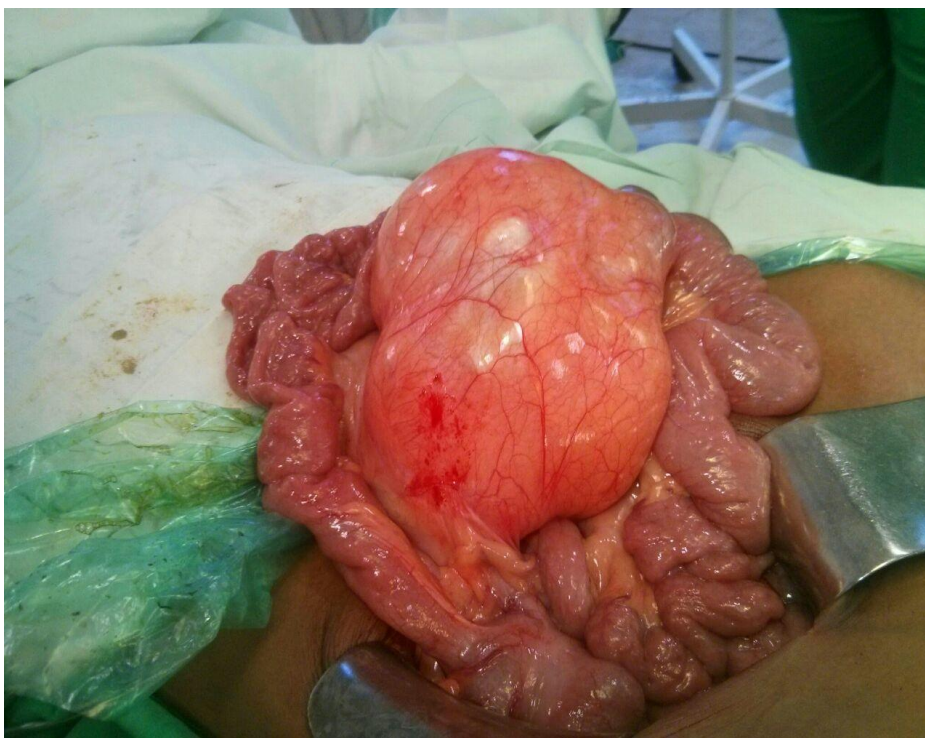


Fig. 2: Intra-operative, the lesion was found to be within the mesentery of ileum



Fig. 3: Cut open section of specimen showing bony and cartilaginous components

Histopathology confirmed the diagnosis of mature mesenteric teratoma. Patient was asymptomatic at 6 months follow-up.

Discussion

Rokitansky nodule or Dermoid plug refers to a solid protuberance, this is referred in context of mature cystic teratoma. Teratoma is commonly a germ cell tumour originating from the gonads and seen in female of reproductive age group. During development, germ cell migrates from yolk sac to genital ridge, through hind gut (route of mesentery). This explains development in abnormal location like mesentery.

The clinical presentation is usually non-specific. It depends on the size and location of the growth. Compression on bladder and small bowel can cause abdominal discomfort, pain in the lower quadrant. Hard lump is felt on palpation.

Diagnosis is confirmed by radiological modalities and examination of histological specimen. Differential diagnosis may include mesenteric or omental cyst (lympangioma, enteric duplication cyst, enteric cyst), cystic teratoma, cystic mesothelioma. Radiograph of abdomen shows teeth and bones, suggestive of teratoma. On ultrasound, the diagnosis of teratoma should be suspected if a cystic mass is detected with fat-fluid level and acoustic enhancement of calcification. CT scan characteristic of mature mesenteric cystic teratoma is a predominantly fatty mass with denser dependent elements and globular foci of calcification in a solid protuberance projecting into the cyst cavity (Rokitansky protuberance, dermoid plug). Calcifications are commonly seen in the solid component or in the wall. On MRI, cystic teratomas reveal the signal characteristic of fat (hyperintense on T1-weighted images) and water (hypointense on T1 weighted images and hyperintense on T2-weighted images). They are primarily benign with rare conversion to malignancy (4-5).

Pathologically, a cystic mesenteric teratoma contains both cystic as well as solid components (3-4). In summary, as mesenteric teratoma is a benign neoplasm. It is important to establish the preoperative diagnosis by radiological studies. As they are well encapsulated without invagination into surrounding structures, surgical excision is the best modality of treatment.

References

1. Al-Arfaj Abdullatif A, El-Shawarby Mohammad A, Al-Mulhim Fatma A, Lardhi Amer A. Mesenteric cystic teratoma in children. *Saudi Med J* 2003; 24(12): 1388-90.
2. Raychaudhari C, Prajapati H, Shah HK. Two cases of immature mesenteric teratoma. *Ind J RadiolImag* 2006; 16 (4): 567-70.
3. Hiralal PP, Vasavada DP. A mesenteric teratoma in an adult male – a rare case. *Indian J Radioimaging* 2004; 14: 257 -9.
4. Srivastava J, Ghritlaharey RK. Immature mesenteric teratoma in an infant: a case report. *Journal of Clinical and Diagnostic Research* 2010 December; 4:3581-4.

5. Harms D, Zahn S, Göbel U, Schneider DT. Pathology and molecular biology of teratomas in childhood and adolescence. *Klinische Pädiatrie* 2006; 218(6):296–302.