

# CASE REPORT

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## A CASE REPORT - RETROPERITONEAL DERMOID

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**ABSTRACT:** Dermoid cyst comprises tissue derived from all the three germ cell layer of the embryo and can include many tissue types. Most are benign, but any of the tissue present can undergo malignant transformation. The presence of immature tissue increases the likelihood of malignant transformation and requires more aggressive therapy. It usually is found in midline structures. Retroperitoneal teratoma may present as a flank or abdominal mass. Thoracic teratoma usually present as an anterior mediastinal mass. Ovarian teratoma presents as an abdominal mass, often with symptoms of torsion, bleeding, or rupture. It needs to be evaluated with Ultrasonogram, CT abdomen, MRI. Complete excision is the treatment of choice.

**KEY WORDS:** Dermoid cyst, germ cell layer, retroperitoneal teratoma

**INTRODUCTION:** Germ cell tumours are most commonly located within the gonads<sup>3, 4</sup>. Common sites are: Ovary (ovarian cyst), Testis (teratoma), Rare sites are: Retroperitoneum (retroperitoneal cyst), Mediastinum (mediastinal cyst), Sacrococcygeal, CNS, Post anal dermoid. Rare sites are considered as a result of aberrant migration of germ cells from the yolk sac during fetal development<sup>4, 5, 6</sup>. Here we present a case report of retroperitoneal dermoid cyst in a patient by name Padma of age 45 yrs who resides in Bellary. Diagnosed by Ultrasonogram, CT abdomen and MRI scan. Confirmed by histopathological report& treated in VIMS, Bellary.

**CASE SUMMARY:** A 45 years old post-menopausal female, resident of Bellary, presented to us in the month of July 2011 with complaints of abdominal discomfort since 10 years, which had increased since 1 month with increased abdominal distension. There was no history of bowel and bladder disturbances. Her general physical examination revealed as an afebrile, active female with no jaundice, pallor, cyanosis, clubbing and lymphadenopathy. Abdominal examination revealed a distended, soft, non-tender, with a soft palpable mass over the left hypochondrium. No organomegaly. Bowel sounds were normal. Rest of the physical examination was unremarkable. Laboratory investigations were within normal limits. Ultrasonogram Shows a mixed echoic mass posterior to pancreas probably s/o of teratoma (retroperitoneal).

**MAGNETIC RESONANCE IMAGING:** Revealed lesion measuring 7.5\* 5.5 cms. Noted in left anterior pararenal space of retroperitoneum on left side with extension.Superiorly; abuts the stomach with minimal displacement.Inferiorly; extending till the lower L3 vertebra. Anteriorly; displaces the stomach with no obvious infiltration. Posteriorly; abuts the left renal artery and vein.

**OPERATIVE FINDINGS:** Under General Anaesthesia and Epidural Anaesthesia. Roof top incision taken. Swelling measuring 7.5 \* 5.5 cms in diameter, tense and cystic in nature detected. Cyst found adherent to Mesocolon and Duodeno-jejunal flexure. Cyst wall incised and contents aspirated.

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Contents were found to be hair, bone, liquid and semisolid fluid. Wall of the cyst excised from the adherents. 90% of the cyst wall excised. Around 10% of the cyst wall was left behind (considering dense adhesion to renal vessels) and the inner lining of the cyst wall cauterised. Haemostasis achieved. Abdomen closed in layers with drain in-situ. Patient tolerated the procedure well. Post-operatively the patient had an unremarkable recovery.

**HISTOPATHOLOGICAL REPORT:** Cystic mass shows an inner lining of squamous epithelium of the epidermis and subepithelial dermal appendages of sebaceous glands and hair follicles. The outer layer consists of thick fibrocollagenous tissue with multifocal areas of lymphocytic infiltration. The cavity showed presence of lamellated type of keratinous material. The features are consistent with a dermoid cyst with secondary inflammatory changes – Retroperitoneum.

