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Adult presentation of retroperitoneal cystic teratoma: a case report

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ABSTRACT

Retroperitoneal cysts are rare, usually asymptomatic, abdominal lesions. Moreover, retroperitoneal space is an uncommon location for teratoma in adults, they occur more commonly in childhood. We report the case of a retroperitoneal cystic teratoma in a 55-year-old male diagnosed after laporatomy where the mass was completely excised and pathological examination was done. The patient is well at one year follow-up.

Key words: Retroperitoneum, benign cystic teratoma.

1. INTRODUCTION

Teratomas are uncommon tumours consisting of derivatives from all three germ cell layers. Germ cell tumours are most commonly located in gonads. Rare sites are retroperitoneal, meditational, and sacrococcygeal and post anal teratomas. These sites are considered as a result of aberrant migration of germ cells from yolk sac during foetal development (Deb et al., 2012). They are commonly seen in children, but are rarely reported in adults (Luo et al., 2005). We report here a case of retroperitoneal cystic teratoma occurring in a 55-year-old female with successful surgical treatment.

2. CASE PRESENTATION AND DIAGNOSIS

A 55-year-old male patient came with complaints of persistent dull aching abdominal pain which was insidious in onset and of mild to moderate intensity. He also complained of low backache since two months. There was no associated history of nausea, vomiting, jaundice, and weight loss or bowel complaints.

Per abdominal examination revealed soft abdomen with minimum tenderness in umbilical region on deep palpation. On examination, a solitary diffuse intraabdominal 6x5 cms vague lump was palpable in the right lumbar region moving with respiration and was dull on percussion.

All routine laboratory investigations including serum α-fetoprotein (AFP), Carcinoembryonic antigen (CEA) and carbohydrate antigen (CA) 19-9 were within normal limits. The abdominal and pelvis Contrast enhanced computed tomography (CECT) revealed a lobulated soft tissue density lesion, 9x7x5 cm size, arising from right psoas muscle, and displacing lower pole of right kidney, hence a probable diagnosis of retroperitoneal sarcoma was made (Figure 1). Exploratory laporatomy was undertaken in view of the possible malignant retroperitoneal tumour. At surgery the mass was found in the right retroperitoneal cavity adherent to the psoas muscle and was completely resected. There were no enlarged lymph nodes in the abdomen. Macroscopic examination revealed a solid cystic mass measuring 11x5x4 cms, filled with pultaceous material entangled with hair and areas of calcification. Histopathological examination showed cyst filled with laminated keratin and cholesterol clefts (Figure 2). The cyst wall was lined by keratinized stratified squamous epithelium with hair follicle and surrounding fibrocollagenous, adipose muscle tissue and neurovascular bundles (Figure 3). No immature tissue or neuroepithelium was identified in the multiple sections examined. There was moderate chronic inflammatory infiltrate, cholesterol clefts with giant cell reaction and foci of calcification (Figure 4). Histopathology confirmed the diagnosis of benign retroperitoneal cystic teratoma.

The post operative period was uneventful, after 1 year follow up the patient was well and free of symptoms without recurrence as confirmed by ultrasonography.

3. DISCUSSION

Germ cell tumours (GCTs) can be broadly classified into two main categories: seminomatous and nonseminomatous GCTs. Teratomas are the most common type of nonseminomatous germ cell tumour in humans, and most of these neoplasms are benign. Extragonadal teratomas are thought to arise from primordial germ cells or early embryonic cells. These arise from totipotential germ cells and occur along midline structures (Deb et al., 2012). Solid, cystic and mixed varieties have been identified macroscopically. The former tends to be malignant while the latter is usually benign (Khan et al., 2012).

Teratomas are generally divided into two histological types, mature and immature. A mature teratoma is an adult-type tumour consisting of differentiated elements, while an immature teratoma consists of elements with only partial somatic differentiation, similar to that observed in an embryo or fetus.

