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A Case Study of Rare Disease: Benign Retroperitoneal Teratoma and Treatment at Tertiary Care Centre

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Abstract

Primary retroperitoneal teratomas are rare non-seminomatous germ cell tumors that arise from embryonal tissues. They form only 5%-10% of all retroperitoneal tumors. These are usually asymptomatic or present as lump or mass with compressive symptoms. Most of the patients are diagnosed by characteristic computed tomography findings. The chances of malignant transformation are rare. Complete surgical resection is the definitive treatment for most patients. The author presents a case of benign retroperitoneal teratoma in a 40-year-old female admitted at tertiary care center, presented with intermittent abdominal pain. Per abdominal examination revealed fullness in the left hypochondriac, left lumbar, umbilical and epigastrium. USG, CT scan and blood investigation were done. USG revealed approximately 8.6*4.6 cm sized multicystic anechoic lesion with evidence of septation within it noted in distal body and tail of pancreas with no internal vascularity possibility of benign cystic lesion but CECT abdomen scan showed lesion with areas of fat density and chunks of ossified vertebra like structures in it noted in epigastric region on the left side in anterior pararenal space. Operation was performed by open Anterior approach Exploratory Laparotomy with excision of retroperitoneal teratoma. Post operative histopathological finding confirmed benign mature teratoma. Within the postoperative course no complications occurred and patient was discharge on 7th day. A classic mature teratoma requires careful examination and interpretation of the imaging. The amount of immature components determines outcome and recurrence in these patients so en-bloc surgical resection is the treatment of choice.

Keywords: Primary retroperitoneal teratoma; Retroperitoneal germ cell tumour, Benign mature teratoma, Retroperitoneum

Introduction

Primary mature teratomas are made up of well differentiated parenchymal tissues that are derived from more than one of the three germ cell layers (ectoderm, mesoderm, and endoderm). They usually occur in midline (paraxial) structures.[1] The most common sites are gonads (testes and ovaries) followed by extragonadal sites such as intracranial, cervical, mediastinal, retroperitoneal, and sacrococcygeal regions.[2] They are more common in childhood and rarely occur in adults. Only a very few case reports have been documented in literature so far. The majority of cases are asymptomatic, present with nonspecific complaints, or identified incidentally on routine investigations.[2-4] Surgical excision of mature (benign) teratoma is required for a definitive diagnosis (by histopathological examination) and remains the mainstay of treatment. Prognosis is fortunately excellent after complete

surgical excision with an overall five-year survival rate of nearly 100%. Herein, we report of a mature (benign) cystic retroperitoneal teratoma in a 40-year-old Female patient.

Result

Case History And Examination

A 40-year-old otherwise healthy female patient presented to Tertiary care center of Surat with a history of intermittent generalized abdominal pain for 15 days without any associated symptoms including fever, loss of appetite, nausea, weight loss and vomiting. Abdominal examination revealed a fullness in the left hypochondriac, left lumbar, umbilical and epigastrium. USG, CT scan and blood investigation were done. CT scan showed lesion with areas of fat density and chunks of ossified vertebra like structures in it noted in epigastric region on the left side in anterior pararenal space. Operation was performed by open Anterior approach Exploratory Laparotomy with excision of retroperitoneal teratoma. Within the postoperative course no complications occurred and patient was discharge on 7^{th} post operative day.

An abdominal contrast-enhanced computed tomography (CT) scan showed approximately 12.2*8.7*8.6 centimetre well defined, well encapsulated non enhancing solid cystic lesion with areas of fat density and chunks of ossified vertebra like structures in it noted in epigastric region on the left side in anterior pararenal space.

Patient was explained about the surgical management and after taking informed verbal and written consent patient was taken for surgery. Chevron incision kept and abdomen opened, peritoneum opened, after opening lesser sac mass was found superior to pancreas, which was 16*10 cm size irregular shaped firm cystic in consistency with well-defined margins and then it was dissected meticulously from surroundings, first from superior aspect of pancreas then from spleen by sharp and blunt dissection, mass was also abutting left kidney and adrenal gland inferiolaterally which was dissected with blunt dissection and separated. Medially mass was displacing aorta and inferior vena cava towards right side and with blunt dissection mass was separated with blunt dissection. Mass removed from abdomen and sent for histopathological examination. Then closure of abdomen was done. Histopathological report was suggestive of benign mature teratoma. Since there was no evidence of immature or malignant components, no radio- or chemotherapy was offered. The patient was discharged uneventfully in a stable condition. A postoperative 6-month follow-up failed to show any evidence of tumour recurrence.