**FOLLOW UP:** The patient was followed up till 1 year with Ultrasound Abdomen which showed no evidence of recurrence.

**DISCUSSION:** Although it may seem, more like science fiction, than science fact, Tumour can be filled with hair, nails, sebum, bone, cartilage, teeth, eyes and/or thyroid tissue. Retroperitoneal dermoid is rare and usually develops, in childhood<sup>3</sup>. Willis<sup>7</sup> states “A teratoma is a true tumour or neoplasm composed of multiple tissues of kinds foreign to the part in which it arises”. Macroscopically there are two types: Cystic teratoma: usually benign, contains yellowish liquid material resembling hair, composed of fully developed tissue. Solid teratoma: generally malignant, have a varied aspect, formed of fibrous, fatty, cartilaginous and bone tissue consists of immature embryonic tissue. Size of retroperitoneal teratoma in adult is variable. Danopoulou, et al.<sup>8</sup> reported a tumour which weighed 36 kg.

The order of frequency of teratoma localisation is: Ovarian, Testicular, Anterior Mediastinal, with retroperitoneal localisation occurring least of all.<sup>9</sup> Symptoms of retroperitoneal teratoma are variable. In benign cases there is never an alteration in the patient’s general condition. In malignant forms the initial clinical picture may be normal, but there are often general symptoms or disturbances due to compression. Complications are rare<sup>10</sup>. However, as benignity cannot be ascertained; the tumour must be removed surgically. Tissue adherence, which has been observed with malignant and benign lesions, may hinder complete removal or require extended surgery. Patients who have had benign teratomas surgically removed have an excellent prognosis. However, malignant teratomas recur, and patients usually die about 18 months after onset of symptoms.

When retroperitoneal tumour is suspected, plain antero-posterior and lateral abdominal radiographs should be obtained. In the absence of calcifications, opacity or a radiolucent mass which displaces the digestive spaces may be observed. Tooth like calcifications are also helpful in establishing the diagnosis of teratoma. Irregular calcifications may be both peripheral and central; this provides conclusive evidence for establishing the diagnosis. Ultrasonography, computed tomography and MRI have extreme importance in diagnosing the said condition.

Ultrasound findings include complex echogenic mass with solid and cystic components, echogenic foci with posterior shadowing and fat fluid levels, may be seen. CT scan requires use of ionising radiation and may not display the origin of the mass, as well as ultrasound. CT demonstrates mass of fat or water density and frequently calcifications. Rim like calcification is noted<sup>12</sup>. Fat fluid

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level may be seen, but is uncommon<sup>12</sup>.MRI findings include hyperintense fat on T1 and T2 weighted sequences, within fluid of low signal intensity.

**CONCLUSION:** Teratomas are germ cell tumors that arise in the midline; they contain elements from all three embryonal layers, ectoderm, mesoderm and endoderm. Teratomas with more primitive features are more malignant while those with more differentiated tissue are more benign. Teratomas are most commonly found in gonads. Extragonadal sites are rare. Retroperitoneal teratoma is one of the rare entities. It needs multi-disciplinary approach for the accurate diagnosis and management. Ultrasound, Computed Tomography scan and MRI scan are the investigations needed and confirmed by histopathological report. Surgical excision is the treatment of choice. Prognosis of malignant teratoma is very poor.

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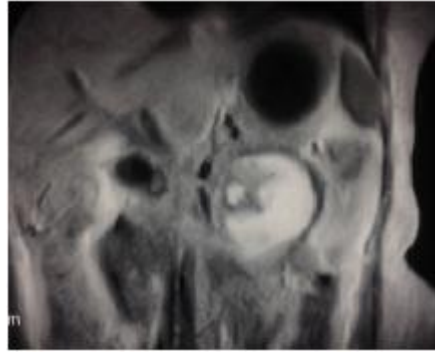


Fig-1: MRI showing retroperitoneal mass



Fig-2: Cross section of mass in MRI



Fig-3: Thick wall of mass

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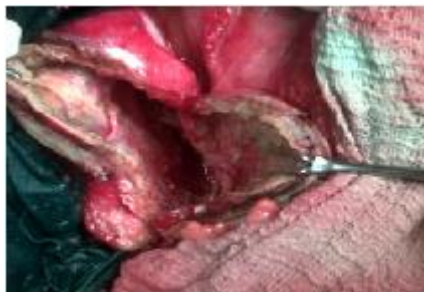


Fig-4: Cyst wall after removing contents



Fig-5: Contents of dermoid cyst contents

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