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Case Report

Fetus in Fetu with Triplet Fetoid form: A Rare Case Report

Mohit Choudhary[1], PK Tiwari [2], Prashant Sinha[3], Roopak Dubey[4], Aakriti Hans[5]

[1]PG Resident, Varun Arjun Medical College, Shahjahanpur
[2]Head of the department, Varun Arjun Medical College, Shahjahanpur
[3]Assistant Professor, Varun Arjun Medical College, Shahjahanpur
[4]Senior Resident, Varun Arjun Medical College, Shahjahanpur
[5]PG Resident, Varun Arjun Medical College, Shahjahanpur

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Corresponding Author: Dr. Mohit Choudhary
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Abstract:

Fetus in fetu - a rare congenital malformation that occurs when an abnormally formed or partially-formed fetus is found inside the body of the twin and is typically discovered during childhood or early adulthood. Although it is a rare malformation , correct opinion with the support of imaging modalities is usually made before heading for surgery. It should be considered as a discriminational opinion for lump tummy especially in babies. Complete excision is restorative. We aimed to report a case of a 24- month-old girl whose plain abdominal radiograph, ultrasonography, Computed tomography scan and MRI revealed a mass in which the contents are favouring towards the diagnosis of fetus in fetu.

Keywords: Fetus in Fetu, Teratoma, Twins, Radiology.

Background

A fetus in fetu is monochorionic- diamniotic, monozygotic twin of its deliverer. It's generally in-traperitoneal or retroperitoneal but it can also occur involving other parts of the body such as the tho-racic region , pelvis, or even the head and neck [1]. Fetus in fetu is generally deformed due to pressure applied by the host organ [2]. This pathology is a rare entity and the incidence is 1 per 500,000 births [3] with less than 220 cases reported across globe as per our knowledge [4]. The current study is an effort to present a rare case entity of fetus in fetu where a 2 years old girl diagnosed with three fetuses with in the abdominal cavity.

CASE REPORT

A 24 month old female child was admitted to our institute with Progressive abdominal distention since 1 month of age. The patient was apparently well till 1 month of age when her mother noticed distended abdomen **(Fig.1A)**. There were delayed developmental milestones.

Xray Abdomen revealed a large opacified area involving the abdominal cavity with multiple areas of calcified components within it **(Fig.1B)**.

USG showed large well defined cystic mass with multiple well defined thick walled internal cystic lesions with hyperechoic components favoring bony skeleton of fetus size measuring 4.3 cm, 6.0 cm and 3.9 cm **(Fig.1C to 1E)**. It was difficult to localise the complete mass on ultrasound (USG), hence Contrast Enhanced Computed Tomography (CECT) abdomen and Magnetic Resonance Imaging (MRI) was advised.

A - Clinical image showed swelling in the abdomen
B- Xray Abdomen revealed a large opacified area in the abdominal cavity with multiple areas of calcified components.

C to E - USG showed large well defined cystic mass with hyperechoic components favoring bony skeleton of fetus.

CT and MRI revealed a large intraperitoneal sac-like structure size measuring approx. 10.4X11.8X12.8 cm **(Fig.2A to 2F)** within the abdominal cavity. Atleast four independent fluid filled sac-like structures were seen within the main sac out of which 3 sacs were containing deformed fetal skeletal structures (like head, spine, sacrum, and femur) and one appeared empty. No abnormal contrast enhancement noted. 3D CT reconstruction confirmed partially formed fetal skeleton in three separate sacs **(Fig.2A and 3)**.