Discussion/ Conclusion

Retroperitoneal tumours are rare having an incidence of only 0.2 to 0.8% of all tumours. Among such tumours, differential diagnosis of teratomas in retroperitoneum ranges from 6 to 18%, and in adults, its presentation is highly unusual. Benign adrenal teratomas are mostly clinically silent throughout their development and only become apparent when they start to produce mass effect on surrounding structures. They also pose diagnostic challenge radiologically, because they mimic other adrenal tumours like angiomyolipoma, myelolipoma or liposarcoma, and rarely, even pheochromocytoma. CT scans are very helpful in guiding towards differential diagnosis, but confirmation can only be achieved by histopathology.[5]

Shakir et al in their study reported single case of 31 years old female patient with retroperitoneal left adrenal teratoma presented with multiple episodes of vomiting and indigestion diagnosed as adrenal mass by CT scan and surgical resection was done by laparotomy and histopathological diagnosed as benign mature cystic teratoma.[6]

Li et al. in 2015 reported in their studied a total of 11 cases only from PubMed in the past 10 years, with seven cases in adults aged from 21 to 64 years. They studied retrospectively primary mature cystic teratoma of adrenal gland in their patients. They analysed the detailed clinical data of five patients with primary adrenal teratomas treated at Peking Union Medical College Hospital. They followed up their patients for 4-60 months and reported no recurrence of tumour.[7]

Chen et al 50-year-old woman with a 2-year history of low back pain and night sweats with CT showing 8 by 4 by 3.5-cm left adrenal mass without a clear plane between the mass and the left crus of the diaphragm. The tumour was resected laparoscopically. It was compressing but not involving the adrenal gland, nor was it involving the

Volume 6, Issue 5; September-October 2023; Page No 602-605

diaphragm. Microscopic evaluation revealed a benign mature cystic teratoma. The patient had an uneventful postoperative course and is free of recurrence after 18 months of follow-up.[8]

Primary benign mature retroperitoneal teratomas rarely occur in adult patients and are typically asymptomatic. Although the diagnosis can be made preoperatively by the characteristics of the tumor on the imaging modalities, but a definitive diagnosis is established upon histological assessment. Surgical resection is the mainstay in the treatment of primary benign mature retroperitoneal teratoma.

Figures

Figure1: CT scan plate showing mass lesion in left retro peritoneum

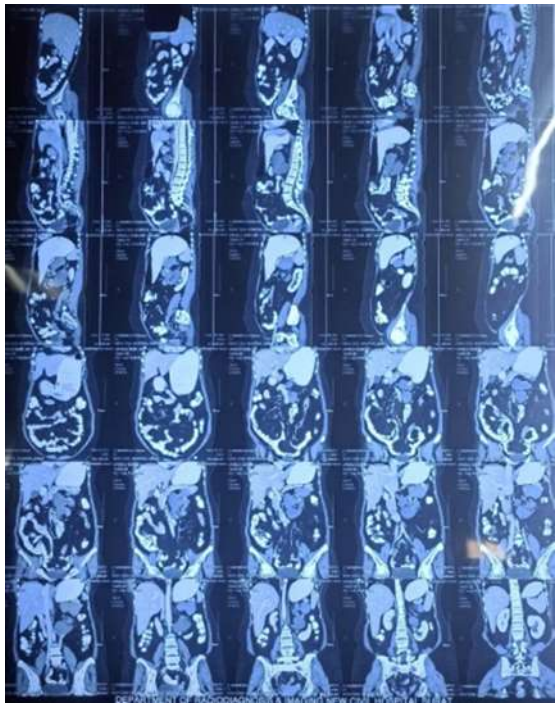
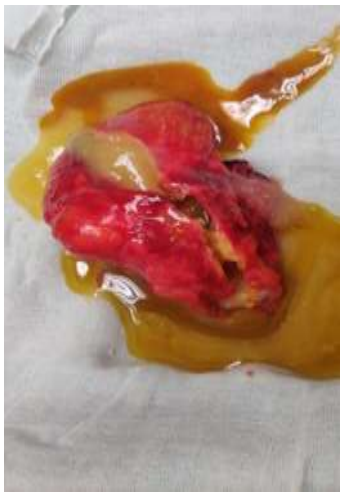


Figure 2 : Gross specimen of mass of retro peritoneum



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Volume 6, Issue 5; September-October 2023; Page No 602-605

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Volume 6, Issue 5; September-October 2023; Page No 602-605