Case study

Mesenteric Dermoid Cyst In Adult And Review of Literature

Abstract

Mesenteric dermoid cysts or teratoma are germ cell tumours composed of three germinal layers, ectoderm, mesoderm and endoderm. These tumours occur usually in children and 80-90% are benign and less than 3% tumours change in to malignancy.

They are more common occur in the region of the head and neck, as well as in the gonads but extremely rarely present in the abdomen as an extra-gonadal mass. The occurrence of mesenteric teratoma in males is less common than in females. Mesenteric dermoid cyst may prevent as asymptomatic mass, abdominal pain and acute intestinal obstruction due to volvulus has been reported According to English literature and PubMed data base only 21 cases of mesenteric dermoid cysts are reported.

Herein, we are reporting an extremely rare case of mesenteric dermoid cyst in a 35 years' adult male patient. Clinically he presented with a lump in abdomen at right ileac fossa, pain in abdomen and diagnosis of mesenteric cyst confirmed on abdominal ultrasonography. We performed complete enucleation of a large mesenteric dermoid cyst without resection anastomosis of small bowel.

Keywords

Mesenteric dermoid cyst, Teratoma, Abdominal mass

Introduction

Dermoid cysts which are also known as mature cystic teratoma. Mesenteric dermoid cysts are even rare. These tumours originate from totipotent germ cells composed of three germinal layers. Dermoid cysts contains hair, sebaceous material and are line by squamous epithelium. They are generally slow growing and benign, very rarely malignant 1.7% and have good prognosis. Till date very few cases of dermoid cyst of mesentery have been reported in adults. They can present as slow growing intra-abdominal mass or acute abdomen due to rupture or intestinal volvulus. Usually, these mesenteric masses are painless. Dermoid cysts may present with complications such as torsion rupture, spillage, peritonitis and very rarely squamous cell carcinoma and recurrence. [1,2,4,9]

Case Report

A 35 years old male patient was admitted to our centre on 15/10/2010, with complains of asymptomatic abdominal lump at right iliac fossa, associated with pain in abdomen for 2 days and physical examination, he had palpable lump at right iliac fossa. Lump was mobile perpendicular to the root of mesentery and little tenderness, no guarding or rigidity over the abdomen. All laboratory investigation including kidney function tests were normal.

Abdominal ultrasonography showed a large, well defined spherical cyst, 10x8 cm in size, anechoic structure. The presence of debris within a cystic lesion with internal echoes and diagnosis was confirmed a benign mesenteric cyst.

He was explored through midline incision. We revealed a large cystic 10x8 cm sized mass in the terminal ilium. Cyst was yellowish white in colour, having thick cystic wall, we aspirated the cyst with 20 cc syringe and cyst containing 200-250 cc brownish fluid from the cyst cavity. After

decompression of the cyst with gentle dissection, we did enucleation of the dermoid cyst without any injury to mesenteric vessels. We are able to remove the dermoid cyst in toto. There was no small bowel ischemia, we applied hot sponges and small bowel was completely viable, so there was no need of segmental resection of the affected bowel. Abdominal closure was performed without any drainage.

On gross examination of dermoid cyst, a thick wall cyst size 10x8 cm, yellowish white in colour and spherical in shape, like a cricket ball. The cyst contains a thick muddy, sebaceous material with no hairs or teeth inside the cyst. The histopathological examination revealed benign cystic teratoma. Postoperative recovery was uneventful and patient discharged on 8th postoperative days. After 10 years follow up, there was no recurrence and patient was healthy. **(Figure 1,2,3,4,5,6)**

