KREP

2025

KARNATAKA RADIOLOGY EDUCATION PROGRAM

CASE PRESENTATION

Case of infantile Hepatic Haemangioma

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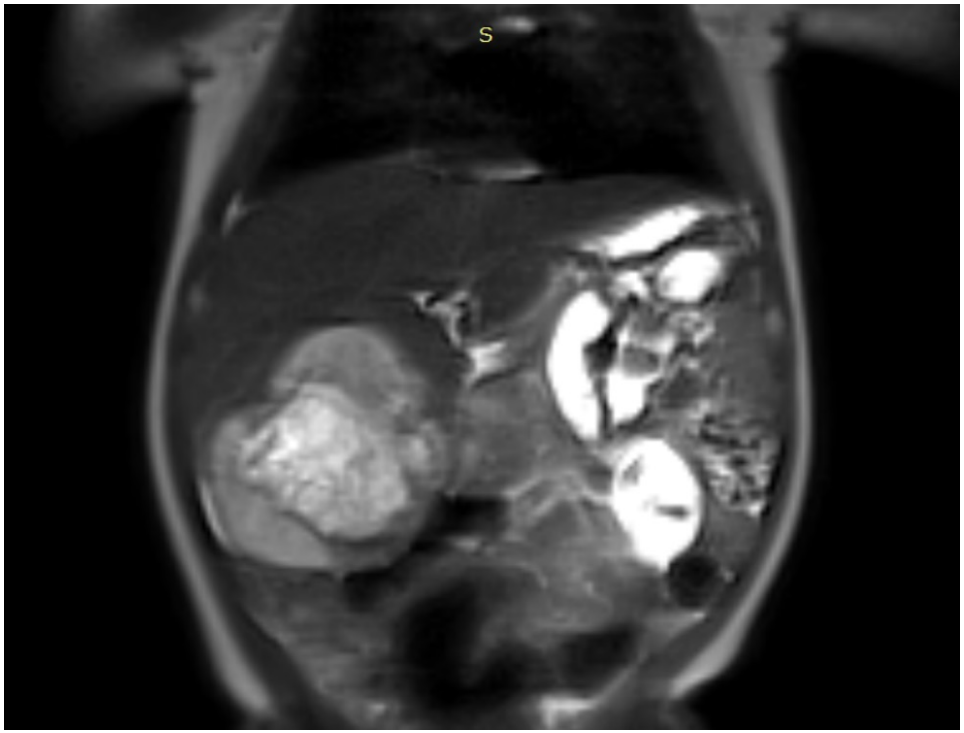
CLINICAL HISTORY

