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Case Report

Retroperitoneal Cystic Teratoma in Infant

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ABSTRACT:
Retroperitoneal teratoma (RPT) is an exceedingly rare neoplasm in infancy. Due to their rarity, we are reporting a case of retroperitoneal cystic teratoma in four months old infant involving pelvic mesocolon. The tumor was completely excised, and the patient was successfully discharged. Histopathological examination confirmed the diagnosis of mature cystic teratoma.

Keywords: Alpha-fetoprotein, germ cell tumors, retroperitoneal teratoma.

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INTRODUCTION

Teratomas generally regarded as congenital, are formed by tissues represented by all three layers ectoderm, endoderm and mesoderm (1). Commonest type being sacrococcygeal teratoma. Other sites where they can occur are other germ cell sites, rarely they can be seen involving neck, stomach and retroperitonium. Retroperitonial teratomas form third most common primary retroperitoneal tumor in paediatric population after Neuroblastoma and Wilms tumor. They occur outside the pelvis and represent only 5% of all childhood teratomas(2). Due to their rarity, we are reporting a case of retroperitoneal cystic teratoma in four months old infant involving pelvic mesocolon.

CASE REPORT

A four months old male child weighing 6 kg was brought by his parents to our hospital with a painless swelling in lower abdomen, which according to them was there for last 3 months. Child did not have any other problems. He was admitted to our hospital.His abdominal examination revealed a cystic mass 8cmx6cm occupying almost lower half of abdomen, which was non tender. All its borders except lower border were well defined. Its movement was restricted. All his routine investigations were normal except haemoglobin was 9.7%.Serum alpha - fetoprotein level was normal. Renal function tests and X- Ray chest did not reveal any abnormality. Abdominal ultrasonography revealed a multilocular cystic mass 9.5x6.1cm seen arising from pelvis. C-T Scan abdomen (figure 1) confirmed findings of ultrasonography and did not show any invasion of major vessels. After correction of anaemia, laparotomy was performed by Pfannansteil incision. A Large cystic mass was seen arising from pelvic mesocolon (figure 2). It was excised taking care of both ureters, bladder and vessels. Abdomen was closed. Postoperative period was uneventful, and the infant was discharged.

Excised mass was 9.5x8.5x6cm (430gm). Histopathology revealed admixed components: neuroglial tissue, fatty tissue, cartilagenous & osseous component, lymphatic channels, nerve bundle, muscles, intestinal tissue along with few cysts lined by flat cuboidal epithelium (figure 3).

The histopathologic diagnosis was consistent with mature cystic teratoma.

The child is under follow-up for the last two months with normal AFP withno features of recurrence. He is growing and gaining weight according to his age.

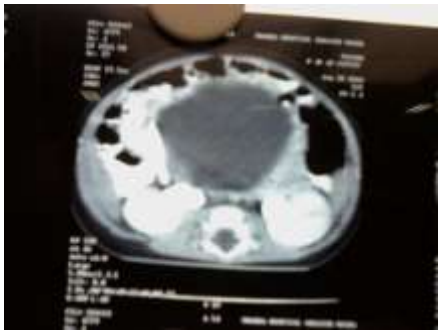

Figure 1: CT scan of Abdomen

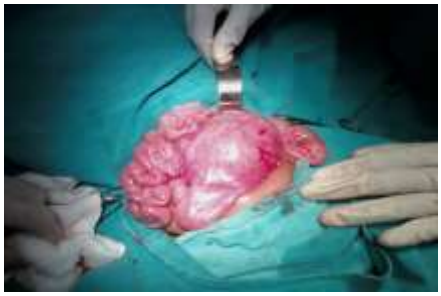

Figure 2: Operative Photograph showing mass in relation to pelvic mesocolon and urinary bladder

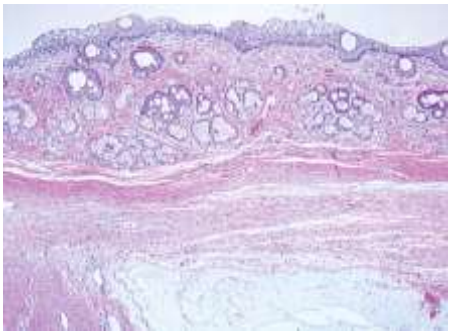

Figure 3: Microphotograph of cyst of retroperitoneum show squamous lining with underlying skin adnexal structure (H&E stain: 40X)

DISCUSSION

Primary retroperitoneal neoplasms constitute 1-11% of retroperitoneal tumours (2). Although first authentic description of a case of retroperitoneal tumour is ascribed to Morgagni in 1761(3), since then several cases have been reported but still they continue to be rare. Occasionally they have been present antenatally and diagnosed at birth, such cases have high incidence of malignancy than older children (4). Luo et al (5) in their study from 1998 to 2002 reported only ten patients of retroperitoneal teratomas, out of which only seven of them were less than one year in age. Though in their series the tumors were large, but most of them were benign and could be easily excised from surrounding structures. In our patient also it could be easily separated from urinary bladder, ureters and pelvic mesocolon. Histologicaly it was benign. Chaudhary et al (6) have encountered only 12 patients of retroperitoneal teratomas in a paediatric surgery department from 1980 to2004, out of which only 3 were infants. Rattan et al (7) has also reported only 8 patients with retroperitoneal tumours in children over a period of 12 years, of them 7 were benign. Patients with retroperitoneal teratomas operated between 2010 and 2015 were studied in detail. All the data were collected from case files.

Rattan et al (8) were study Patients with retroperitoneal teratomas operated between 2010 and 2015 results, there were seven patients including four males and three females. There was no side predilection (three right, two midline, one left and one lesser omentum). In our patient it was occupying almost lower half of abdomen.

For diagnosis of Teratoma routine protocol is USG followed by abdominal radiograph. Schey et al. [9] are in favour of only a plain abdominal radiograph and excision of the tumour if the characteristic calcification is demonstrated. Presence of bones or teeth on radiograph was also considered most helpful for the diagnosis of teratomas by Lack et al. [10].

CONCLUSION

Retro-peritoneal teratomas are uncommon paediatric tumours that are mostly benign. Complete excision is possible without causing any damage to surrounding vital organs as they are well encapsulated.

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