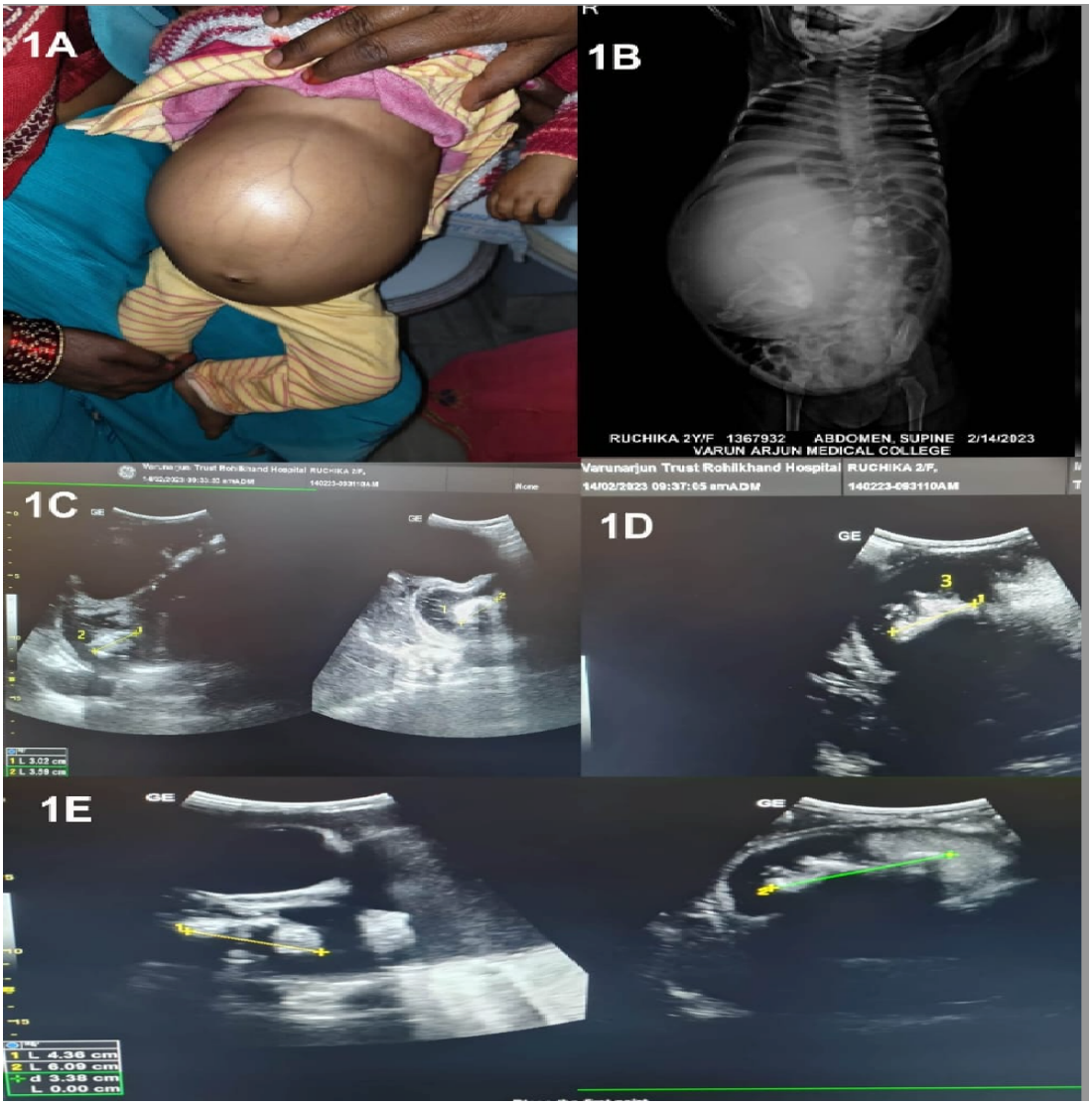


Figure 1:

