**Fetus in Fetu: A rare case of intra-abdominal mass**

Keywords:

Fetus in Fetu, Teratoma, Abdominal mass

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**Abstract:**

Fetus in fetu is a rare congenital anomaly that occur secondary to abnormal embryogenesis in a diamniotic monochorionic pregnancy(1). It was first described in the 1800s by Johann Friederich Meckle (2). Less than 200 cases of fetus in fetu have been reported till now(3). It is unusual condition in which a vertebrate fetus is enclosed within the abdomen of the other fetus. There is still controversy in considering fetus in fetu as separate diagnosis and some consider it as a form of highly differentiated teratoma(4). This condition has 2:1 male predominance(5) and patients start presenting in the first year of life mostly with abdominal distention(1).

Here we present a case of 4 days old male neonate with abdominal mass. Ultrasound and CT scans were done.

**Case report:**

A 4-day-old boy presented with abdominal distention. On examination, a large intrabdominal mass was felt of variable consistency. Abdominal ultrasound showed a large intrabdominal mass lesion measuring 9x9x5 cm with oval shape, well defined outline, smooth surface, mixed solid and cystic components with multiple straight bony structures as well as cystic elements (Fig 1 &2).

CT of the abdomen and pelvis obtained before and after contrast injection with 3D reconstruction revealed a large complex abdominal mass lesion measuring about 94 mm x 66 mm x70mm, extending in both para-renal spaces displacing bowel loops laterally and superior mesenteric artery and stomach superiorly. It shows remnants of fetal parts and limb puds (Fig 3, 4 and 5). 3D reconstruction CT shows multiple long bony structures mostly of long bones of fetus along with vertebral bodies (Fig.6)

Surgical excision was done under general anesthesia and total excision of the mass was done. The mass grossly showed hands and feet at its outer surface. On opening, there are cystic spaces, fatty tissue and various organs with skin and hair (Fig. 7)

Pathology report showed mixture of skin with hair tuft shafts and sebaceous glands, small intestine, colon, islands of mature cartilage, mature brain tissue choroid plexus, smooth and skeletal muscle fibers, fibrous tissue and blood supply. No evidence of immature elements and no evidence of malignancy.

**Discussion:**

Fetus in Fetu is a an abnormal congenital condition that resulted from unequal division of the totipotent inner cell mass of the developing blastocyst leads to the inclusion of a smaller cell mass within a maturing sister embryo(6). The fetus in fetu produces symptoms due to mass effect leading to distention, difficulty in feeding, vomiting, jaundice, urinary retention(1). There is still controversy in considering fetu in fetu as a distinct entity or considering it as highly differentiated teratoma. Many authors claim that it is important to differentiate between both diagnoses because of the different prognosis of both diseases(4).

Teratoma is the presence of variety of tissues in quite abnormal location with varying degree of malignant potential. Even the presence of high differentiated tissue doesn’t exclude the teratoma. Teratoma-unlike fetus in fetu- does not show signs of possession of vertebral axis or regional distribution of organs. Teratomas are considered true neoplasms with malignant potential(4).

The presence of immature elements within the Fetus in fetu emphasizes the need of complete excision along with its covering membrane, as cases of malignant transformation of remnant membranes have been reported. Risks associated with fetus in fetu are hemorrhage, infection, mass effects and pleuro-peritoneal inflammation due to leak of sac contents(2).

The CT findings are of a mass lesion consisting of various tissue components mainly cysts and fat surrounding tubular bone structures. The presence of vertebral bodies in 3D CT despite being distorted is a guide for the diagnosis. Our findings were similar to those reported and help us to diagnose this rare disease and are confirmed with pathology specimen.

In summary, Fetus in Fetu is rare disorder that occurs in diamniotic and monochorionic pregnancy and results from error in embryogenesis. The main differential diagnosis is Teratoma. CT and Ultrasonography are useful tools in diagnosing the disorder.

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