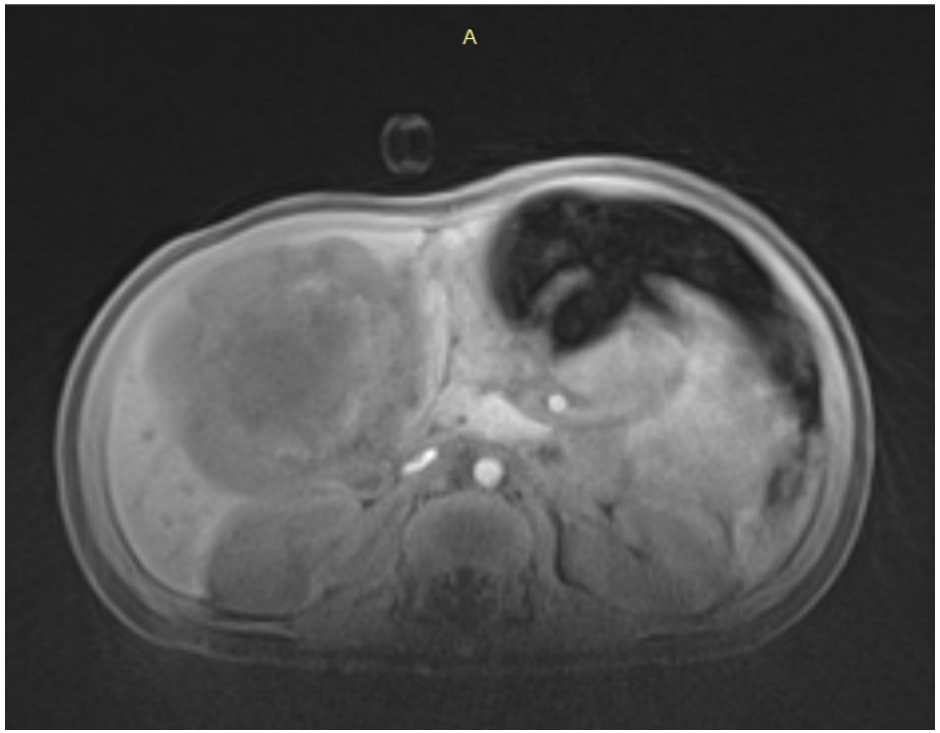
- 1 month old male child came with complaints of breathlessness, abdominal tightness and irritability for 2 days
- No complaints of fever, vomiting, altered bowel or bladder habits
- On examination: the child had palpable liver (indicating hepatomegaly)
- Liver function test: increased A/G ratio (2.9) and increased direct bilirubin levels
- Increased Alfa Feto Protein levels: 1210 ng/dl
- The child was advised CECT abdomen pelvis (done outside)

FINDINGS

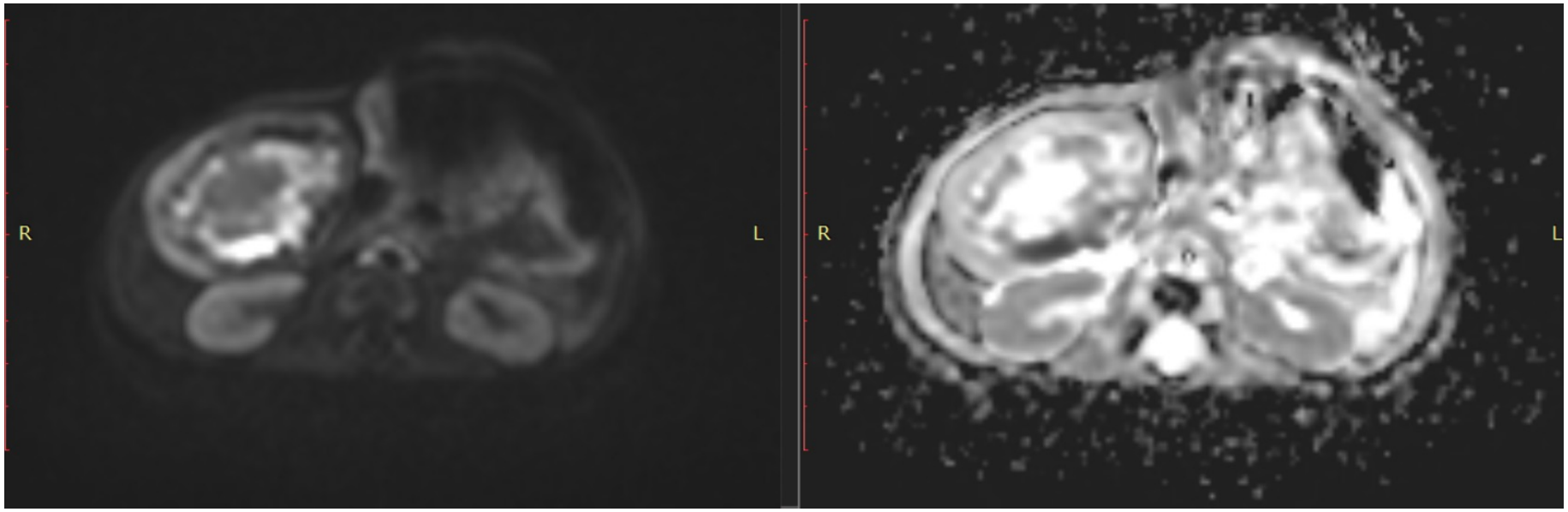
- CECT Abdomen Pelvis (outside):
  - Well defined hypodense lesion with exophytic component arising from segment V of liver with focal faint calcifications, approximately measuring 4.9 x 4.1 x 5.1 cms which showed moderate peripheral enhancement with predominant central necrosis/ cystic change
- The child was then advised MRI Abdomen Pelvis (Plain and contrast) for further evaluation



