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Case Report

Spontaneous resolution of common bile duct obstruction caused by a calculus in an infant

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Introduction

Irritability and crying are common modes of presentations of diseases in infancy. We had a rare encounter of an infant presenting with non-specific clinical features caused by cholidocholithiasis that underwent spontaneous resolution within a couple of days of onset of symptoms. Systematic analysis of clinical features and judicial use of imaging is useful in the identification of rare pathologies in this age group, such as cholidocholithiasis [1,2] as seen in this baby.

Case report

A six and a half month old, previously well baby girl was admitted with a two day history of irritability and episodes of crying. She had been introduced to weaning food with rice kanjee at six months of age. According to her mother, she was feeding well and had normal bowel habits. However, on further questioning the mother admitted that the baby's stool colour was lighter than usual. On inspection, stool colour was pale (Figure 1).

Figure 1: Pale stools on admission

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Urine passed onto the nappy was slightly darker than expected. Other than a tinge of jaundice in her sclera, examination findings were unremarkable. There was no family history of hepato-biliary diseases or haemolytic disease.

Her full blood count was normal. Bilirubin was elevated with the total bilirubin of 69.9 µmoles/L (normal:5-21) and direct bilirubin of 65.9 µmoles/L (normal:0-3.4). Liver function tests showed; ALT: 55U/L (normal:10-40) and AST: 65U/L (normal:10-35). Blood picture excluded haemolytic disease. Serum electrolytes and renal biochemistry were normal. Ultrasound scan of the abdomen (USS) identified a 3.6mm calculus with typical acoustic shadowing located in the distal common bile duct (CBD) causing obstruction and mild intrahepatic duct dilatation. Maximum diameter of distal CBD was 6.4 mm. The gallbladder was distended but there were no calculi inside it. There was no ultrasonographic evidence of cholangitis.

A diagnosis of obstructive jaundice due to distal CBD calculus was made. She was commenced on intravenous cefuroxime in view of the risk of developing cholangitis secondary to obstruction. Breast feeding was continued.

Two days after admission (4th day of illness), specks of greenish pigments were noted in the stools. On the following day, stool colour became normal (Figure 2).

Figure 2: Normal stools on 5th day of illness

At this point, USS identified complete disappearance of the biliary calculus and reduction in CBD diameter to 4mm. Total serum bilirubin was 11.7 µmol/L. ALT was 42 U/L and AST was 51 U/L.

She remained clinically well during hospitalisation and completed a seven day course of antibiotics. USS on the day of discharge from hospital showed complete resolution of biliary tree dilatation. Serum bilirubin and liver function tests were normal. Lipid profile done in view

of excluding the rare possibility of hypertriglyceridaemia was normal. She remained clinically well and was followed up with monthly liver function tests and USS for six months. All investigations remained normal.

Discussion

Biliary calculi are extremely rare in infants. The commonest cause of gallstones in children is haemolytic disease [1]. Anatomical abnormalities of the extra-hepatic biliary tree and recurrent cholecystitis are postulated as other causes of choledocholithiasis in children [1,2,3]. In most instances no aetiology is identified. Children with CBD calculi usually present with features of obstructive jaundice or cholangitis [1].

Biliary sludge is a common USS finding in preterm infants and in those treated with parenteral nutrition secondary to bowel atresia. Unlike biliary calculi, biliary sludge usually resolves spontaneously.

Ultrasonography identifies biliary calculi due to their typical acoustic shadowing. In addition, USS helps to exclude anatomical abnormalities of the biliary system such as biliary atresia and choledochal cysts [2,4].

Records of spontaneous resolution of CBD calculi within a few days of onset of clinical features is very rare [4]. It is extremely rare to encounter a CBD calculus in an infant who does not have a predisposing cause presenting with non-specific clinical features and to see it spontaneously disappear within such a short period of time.

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