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Case Report

Radiology Section

A Rare Case of Fetus within a Fetus

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ABSTRACT

We present a case of a 45-day-old baby brought to our paediatric outpatient department with complaints of abdominal distension. The prenatal ultrasonographic examination showed a large cystic intrabdominal mass with internal calcifications.

Keywords: Fetus-in-fetu, Retroperitoneal mass lesion, Teratoma

CASE REPORT

A 45-day-old male child was presented to the paediatrics out-patient department with abdominal distension. The child was born by normal vaginal delivery at term. No maternal pre-natal or intra-natal complications were encountered. Prenatal ultrasonographic examination showed a large inhomogeneous cystic intrabdominal mass with internal calcifications.

Laboratory investigations were within normal limits.

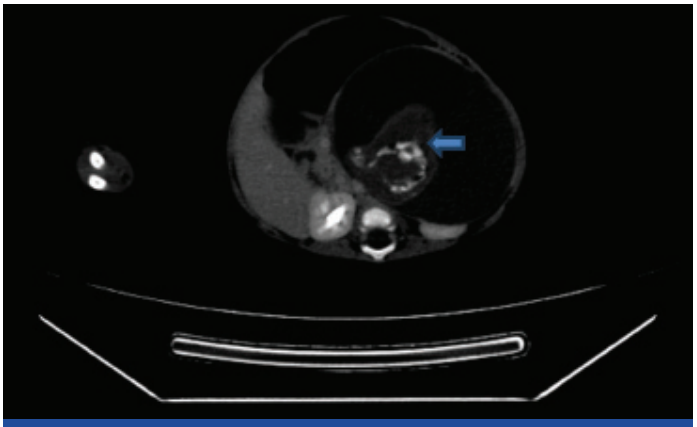
CECT abdomen showed: Large well defined retroperitoneal cystic lesion with solid component showing calcifications, fat densities [Table/Fig-1], bony components such as vertebrae [Table/Fig-2,3], long tubular bones resembling femur, tibia and fibula [Table/Fig-4].

Aorta and IVC were displaced to the right. Pancreas was displaced antero-superiorly and to the right by the lesion. The bowel loops were displaced to the right. The lesion was seen displacing stomach anteriorly and to the right. The spleen was displaced superiorly by the lesion and left kidney inferiorly [Table/Fig-5].

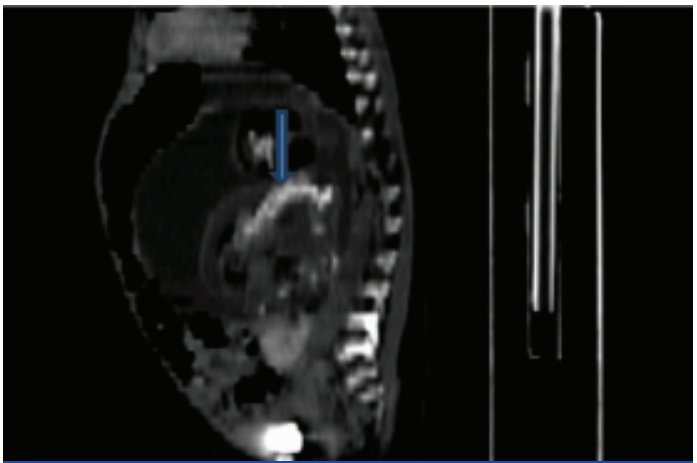
In view of these features a preoperative diagnosis of Fetus-in-fetu was made.

Intraoperatively a large fluid filled sac like structure was noted in the retroperitoneum which was adherent to the aorta and was deriving blood supply from the aorta. On aspiration, straw coloured fluid was aspirated [Table/Fig-6]. After decompression and dissection the sac like structure was separated and removed. An immature fetus was present within the sac. Immature limb like structures with fingers were seen [Table/Fig-7].

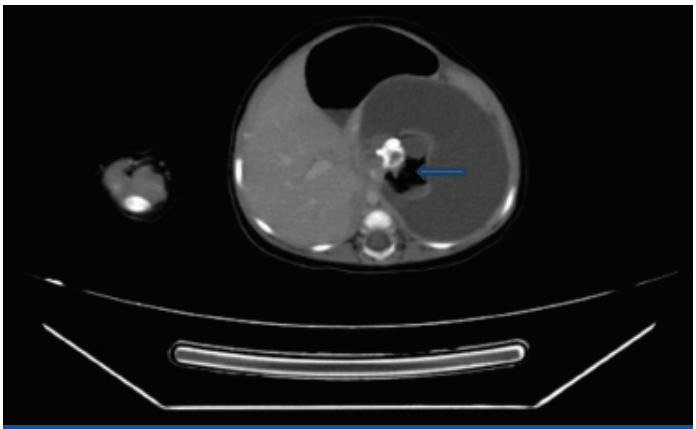
Postoperative X-ray of the specimen showed vertebrae within the immature fetus [Table/Fig-8].



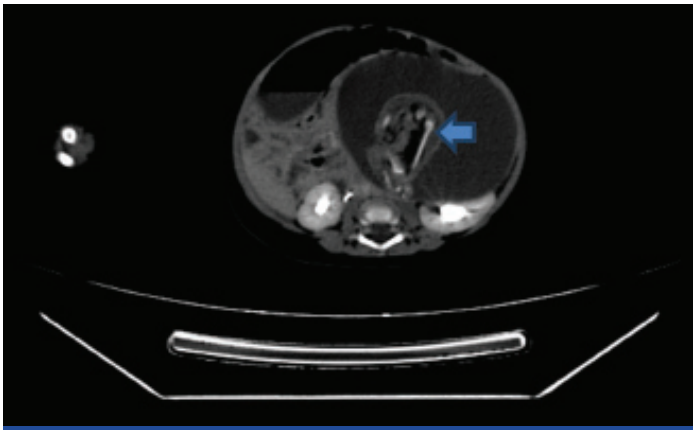
[Table/Fig-2]: Axial section showing fully formed vertebra with ribs.



