International Journal of Surgery (2008) 6, e94–e96

ELSEVIER

INTERNATIONAL JOURNAL OF SURGERY

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CORRESPONDENCE

Fetus in fetu: Report of a case and literature review

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Available online 1 May 2007

KEYWORDS
Fetus in fetu;
Retropepitoneum tumor

Introduction

Finding a large solid tumor in a pediatric patient can be a big challenge for the pediatrician and surgeon as there are a lot of differential diagnosis, so keeping in mind that it may be one of the existing rare conditions would be helpful in our practice. Fetus in fetu (FIF) denotes a rare congenital tumor containing a vertebrate fetus incorporated within its twin. Recent review of the literature demonstrates that less than 100 cases have been reported so far. Appropriate treatment is complete surgical excision because of malignancy potential. We report another rare case and review the literature.

Case report

A 4-year-old healthy boy with a visible and palpable abdominal mass from the age of 6 months without any other complaint was referred to us for more exploration.

At initial evaluation, the child was coherent with his age and sex with normal growth and development history. There was no abnormal history of gastrointestinal symptoms. On abdominal examination, a firm, immobile, nontender and pulseless epigastric mass with extension to both upper quadrants was palpated. No association with abdominal wall was found on examination. Blood pressure and pulse rate were normal and stable on serial examinations.

On laboratory evaluation, anemia, electrolyte disturbance or liver function test abnormality were not found. Alphafetoprotein and beta-HCG titers were in normal range. On ultrasonographic study, the mass was echogenic and severely calcified, but its correlation with adjacent organs was not carefully appreciable and was reported in favor of pheochromocytoma or neuroblastoma. Abdominal spiral CT scanning with oral and IV contrast showed a $100 \times 70 \times 80$ mm well defined mass in the lesser sac and posterior to the pancreas with calcified elements and developed vertebral and extremity bones impressing a rudimentary fetus. (Fig. 1). During laparotomy, the mass has no adhesion to vital structures of retroperitoneum so it was excised without significant hemorrhage (Fig. 2). On microscopic evaluation, well developed vertebral and extremity bones plus differentiated connective and fat tissues were reported without evidence of malignant degeneration. The pathologic diagnosis was Fetus in Fetu. The patient was discharged on fourth postoperative day without any complication.

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1743-9191/$ - see front matter
doi:10.1016/j.ijsu.2007.04.010

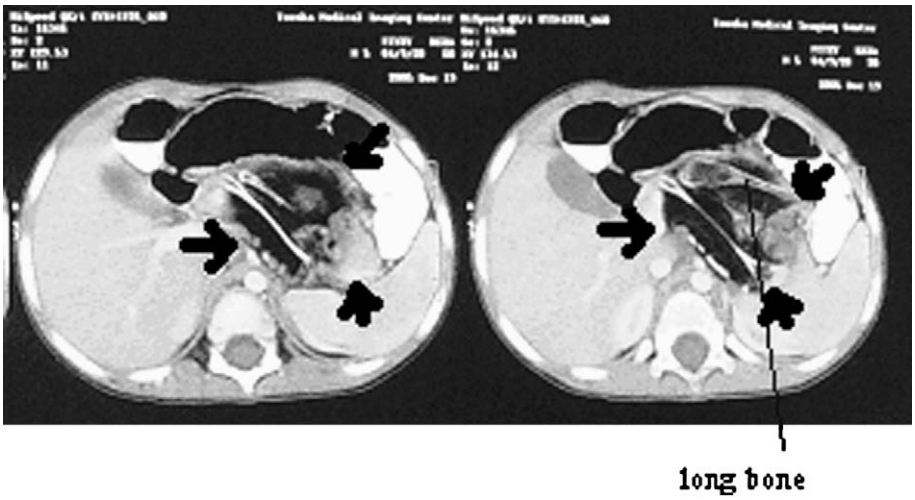

Figure 1 Thoracic and abdominal HR spiral CT scan of the patient.

Discussion

Fetus in fetu (FIF) is an extremely rare congenital tumor (approximately 1/500,000 live births).[1] From the first time reported by Meckel in 1800[2] so far, fewer than 100 cases have been reported worldwide.[3] It is secondary to a monochorionic diamniotic pregnancy[1,4] and actually, one of monozygotic twins is incorporated within the other one and found during prenatal or postnatal period.[2] Symptoms of fetus in fetu relate mainly to its mass effect and include abdominal distention, feeding difficulty, emesis, jaundice, pressure effects on the renal system and dyspnea. There are reported signs of maceration with the threat of consumptive coagulopathy in their patients. Occasionally, the anomaly is asymptomatic.[3]

FIF can be detected prenatally by sonography.[6] The latest time of diagnosis has been reported in a 47—year-old Italian man.[7] FIF is more common in females.[8]

In 80% of cases, FIF is found in the retroperitoneum,[5] but it may be found in atypical sites such as: intracranial area,[9] mediastinum,[10] lung,[11] pelvis,[12] oropharynx,[13] scrotum,[14] adrenal gland,[5] ovary[15] or the neck.[16]

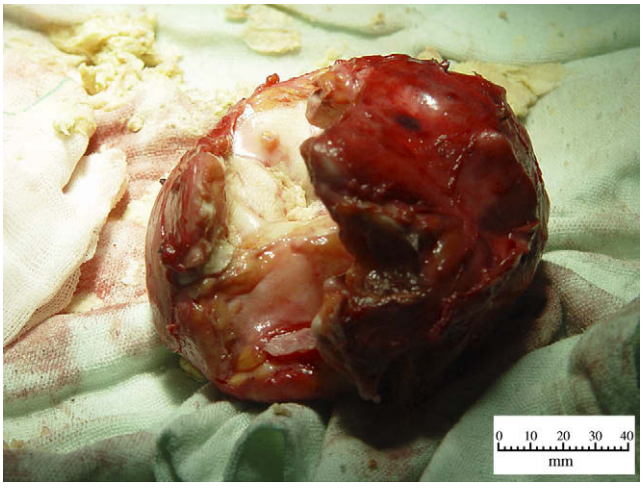

Figure 2 The whole excised fetus in fetu.

Its diagnosis is based on the presence of vertebral column plus well differentiated tissues in the mass. The cardinal differential point of FIF from mature teratoma is the presence of vertebral column and internal organs.[5]

Because of its malignant potentials,[17] the main treatment for FIF is complete surgical excision[3,17]; but rare cases of conservative management are reported unchanged during four years of follow up.[5]

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