ISSN 2822-2032 (Print) 2822-2040 (Online)

Medical Journal of Eastern Nepal

Volume 01, Number 02, Issue 02, December 2022, 49-51

Case Report

RARE CASE REPORT OF MATURE MESENTERIC TERATOMA IN A 35-YEAR-OLD FEMALE

Manmohan Bir Shrestha, Umesh Kumar Sharma, Suraj Thapaliya, Jayanti Limbu

Department of Radiology & Imaging, B & C Medical College Teaching Hospital and Research Center, Birtamode, Jhapa, Nepal

Submitted: 29-July-2022, Revised: 16-September-2022, Accepted: 27-September-2022

DOI: https://doi.org/10.3126/mjen.v1i02.51164

ABSTRACT

Teratomas are germ cell tumors that usually occur in the gonads, and present in early age group. Mesenteric teratoma is rare. Patients with mesenteric teratoma may remain asymptomatic or may present with compressive symptoms. Teratomas contain derivatives of all three germ layers, hence may contain diverse tissues. Computed tomography (CT) scan is ideal to establish the diagnosis of mesenteric teratoma, and reveal fluid, fat, calcifications, fat-fluid level. This is a case of 35-year-old female, who presented with upper abdominal pain for 2 months. She underwent Computed Tomography (CT) scan which revealed large well circumscribed mass in left upper abdomen, containing fluid, fat, and globular calcifications. Size of the lesion was: craniocaudal dimension= 12 centimeter, transverse diameter = 10 centimeter, anteroposterior diameter = 10 centimeter. Patient was managed by complete surgical resection. Histopathological examination confirmed the diagnosis of mature teratoma of mesentery.

Keywords: Computed tomography, Germ cell tumor, Mesenteric teratoma

INTRODUCTION

Teratomas are germ cell tumors that contain derivatives of all three germ layers, i.e. ectoderm, mesoderm and endoderm. Teratomas usually occur in gonads, and rarely occur in extragonadal sites along the midline of body. Less common sites are: sacrococcygeal region, cranium, mediastinum, retroperitoneum and mesentery. Occurrence of human germ cell teratomas along the midline of the body is explained by the migration of primitive germ cells (1, 2. 10). The origin of the word "teratoma" is from Greek word "terato", which means monster (3). Teratomas occurring in the mesentery and retroperitoneum are extremely rare and accounts only 4-6% of all teratomas (4). Patients with abdominal teratoma may remain asymptomatic, or may present with compressive symptoms. Computed tomography (CT) scan is well suited for the diagnostic evaluation of mesenteric teratoma, and is highly specific in the detection of fat, fluid, calcifications, fat-fluid level (5). Here, we report a case of mature mesenteric teratoma in a 35-year-old female who was managed by complete surgical resection.

CASE REPORT

A 35-year-old female patient presented in emergency department with complaints of upper abdominal pain for 2 months. Physical examination revealed a large

***Corresponding author:**
Manmohan Bir Shrestha
Email: macbirshrestha@gmail.com
ORCID: https://orcid.org/0000-0002-1786-16611

Citation
Shrestha M B, Sharma U K, Thapaliya S, Limbu J, Rare Case Report of Mature Mesenteric Teratoma in a 35-year-old Female, MJEN. 2022 December; 1(2): 49-51.

mass in left upper abdomen. Mass was firm in consistency, with well defined borders. Then, the patient underwent Computed tomography (CT) of abdomen. Computed tomography (CT) scan revealed large well circumscribed oval mixed density lesion in left upper abdomen, containing fluid, fat, and calcifications (Figure 1, 2, 3). The lesion was intraperitoneal in location. The lesion was well marginated and minimally compressing the surrounding structures without evidence of invasion. Posteriorly, the lesion was abutting left renal vessels and anterior surface of left kidney (Figure 3). On left side, the lesion was abutting descending colon (Figure 3). Size of the lesion was: craniocaudal dimension= 12 centimeter, transverse diameter = 10 centimeter, anteroposterior diameter = 10 centimeter. Patient was managed by complete surgical resection and the entire tumor was excised. Histopathological examination revealed mature teratoma of the mesentery (Figure 4, 5).

