A 3-month-old male infant presented with a history of intermittent low-grade fever, irritability, poor weight gain and abdominal distension since birth. On clinical examination hepatosplenomegaly and pallor were present. Gastric aspirate for AFB was positive.

Imaging Findings:

The infant's chest radiograph was normal. Ultrasound of the liver showed multiple small echogenic lesions of 8-10mm in both hepatic lobes (Fig. 1) and spleen (Fig. 2). Multiple enlarged mesenteric nodes (10-12mm) were noted (Fig. 3). One of the mesenteric nodes showed calcification (Fig. 4).
Discussion:

The diagnostic criteria for congenital tuberculosis (CTB) was first defined by Beitzke and later modified by Cantwell et al which includes the presence of tuberculosis lesions in the first week of life, demonstration of a primary hepatic complex or caseating hepatic granulomas and also confirmation of tuberculosis in the placenta or maternal genital tract. Postnatal transmission has to be excluded after investigation of close contacts. The clinical manifestations of CTB includes fever, lethargy, irritability, respiratory distress, abdominal distension, lymphadenopathy, hepatosplenomegaly, jaundice and skin papules [1]. The case we came across showed AFB positivity of maternal endometrial samples and subsequent culture reports confirmed mycobacterium tuberculosis. The clinical picture was consistent with that described by Hudson F P who found that the onset of symptoms may vary with an average of 2 - 4 weeks [2]. In our case hepatosplenomegaly was the indication for an abdominal ultrasound. Ultrasound of the liver and spleen showed multiple small echogenic lesions measuring 8-10 mm and multiple enlarged mesenteric lymph nodes with calcifications in few nodes. These findings were consistent with those of Matthai et al and aided in diagnosing CTB [3]. We confirmed the diagnosis of CTB by excluding i) respiratory findings suggestive of pulmonary tuberculosis . ii) healthy contacts of the patient. iii) maternal endometrial samples positive for tuberculosis. iv) hepatic, splenic granulomas and mesenteric lymphadenopathy with calcific specks. Early diagnosis and treatment is crucial since the mortality rate is approximately 50% [4, 5]. Abdominal ultrasound has the unique advantage over other diagnostic modalities since it helps in early detection of disease, thus lowering the mortality rate to a great extent [6]. Also once diagnosed, USG can be used in the confirmation of the diagnosis by aiding in liver biopsy. Thus, a simple diagnostic tool viz. ultrasound has proven to be a key element in early detection of a potentially fatal disease.

Differential Diagnosis List:  Congenital tuberculosis, Primary tuberculosis, Blastomycosis

Final Diagnosis:  Congenital tuberculosis

References:

Description: Ultrasound of abdomen showing the section of liver multiple small hyperechoic granulomatous lesions in the both lobes of liver. Origin: Department of Radiology, KMC Hospital, Mangalore, India
Description: Ultrasound of abdomen showing enlarged spleen with multiple small hyperechogenic granulomatous lesions. Origin: Department of Radiology, KMC Hospital, Attavar, Mangalore, India
Figure 3

Description: High frequency ultrasound image showing enlarged mesenteric lymph nodes. Origin: Department of Radiology, KMC hospital, Mangalore, India
Figure 4

Description: High frequency ultrasound image showing mesenteric lymph node calcification. Origin: Department of Radiology, KMC hospital, Mangalore, India.