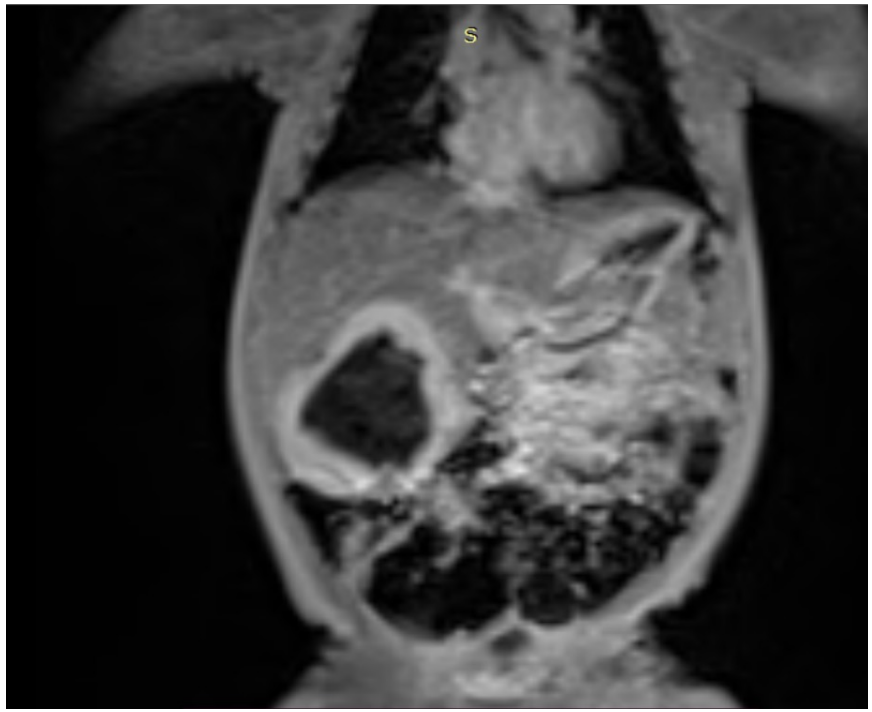
T2 WI Coronal Section

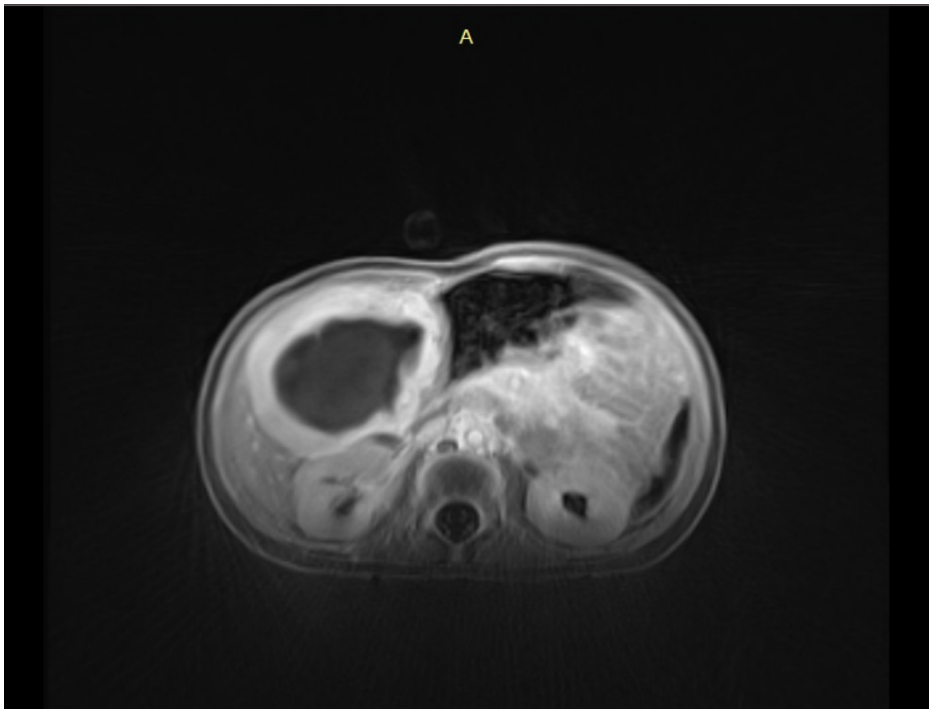


T1 WI Axial Section



DWI axial section at b800 and
ADC respectively





T1 post contrast coronal and
axial

FINDINGS

MRI ABDOMEN PELVIS (PLAIN + CONTRAST)

- Well defined T2 heterointense (predominantly hyperintense) and T1 hypointense mass lesion approximately measuring 4.0(AP) x 4.8(ML) x 4.7(CC) cm involving segment V of right lobe of liver with few areas of diffusion restriction on DWI sequence
- On contrast study, the lesion shows irregular wall enhancement with central non enhancing areas.
- On delayed phases, the lesion shows intense wall enhancement.
- Medially, the lesion is seen reaching upto the porta hepatis.
- Posteroinferiorly, the lesion shows mass effect on the bowel loops and upper pole of right kidney, however shows well maintained fat planes with it.
- Posteriorly, narrowing of aorta (post celiac axis) is noted