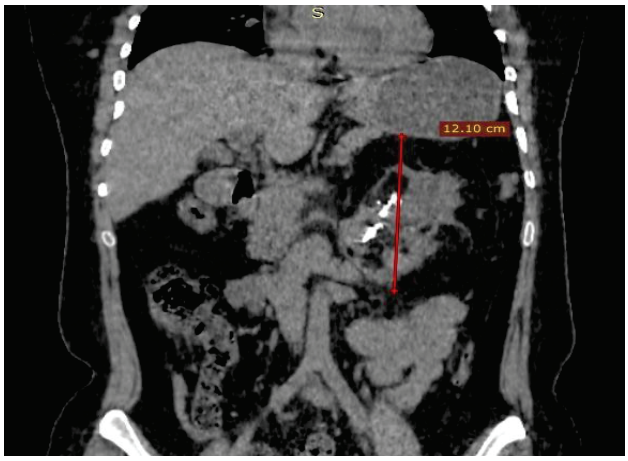

Figure 1: Non-contrast coronal Computed tomography (CT) image shows large well marginated oval mixed density mass in left upper abdomen, below stomach. Areas of fluid density, fat and globular calcifications seen in the lesion.

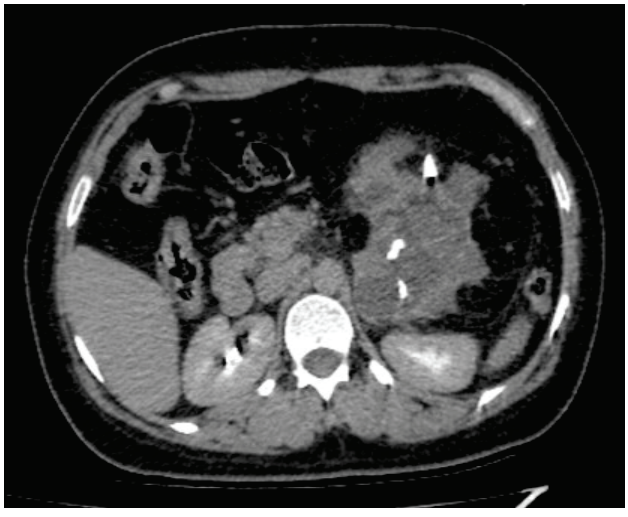

Figure 2: Contrast enhanced axial Computed tomography (CT) image shows well circumscribed lesion in left upper abdomen, containing areas of fluid, fat and calcifications.

Figure 3: Contrast enhanced axial Computed tomography (CT) image revealed well circumscribed oval mixed density lesion (containing fat, fluid, and calcifications) in left upper abdomen. Posteriorly, the lesion is abutting left renal vessels and anterior surface of left kidney. On left side, the lesion is abutting descending colon.

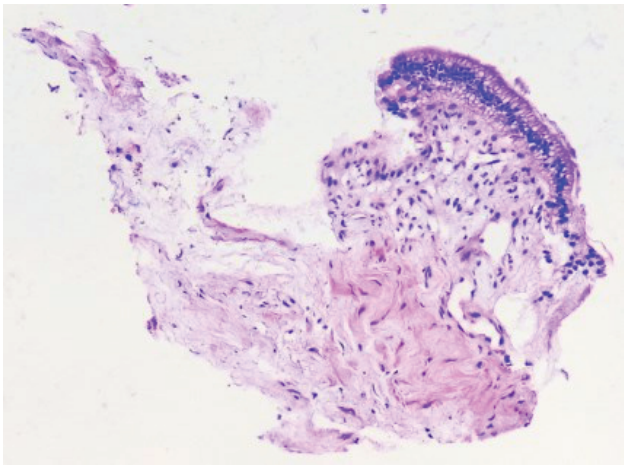

Figure 4: Hematoxylin-eosin section of mesenteric teratoma showing mucinous columnar lining epithelium.

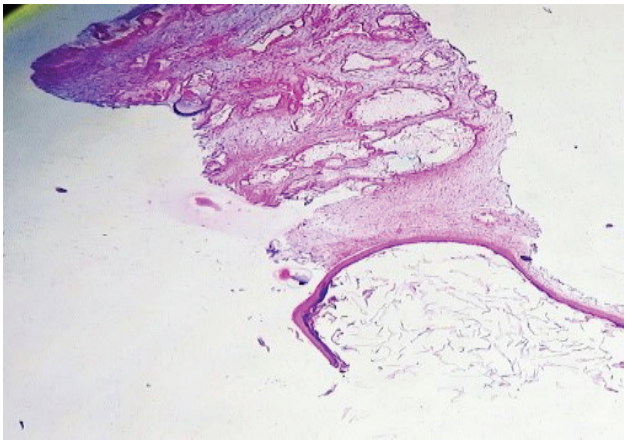

Figure 5: Hematoxylin-eosin section of mesenteric taratoma showing skin and adnexa with calcified bone.