Primary retroperitoneal teratomas account for 1-11% of retroperitoneal neoplasms and are mostly seen in neonates and young adults. There is very few case reports occurring in the elderly have been documented in literature so far (Gupta et al., 2007). The case described here is therefore unusual in that it was a primary retroperitoneal tumour in an adult which was found adherent to the right psoas muscle raising a clinical suspicion of sarcoma.

Benign teratomas are usually asymptomatic but as the tumour mass increases in size, compressive symptoms such as lower back or abdominal pain, genitourinary symptoms, and gastrointestinal symptoms can be produced. Teratomas can get infected secondarily leading to abscess formation (Talwar et al., 2005). Traumatic rupture with chemical peritonitis has been reported (Sarin et al., 2012). Malignant change, though extremely rare, has been reported. Malignant transformation was higher in adults than in children, with incidences of 25.8% and 6.8%; respectively (Lambrianides et al., 1987). Abnormal elevations in serum levels of AFP, CEA and CA 19-9 have been reported in primary retroperitoneal teratomas (Gatcombe et al., 2004). In the present case, all tumour markers were within the normal range.

Differential diagnosis of retroperitoneal teratoma includes ovarian tumour, renal cyst, retroperitoneal fibroma, sarcoma, haemangioma, and xanthogranuloma and perirenal abscess (Pandya et al., 2000)**.** The prognosis is excellent for benign retroperitoneal teratoma following complete surgical resection.

4. CONCLUSION

Retroperitoneal teratoma is one of the rare entities. Benign cystic teratoma in the retroperitoneal space, although rare, must be considered in the differential diagnosis of retroperitoneal lesions. It needs multidisciplinary approach for accurate diagnosis and management. Radiographic investigations are needed and confirmation demands histopathological evaluation. The prognosis is excellent for benign retroperitoneal teratoma and complete resection is required so as to prevent complications or recurrences. Prognosis of malignant teratoma is very poor.

DISCLOSURE STATEMENT

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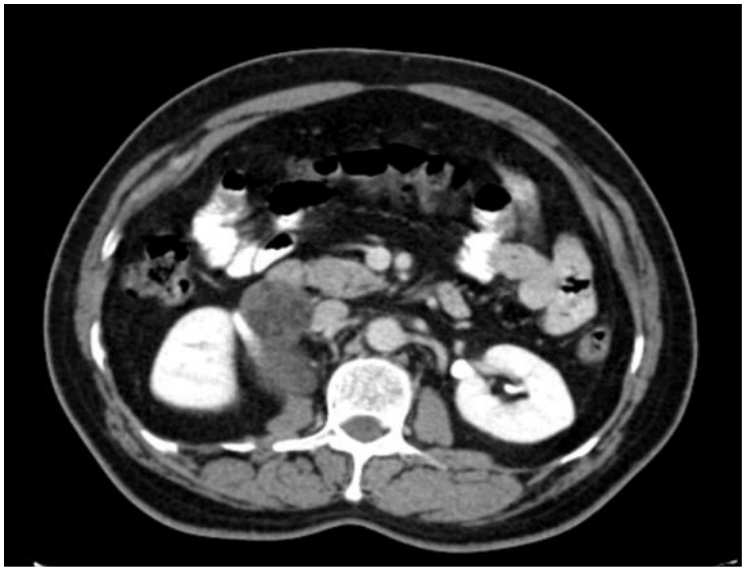

Figure 1

CECT of abdomen and pelvis showing a soft tissue density lesion displacing the lower pole of right kidney

