

Fetus in Fetu (FIF): A Rare Case Report in Adult Male

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Abstract: *Fetus in fetu (FIF) is a very rare condition in which malformed fetus is found within the body of a living twin, most commonly within the retroperitoneum. It is a parasitic fetal twin of a diamniotic, monozygotic type¹. Despite its prevalence among infants and children, there have been reports of cases in which the anomaly had remained asymptomatic until later ages³. It should be differentiated from teratoma by the presence of organized vertebral column and appropriately arranged other organs or limbs around it¹. Here is a case of Fetus in fetu in a 20 - year - old man who presented with nonspecific abdominal symptoms. The diagnosis of FIF was made on the basis of CT abdomen findings. For the definitive management the patient underwent exploratory laparotomy with complete excision of mass which was proven to be FIF on the basis of gross and histopathological examination.*

Keywords: fetus in fetu (FIF), CT abdomen, Teratoma

1. Clinical History

A 20 - year - old man presented with clinical history of left upper abdominal lump for 6 - 7 years, which was gradually increasing in size. It was associated with dull aching type of pain, which was on and off in nature. There was no history of fever, weight loss, altered bowel habits, or urinary symptoms. There was no history of twin birth or teratoma in the family. On abdominal examination, there was a lump involving the left upper quadrant of the abdomen. It had ill - defined margins with soft to firm consistency and irregular surface. It was not moving with respiration.

2. Imaging Findings

USG showed a large, ill - defined heterogeneous mass in the right side of the abdominal cavity adjacent to the liver, having multiple hypoechoic areas and echogenic structures with no internal vascularity.

Contrast enhanced CT scan of the abdomen and pelvis revealed, fairly large multilobulated peripherally enhancing cystic (predominantly cystic - avg. HU +10) lesion with fatty component (avg. HU - 60) on its inferior aspect. Multiple chunks of calcification noted in its entire wall. The lesion extends craniocaudally from T7 to L4 vertebral level i. e., from epigastric and bilateral hypochondriac regions till lumbar region on left side and till infraumbilical level in midline with bone like structure within it. It reaches upto anterior abdominal wall and superolaterally it closely abuts the inferior surface of liver, causing its scalloping. However, the intervening fat plane is preserved. It also compresses the portal vein with its resultant luminal narrowing and displace it to extreme right very close to the right lateral abdominal wall, however portal vein shows post contrast opacification.

3. Discussion

3.1 Background

Fetus in fetu (FIF) is a rare developmental condition. Fetus in fetu is a rare entity that typically presents in infancy and early childhood⁴. It is usually retroperitoneal, but it can be found from the cranial cavity to scrotal sac. Usually it is surrounded by a membrane. There is subsequent growth retardation as it does not have an independent circulatory system. Developmentally it has passed the stage of primitive streak and that is why it has organized arrangement of organs around the axis and a vertebral body. It should be differentiated from teratoma which has no axial arrangement and has got definite malignant potential². "Included twin" theory - explains FIF as a diamniotic monochorionic monozygotic twin embodying into the body of the host twin after colligation of the vitelline circulation¹.

Majority of cases have been described in neonates and children and only few cases have been reported after the age of 15 years, and it is mostly seen in males.

Pathophysiology

FIF occurs secondary to abnormal embryogenesis in a monochorionic diamniotic pregnancy. It can present at various age groups, with predominance in infancy. The blood supply of the vascular supply to FIF is derived most commonly from the abdominal wall.

a) Clinical Perspective

- Usually asymptomatic.
- Symptoms relate to the mass effect, leading to distention, difficulty in feeding, vomiting, jaundice, urinary retention².

b) Treatment options -

The treatment of fetus in fetu is operative to relieve obstruction, prevent further compression and possible

complications. Complete excision allows confirmation of the diagnosis and lowers the risk of recurrence⁴.

c) Final Diagnosis:

Fetus in fetu

d) Differential Diagnosis List

Teratoma

References

[1] Saroj Sharma, Prashant Kumar Gupta, Basanta Regmi, Aarti Gupta, Upasana Lamichhane, "Fetus in Fetu in an Adult Female and Brief Review of Literature", *Case*

Reports in Radiology, vol.2021, Article ID 6660277, 5 pages, 2021. <https://doi.org/10.1155/2021/6660277>
 [2] Sharma, Atul et al. "Fetus in fetu: A rare case report." *Journal of research in medical sciences: the official journal of Isfahan University of Medical Sciences* vol.17, 5 (2012): 491 - 4
 [3] Karaman I, Erdoğan D, Ozalevli S, et al. Fetus in fetu: A report of two cases. *J Indian Assoc Pediatr Surg.*2008; 13 (1): 30 - 32. doi: 10.4103/0971 - 9261.42572
 [4] Ji, Y., Chen, S., Zhong, L. *et al.* Fetus in fetu: two case reports and literature review. *BMC Pediatr* 14, 88 (2014). <https://doi.org/10.1186/1471 - 2431 - 14 - 88>