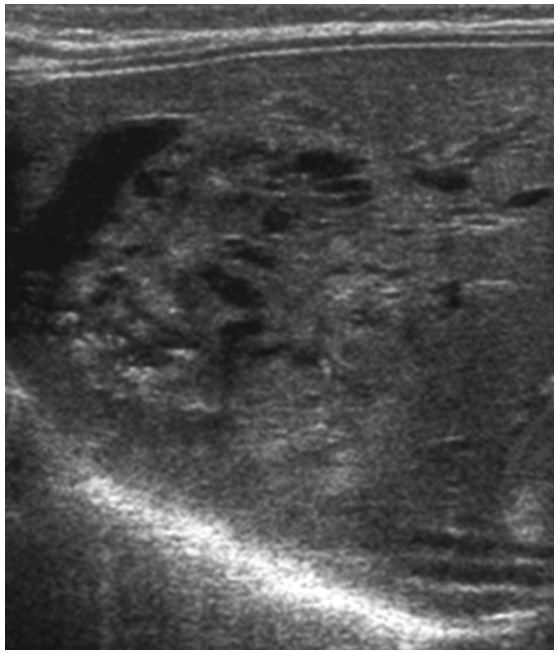
DIFFERENTIALS TO BE CONSIDERED

- Infantile hepatic hemangioma
- Mesenchymal hamartoma
- Hepatoblastoma

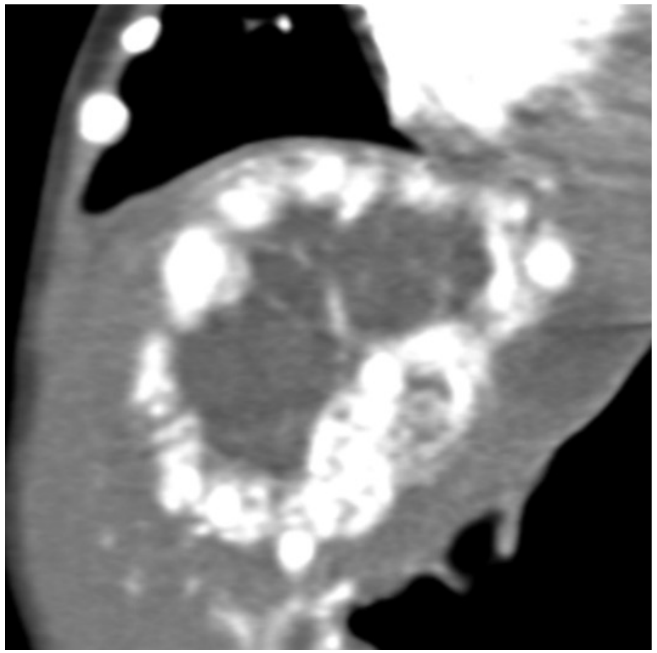
Infantile hepatic hemangioma

- Benign vascular tumor of the liver that is lined by endothelium.
- The most common benign hepatic tumor in infants
- Divided into focal, multifocal, and diffuse subtypes.
- Focal infantile hepatic hemangioma is thought to be the hepatic form of cutaneous rapidly involuting congenital hemangioma (RICH).
- There is typically no association with cutaneous hemangiomas and no known sex predilection.