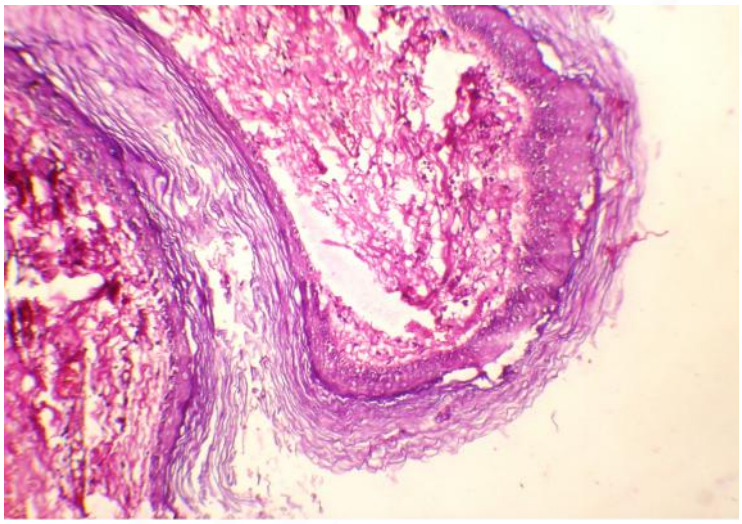

Figure 2

Photomicrograph shows cyst filled with laminated keratin and cyst wall lined by stratified squamous epithelium (H & E, x100)

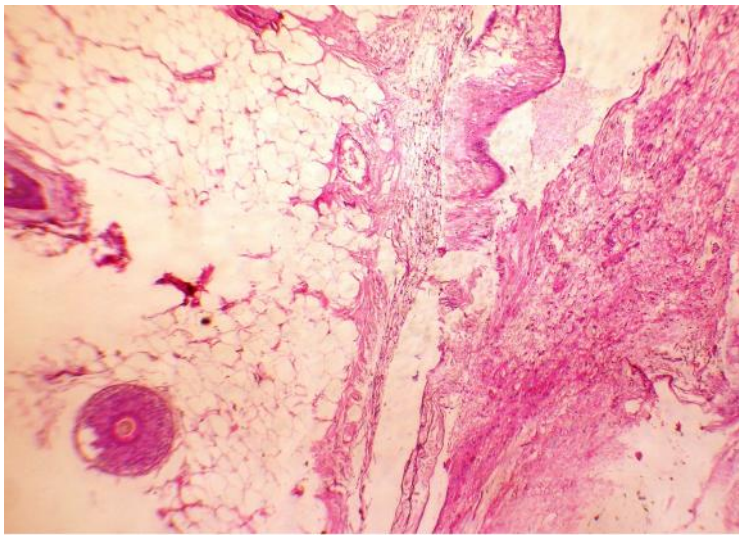

Figure 3

Photomicrograph shows cyst wall with hair shaft and adipose tissue (H & E, x100)

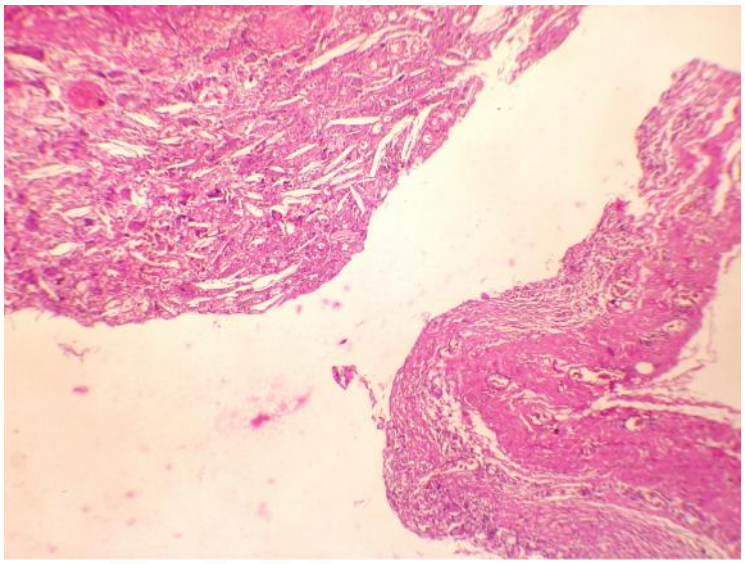

Figure 4

Photomicrograph of cyst wall showing cholesterol clefts and foreign body giant cell reaction (H & E, x400)