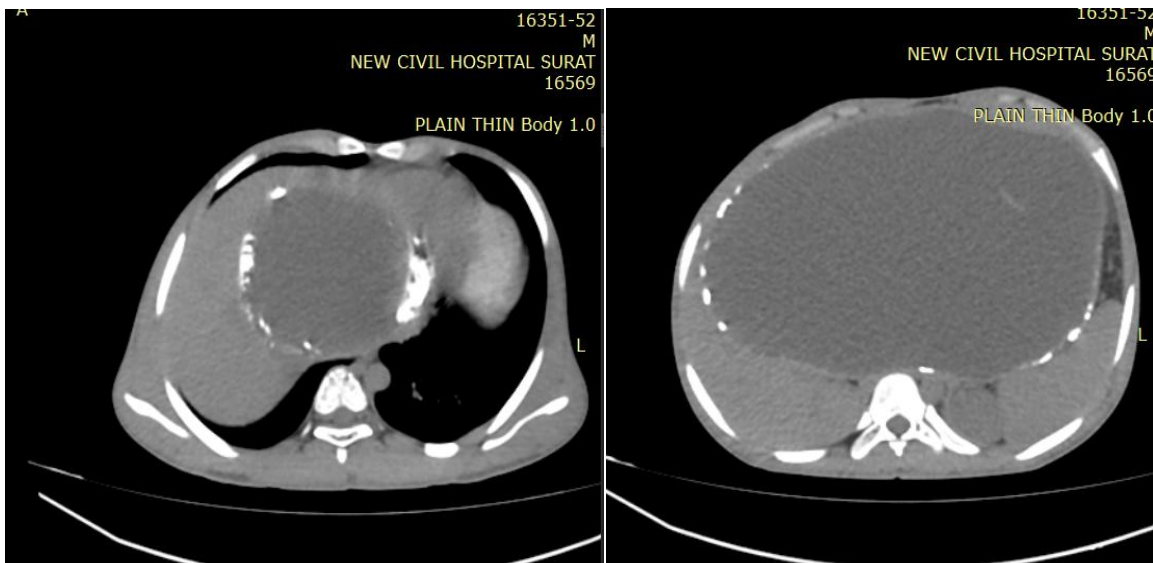


Figure 1: Axial plain CT abdomen shows a large heterogeneous mass with cystic, calcified, soft tissue components, and bony elements; with multiple chunks of calcification within its entire wall.

Anteriorly the lesions reaches upto the anterior abdominal wall, posteriorly upto the prevertebral fascia. Superolaterally on right side it closely abuts the left lobe of liver and left side it abuts the spleen.