- Histopathologic antibody staining of the endothelial cells in RICH is negative for glucose transporter protein-1 (GLUT1). RICH is usually symptomatic because of arteriovenous shunting.

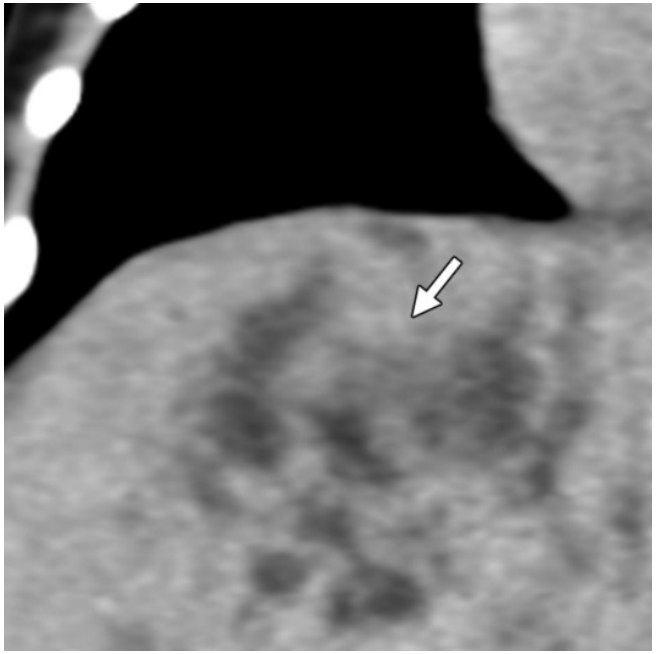
Rapidly involuting congenital hemangioma



Longitudinal ultrasound image shows heterogeneous liver mass with anechoic vascular spaces



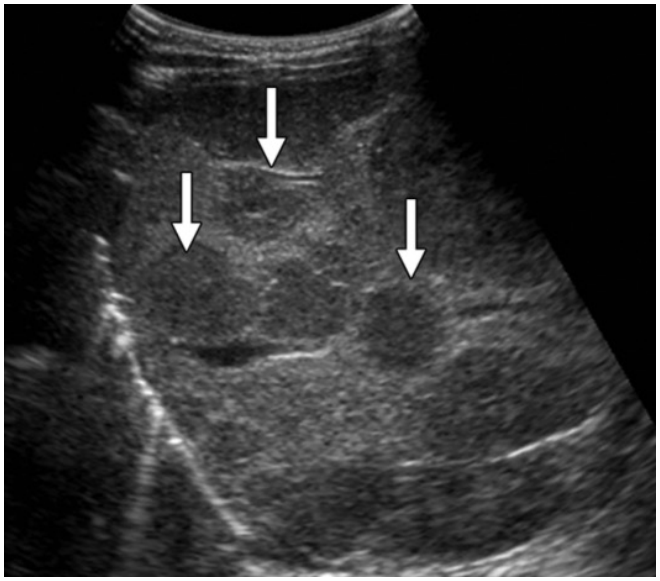
Coronal contrast-enhanced CT image obtained during arterial phase shows large hepatic mass with early peripheral enhancement.