DISCUSSION

Teratomas are germ cell tumors that usually occur in gonads. Extragonadal occurrence of teratoma is rare, and occurence of abdominal teratoma only accounts 4-6% (4). Other extragonadal sites of teratoma other than retroperitoneum & mesentery are: cranium, mediastinum, and sacrococcygeal region (1, 10). Teratoma commonly occurs in the early age group. Mature mesenteric teratoma in adulthood is extremely rare (6, 7, 11).

Patients with mesenteric teratoma may remain asymptomatic. Mesentery offers sufficient space for considerable tumor growth before symptoms can appear, particularly if the lesion is near the root of the mesentery (8). Symptoms of mesenteric teratoma are nonspecific, and may depend on its size. Patients may present with abdominal swelling when the mass is large, or may present with compressive symptoms, most commonly constipation or vomiting (9).

Teratomas are tumors that arise from pluripotent cells, and composed of multiple diverse tissues, that may be foreign to their anatomical site of origin. As mesenteric teratomas are usually well circumscribed, it is important to establish a pre-operative diagnosis for elective surgical treatment. Mesenteric teratomas are well marginated mass with variable amount of fluid content, and possessing areas of fat and calcification. Computed tomography (CT) scan is well suited cross-sectional imaging techniques for the evaluation of mesenteric teratoma. And Computed tomography (CT) scan is highly specific for detection of fat and calcification (5).

CONCLUSION

Occurrence of mesenteric teratoma in older age is rare. Mesenteric teratoma is one of the less common sites of occurrence of extragonadal teratoma. Computed tomography (CT) is the best imaging modality to demonstrate fat, fluid, calcification, fat-fluid levels in teratoma. Our case highlights the importance of considering mesenteric teratoma in differential diagnosis of intra-abdominal masses.

Conflict of interest: None

REFERENCES

1. Yu, C., Liu, K., Lin, W. and Li, Y., 2003. Mature cystic teratoma of the pancreas in a child. ***Pediatric Radiology***, 33(4), pp.266-268.
2. Oosterhuis, J., Stoop, H., Honecker, F. and Looijenga, L., 2007. Why human extragonadal germ cell tumours occur in the midline of the body: old concepts, new perspectives. ***International Journal of Andrology***, 30(4), pp.256-264.
3. Nader, R., Thubert, T., Deffieux, X., de Laveaucoupet, J. and Ssi-Yan-Kai, G., 2014. Delivery Induced Intraperitoneal Rupture of a Cystic Ovarian Teratoma and Associated Chronic Chemical Peritonitis. ***Case Reports in Radiology***, 2014, pp.1-4.
4. De Backer, A., Madern, G. and Hazebroek, F., 2005. Retroperitoneal germ cell tumors. ***Journal of Pediatric Surgery***, 40(9), pp.1475-1481.
5. Bowen, B., Ros, P., McCarthy, M., Olmsted, W. and Hjermstad, B., 1987. Gastrointestinal teratomas: CT and US appearance with pathologic correlation. ***Radiology***, 162(2), pp.431-433.
6. De J, Banerjee M, Biswas PK, Banerjee AK, Karim R. Mature teratoma of the mesentery. J Indian Med Assoc. 2002;100(3):198-99.
7. Cuevas-Ocampo AK, Tavares-García S, Martínez-Gómez H. Mature mesenteric teratoma in an adult male. A case report. Rev Med Inst Mex Seguro Soc. 2011;49(2):209-12.
8. Upadhyaya M, Rogers T, Ms Thyagrajan. Infected mesenteric ileocaecal dermoid cyst in a child. J Surg Case Rep 2010;5. https://doi.org/10.1093/jscr/2010.10.5.
9. Hicham A, Hajar B. A case of mesenteric teratoma. Eurorad; 2016. https://doi.org/ 10.1594/EURORAD/CASE.13315.
10. Taori, K., Prasad, P. and Joshi, S., 2006. Mature cystic teratoma of the mesentery. European Journal of Radiology Extra, 59(2), pp.59-61.
11. Neeralagi, C., 2017. Mesenteric Teratoma in Elderly Female: A Rare Case Report. JOURNAL OF CLINICAL AND DIAGNOSTIC RESEARCH