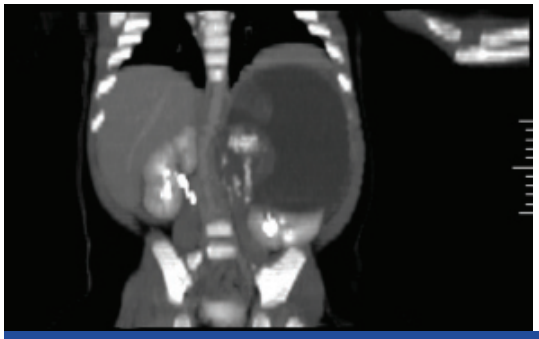
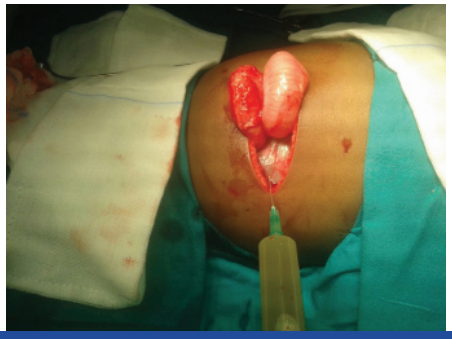
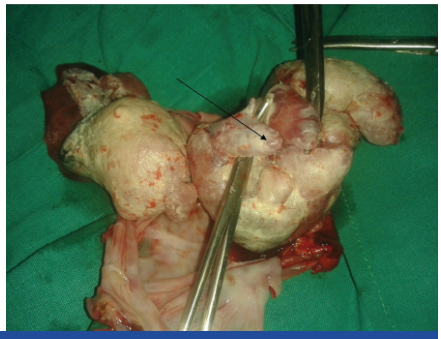
[Table/Fig-3]: Sagittal section showing immature spine in the immature fetus.



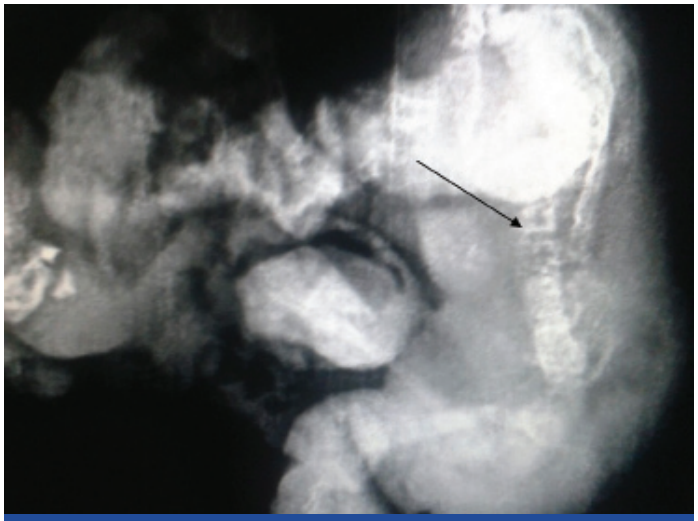
[Table/Fig-1]: Fat density within the lesion.



[Table/Fig-4]: Axial section showing long bone within the cystic lesion.

[Table/Fig-5]: Coronal section showing inferior displacement of the kidney by the lesion. **[Table/Fig-6]:** Aspiration from the retroperitoneal sac yielded straw coloured fluid. **[Table/Fig-7]:** Immature fetus showing limb with fingers and nail.



[Table/Fig-8]: Postoperative x-ray of the specimen showing vertebrae.

DISCUSSION

Fetus-in fetu is a rare entity where an immature parasitic twin is trapped within the body of a fully developed twin. The presence of this condition can be diagnosed through ultrasound and CT or MRI Surgical removal of the immature twin fetus is the treatment of choice [1]. A male preponderance of 2:1 has been reported [2].

One school of thought suggests that it is a mere highly organized teratoma and not a separate entity as such [3]. According to one school of thought fetus-in fetu arises from the inadequate and incomplete separation of the totipotent inner cell mass at the stage of blastocyst. Thus ensues a malformed diamniotic monochorionic twin within a normally developing twin [4].

However certain features corroborate the theory that fetus-in-fetu after all might be a separate entity in itself. Malignant transformation is very rare in fetus-in-fetu with one reported case till date [5]. Presence of vertebrae has been described by many authors as a distinguishing feature between fetus-in fetu and teratomas. Presence of vertebrae are an indicator of the fact that the immature twin has in fact reached at least till the stage of formation of primitive streak resulting in formation of notochord [4]. The presence of vertebra was demonstrated in our case. Common intra-abdominal sites include retroperitoneum followed by lower abdomen and ovaries [6]. Extra-abdominal sites of location of the parasitic twin include cranial cavity, sacrococcygeal region [6] and scrotum [7].

Usual presentation is in the form of mass per abdomen causing renal, hepatobiliary compression or respiratory compromise. There was no such presentation in our case apart from abdominal distension. There exists report of a fetus-in-fetu deterring normal testicular descent causing bilateral undescended testis [8] which was not seen in our patient. Post-surgery there were no complications and child was discharged with complete cure.

CONCLUSION

In conclusion, fetus-in-fetu is a rare condition which can be diagnosed fairly confidently on CT allowing timely operative treatment which is curative.

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