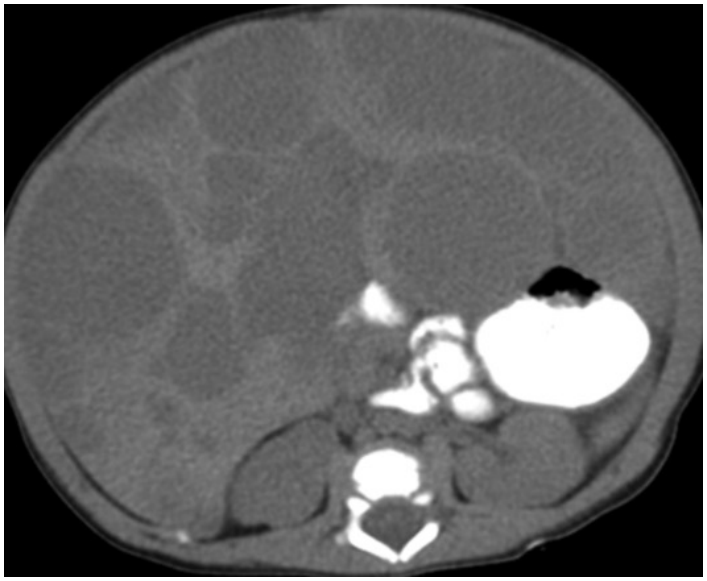
Coronal contrast-enhanced CT image obtained during delayed phase shows large hepatic mass with delayed partial central enhancement (arrow).

- Multifocal subtype of infantile hepatic hemangioma is hepatic form of simple cutaneous infantile hemangioma and is often associated with multiple cutaneous hemangiomas
- Commonly present before 6 months of age
- Positive for GLUT1
- Involute spontaneously by 12-15 months of age

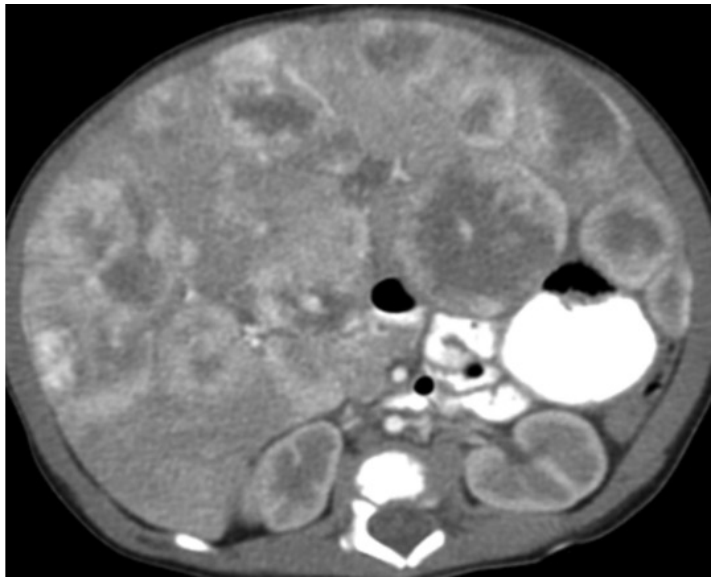
MULTIFOCAL hemangioma



Transverse ultrasound image shows multiple hypoechoic masses (arrows).



Axial unenhanced CT image shows multiple low-attenuation lesions throughout liver



Axial contrast-enhanced CT image obtained during arterial phase shows peripheral enhancement of hepatic lesions.

FOLLOW UP

- The patient is yet to undergo further clinical investigations and biopsy
- The patient took discharge against medical advise and is being treated as infantile hepatic hemangioma