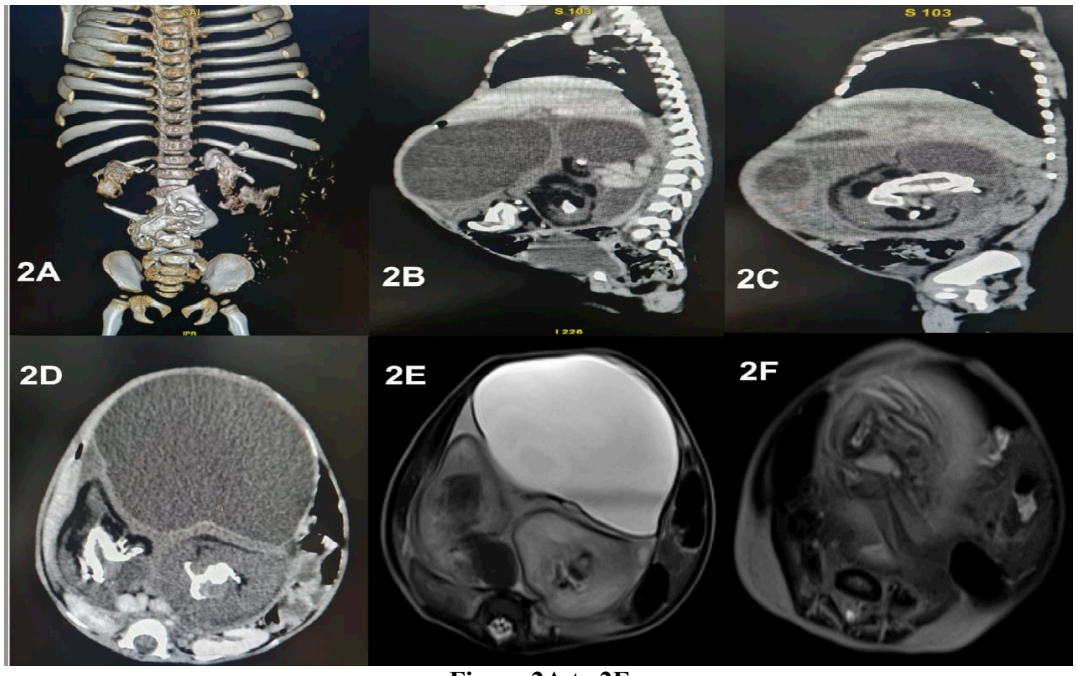
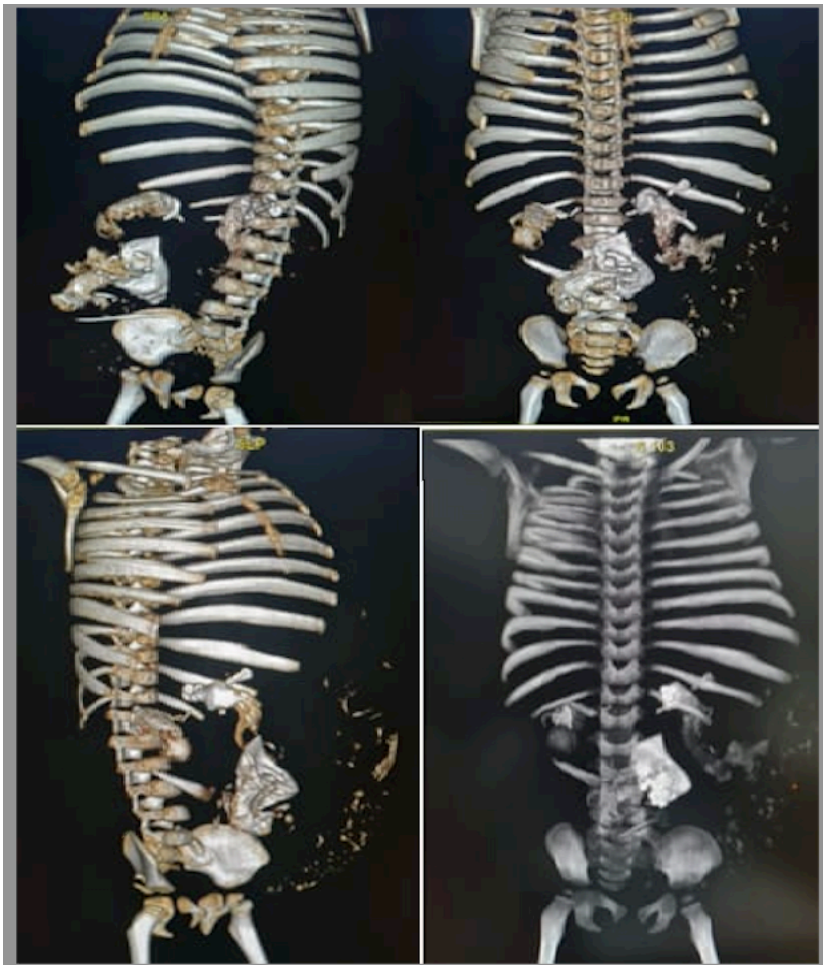


Figure 2A to 2F

CT and MRI revealed a large intraperitoneal sac-like structure within the abdominal cavity with four independent fluid filled sac-like structures within the main sac out of which 3 sacs were containing deformed fetal skeletal structures.



3D CT reconstruction confirmed partially formed fetal skeleton.

Discussion

The usual appearance of fetus in fetu is mass generally in the peritoneum, nearly 80 % cases reported in the retroperitoneum [5]. On Reviewing old literature , it was revealed that in about 9% of cases of fetus in fetu, no vertebral column was appreciated even on pathological diagnosis . Therefore, it was suggested by Gonzalez-Crussi to apply the terminology Fetus in fetu to any structure in which the fetal form has a highly developed organogenesis or there is presence of vertebral axis [6]. In this case we observed a large main sac containing 4 independent sacs with in it. Out of 4 sacs, three sacs were containing fetal skeleton like head, spine, sacrum and femur, hence, confirming three fetuses.

Till now majority of reports published regarding fetus and fetu were with single fetoid form and few reports showing multiple fetoid form However, to our knowledge no report regarding triplet fetus in fetu in the literature. Though a rare entity, fetus in fetu can be diagnosed radiologically in the preoperative period [7]. Teratoma and meconium pseudocyst form the major radiological differential diagnosis. [8].

Pathological differences in opinion arise during distinguishing fetus in fetu from a mature or well organized Teratoma. Willis suggests, [9] the appreciation of axial skeleton along with vertebral axis and an appropriate arrangement of other limbs and organs goes more towards diagnosis of fetus in fetu. In Consistency with the theory of Willis, in our case, the vertebral column was appreciated on CT and MRI. On the contrary, teratoma is an accumulation of pluripotent cells in which there is neither organogenesis nor vertebral segmentation [10].

Conclusions

Fetus in fetu is diagnosed in the preoperative period. Radiological approach with different imaging modalities help in diagnosing it. Though a rare malformation, it should thought of as a differential diagnosis for lump abdomen in infants and early

childhood and should be properly differentiated from Teratoma.

List of abbreviations

USG - Ultrasound

MRI - Magnetic Resonance Imaging

CECT - Contrast Enhanced Computed Tomography

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