Mature cystic teratoma in falciform ligament of the liver in an infant

Sir,

Surgical lesions are rarely encountered in the falciform ligament (FL) of the liver. Few cases of benign or neoplastic condition are reported, but we are presenting a case of mature cystic teratoma occurring in FL in an infant. There are only two cases of mature cystic teratoma reported in the English literature and both are described in adult.

A 3-month-old female presented to our hospital with increasing upper abdominal distension of one month duration, associated with nonbillious recurrent vomiting. On general examination, patient was pale and dehydrated, but with no jaundice or lymphadenopathy. There was a lump in the epigastrium extending to right hypochondrium and umbilical region, with an ill defined margin. Haematological and biochemical workups were within normal limits except for the anemia. Abdominal CT scan showed a heterogeneous mass of uncertain origin, measuring 10 × 8 cm within the abdominal cavity [Figure 1]. Explorative laparotomy revealed a large mass of mixed solid and cystic consistency, arising from the falciform ligament of the liver [Figure 2]. The mass was completely excised [Figure 3], the postoperative course was uneventful. Histology revealed a mature cystic teratoma; the patient has remained well after the operation.

The majority of case reports of teratoma arising from the peritoneal folds do not describe the nature of the mass in detail[1] In all of these reports, the calcification in the mass was picked up radiologically.[1] Teratoma are lesions containing elements derived from the three primary germ layers, and the most common sites for teratoma are: Sacrococcygeal, mediastinal, retroperitoneal regions, and gonads. Their histological components are skin appendages, cartilage, bone, tooth, adipose tissue, and less commonly glial and glandular tissue.[2] Pathologic conditions of the falciform ligament leading to surgical intervention are extremely rare and clinically they present most often as a cystic abdominal mass, and less often as an abscess.[4] We present a case of mature cystic teratoma in the falciform ligament. We believe that it is the first reported case of a mature cystic teratoma arising from the falciform ligament in an infant.

The abdomen is a rare site of teratomas in children and most of them arise from the gonads or kidney[4] Very few teratomas have been reported to arise from



Figure 2: Intraoperative photograph showing the mass in the falciform ligament

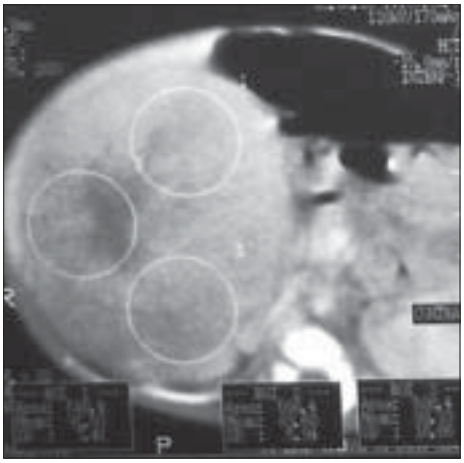


Figure 1: CT scan showing mass in the abdomen



Figure 3: Excised specimen showing solid and cystic and solid area

the peritoneal folds; namely, falciform ligament, the lesser omentum, mesentery, or greater omentum.[2] The falciform ligament is double layer of peritoneal fold containing the ligamentum teres, the obliterated umbilical vein, and variable amount of extra peritoneal fat.[3] The pathological lesions of falciform ligament leading to the surgical intervention are uncommon.[4] The etiology of falciform ligament cysts is diverse and the causes have been classified as primary and secondary.[5] Primary cysts arise during development from congenital defects of mesenteric origin.[6] Secondary cysts are the result of infections (echinococcus, abscesses), trauma (haematomas and biliary leaks), and neoplasms with cystic degeneration. Partial obliteration of the umbilical veins has also been reported to cause falciform ligament cyst.[7] Cystic teratomas are congenital tumours that contain derivatives of all three germ layers. They are thought to arise from pluripotential embryonal cells. The differential diagnosis of masses includes mesenteric cysts, such as lymphangioma, enteric duplication cysts, enteric cysts, mesothelial cysts, and nonparasitic pseudo cysts.[2] Clinically, a frequent symptom of intraperitoneal teratoma is a palpable mass, as well as, other manifestations, depending on its location.

In the present case, the possibility of an abdominal teratoma was not considered, mainly due to its relative rarity in boys and the fact that no calcification was observed on abdominal radiographs. Although, it must be born in mind that only 35-60% of abdominal teratomas show calcification on plain abdominal radiographs.[2] The preoperative diagnosis can be made by the combined modalities of ultrasound and CT scan. Some times as seen in this case, there may be no calcium or fat and diagnosis was difficult on CT.[8]

We like to conclude that despite their rarity, FL teratomas should be considered in the differential diagnosis of an abdominal mass in young children, especially if the clinical findings and radiological investigations are doubtful.

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