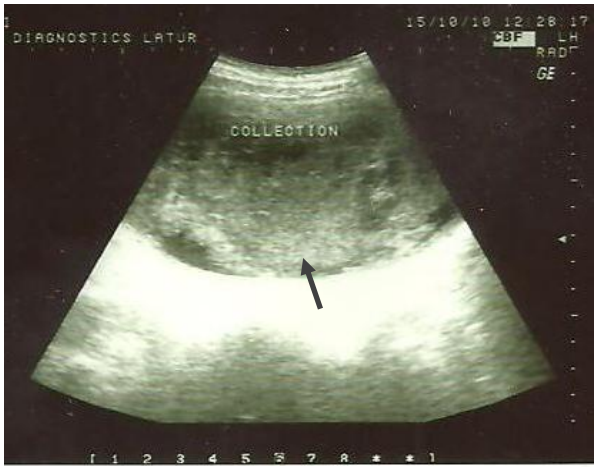


Fig-1 Ultrasonography abdomen showing a solitary cystic, mass containing debris

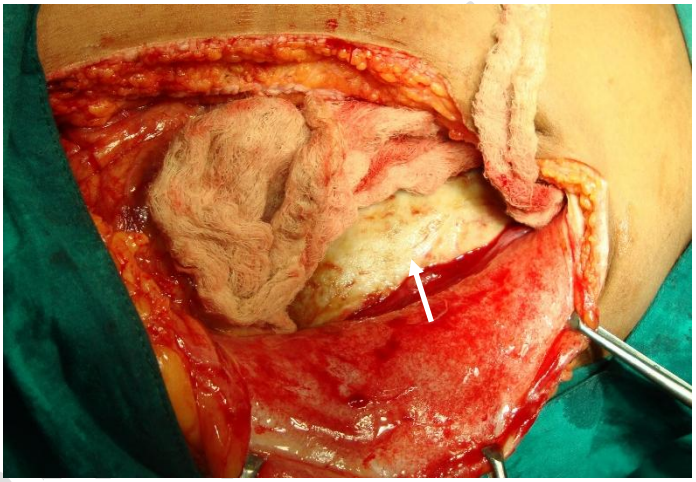
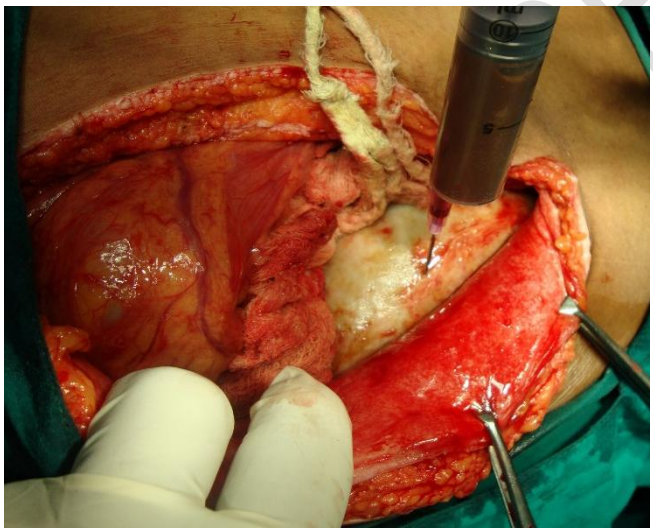