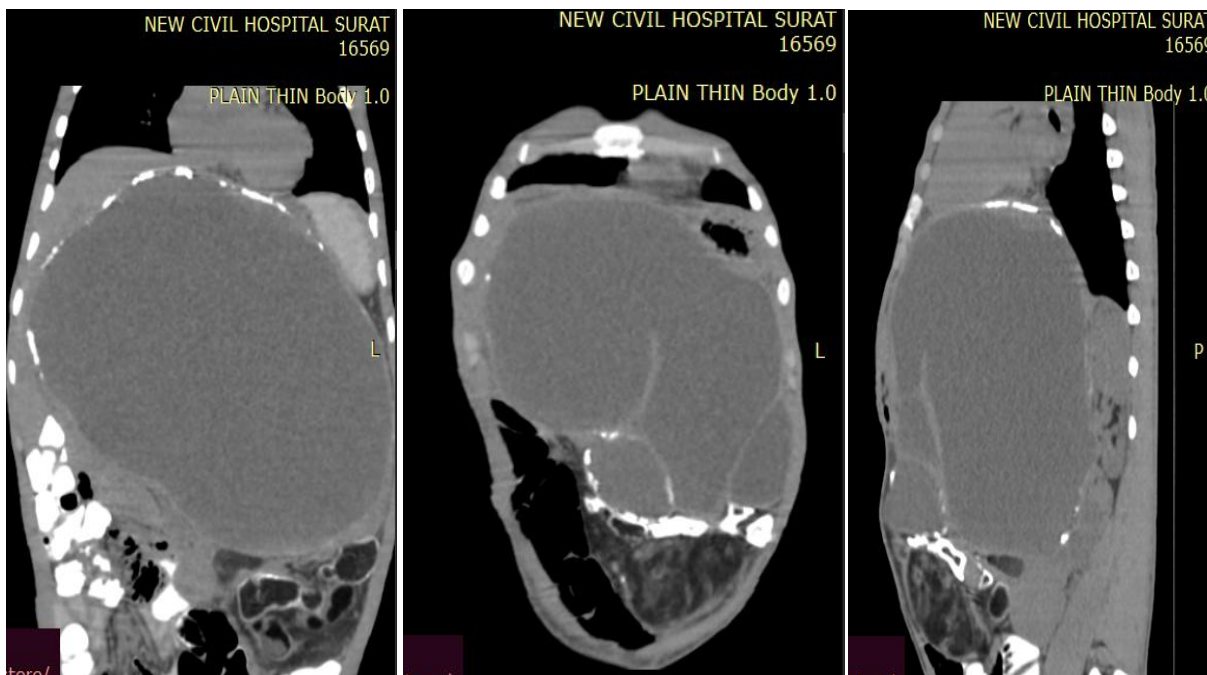


Figure 2

Coronal and sagittal plain CT abdomen shows fairly large multiloculated predominantly cystic lesion with peripheral calcification and bone like structure within.

Stomach compressed and displaced laterally. Bilateral kidneys compressed and displaced laterally. Bowel loops displaced inferolaterally. However the respective intervening fat planes are preserved.

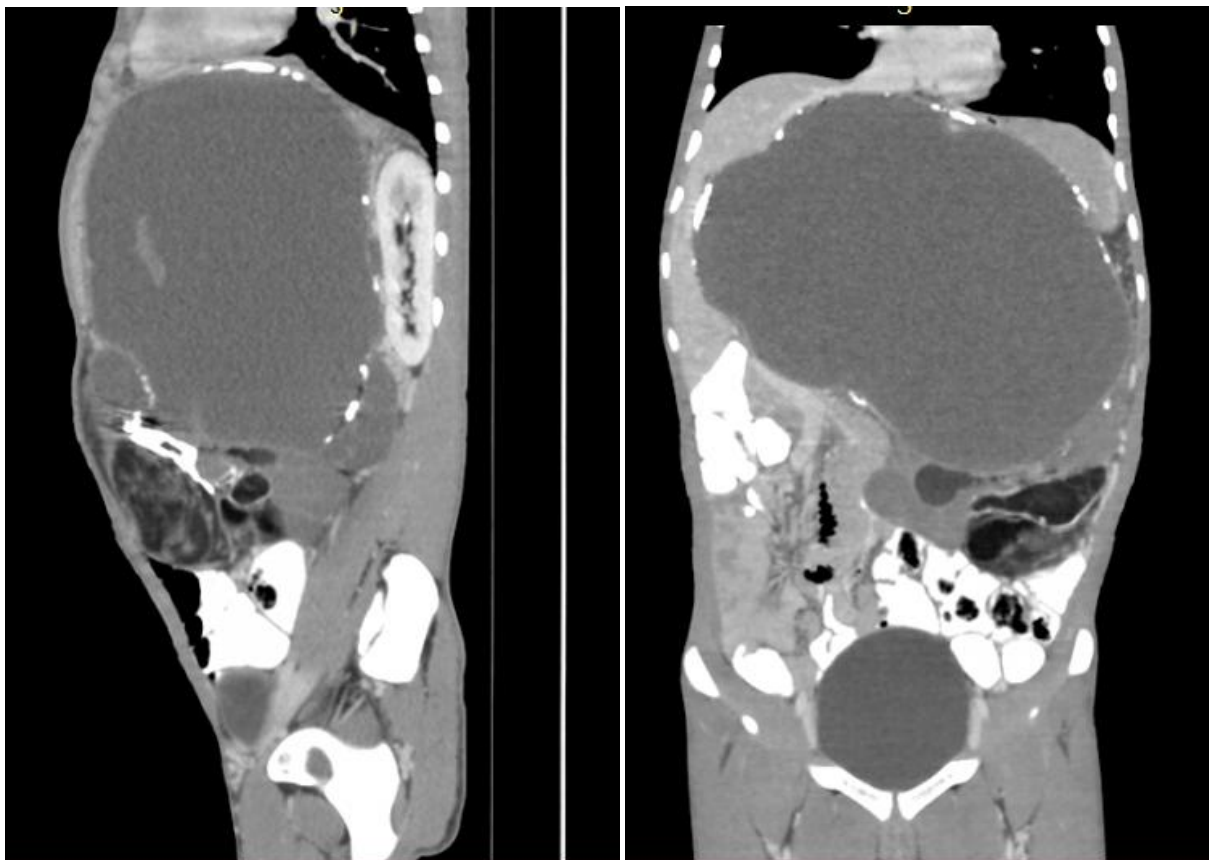


Figure 3: Coronal and sagittal venous phase CT abdomen shows right side displacement of major vessels (IVC & Aorta) and their branches. However vessels show normal post contrast enhancement.