Fig-2 Intraoperative photographs showing mesenteric dermoid cyst at RIF



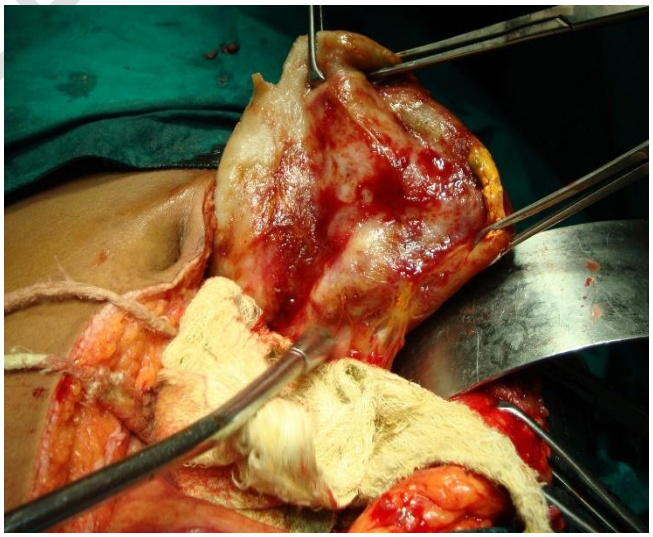


Figure 3: **Photograph showing dermoid cyst surgery**

Figure 4: **Photograph showing post operative view of dermoid cyst**

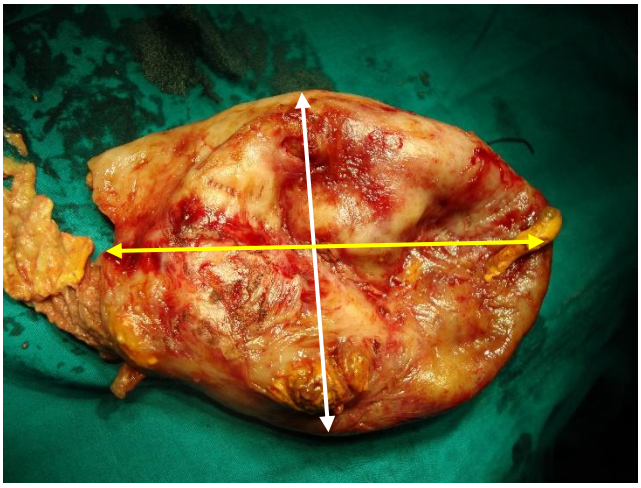


Fig-5 Photograph showing dermoid cyst like a cricket ball, of size 10x8 cm

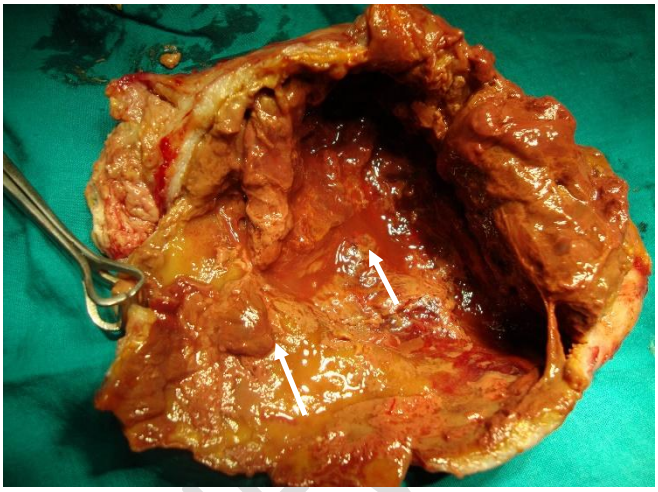


Fig-6 Photograph showing dermoid cyst containing muddy and sebaceous material

Discussion

In 2000, DePerrot et al suggested a classification for mesenteric cyst based on histopathological features.

1. Cyst of lymphatic origin.
2. Cyst of mesothelial origin.
3. Cyst of enteric origin.
4. Cyst of urogenital origin.
5. Mature cystic teratoma or dermoid cyst.
6. Pseudocyst (traumatic or infective) [2,3]

Dermoid cysts are more common in the head and neck, gonads, mediastinum, retroperitoneal and sacrococcygeal region. Very rarely migration of primordial germ cells, may have migrated from the dorsal mesogastrium in the midline and then transversed in the mesentery of the ileo-caecal region. Mature cystic teratoma are benign neoplasm of germ cell tumours that occur more frequently in gonadal sites. Mesenteric teratoma are rarely diagnosed because pathological examination is necessary to make a definitive diagnosis. [2,3]

Mesenteric dermoid or teratoma are usually solitary tumours with diameter ranging 3-18 cm and located more often in small bowel mesentery than in the mesocolon. Dermoid cyst may contains skin appendages/dermal structures including sebaceous glands, sweat glands, hair follicles, tooth and cartilages derived from totipotent cells. These tumours are more frequently occur in children's than in adults. [3,4]

Mesenteric teratoma may present with asymptomatic abdominal mass, abdominal pain and acute intestinal obstruction due to volvulus. Usually these mesenteric masses are painless. Ultrasonography futures was dermoid cyst include cystic mass containing hyperechoic dots or debris with calcification in the cystic wall. CT scan shows well defined solitary cyst with areas of calcifications. Many a times a solid protuberance seen projecting in to the cyst cavity called **Rokitansky Protuberance.**

Complete excision of dermoid cyst with or without segmental resection of affected bowel with histopathological examination of resected specimen and confirm the diagnosis. Mesenteric dermoid or teratoma can be treated by laparoscopic or laparotomy surgeries, laparotomy is preferred to avoid spillage and peritonitis. [2,4,9]

Review of literature

Mature cystic teratoma are commonly found in the ovaries. English literature and PubMed published by 31 October 2012, were searched the keywords "Mature cystic teratoma, mesenteric

teratoma and mesenteric dermoid cyst" and only 21 cases of mesenteric teratoma have been reported in the literature. Mesenteric teratoma can occur at any age from new-born to adult patients, the tumours are solidary and size approximately 10 cm in most the cases. [8,9]

Conclusion

Mesenteric dermoid cysts are extremely rare benign tumours. Complete surgical excision of cyst with or without segmental resection of bowel and pathological examination is necessary to make a definitive diagnosis.

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