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CLINICAL IMAGE

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Clinical image report of acute Cholangitis in Beta-thalassemia major

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Abstract

Beta-thalassemia is congenital red blood cell disorder. Gallstones is a recognized complication due to recurrent hemolysis. Acute cholangitis is a rare complication might occur in patient with beta-thalassemia. We report a case of acute cholangitis in patient with beta-thalassemia with Gilbert syndrome. We present a case of a young female of Arabic descent with acute abdomen. Workup revealed acute cholangitis with gallstones in the common bile duct. The ERCP was used to extract the stones than cholecystectomy.

KEYWORDS

acute cholangitis, beta-thalassemia, common bile duct, gall bladder

1 | DESCRIPTION

A 37-year-old female patient with a background of beta-thalassemia major presented to the emergency department complaining of right upper quadrant pain associated with nausea and vomiting. Physical examination was consistent with positive Murphey's sign. Blood workup showed a picture of cholestatic injury (Table 1). Ultrasound abdomen (Figure 1) features were suggestive of acute cholecystitis along with dilated common bile having multiple stones and intrahepatic biliary dilatation. Further imaging with abdomen MRI and MRCP confirmed the previous finding and revealed secondary hemochromatosis (Figure 2).

TABLE 1 Liver function test

Detail	Value w/Units	Normal Range
Bilirubin T	164 umol/L	0–21
Bilirubin D	122 umol/L	0–5
Total protein	62 gm/L	60–80
Albumin level	39 gm/L	35–50
Alkaline phosphatase	403 U/L	35–104
ALT	687 U/L	0–33
AST	682 U/L	0–32

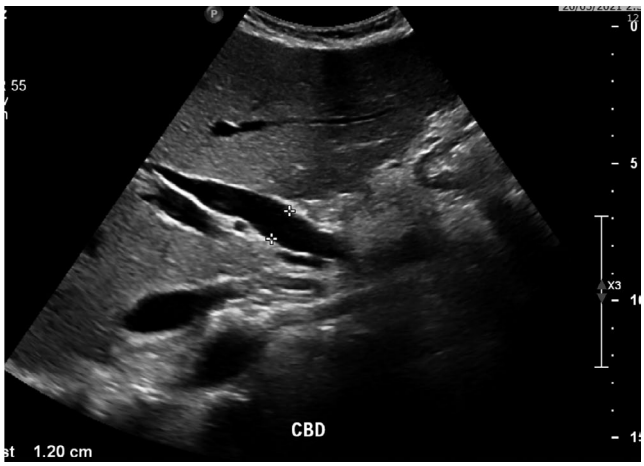

FIGURE 1 Common bile duct is dilated, measuring up to 12 mm. Small stones are seen in the mid-to-distal CBD, the largest measuring 5.5 mm

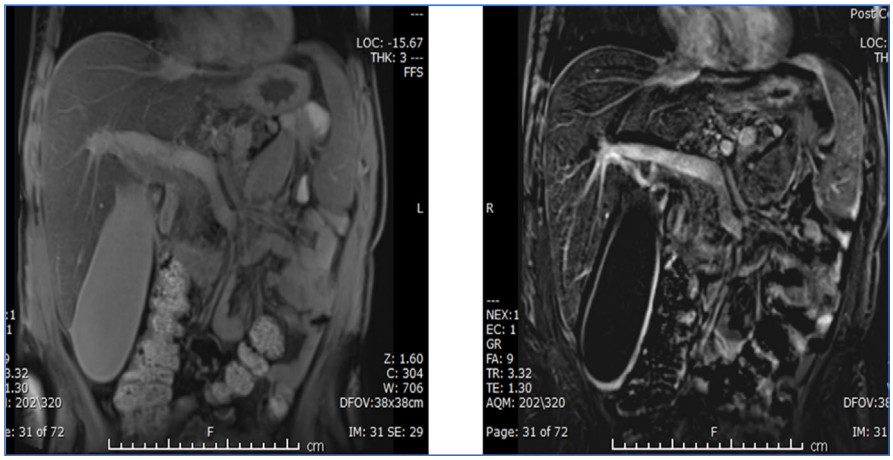

FIGURE 2 Pre- and post-contrast of T1 sequence, post-contrast enhancement of the ductal system suspicious of cholangitis

Beta-thalassemia is caused by a defect in the synthesis of the beta-globin chain of hemoglobin. Homozygotes for beta-thalassemia can have either beta-thalassemia major or intermedia, which can be distinguished by genetic studies.[1] A frequently encountered complication in beta-thalassemia major is the development of bilirubin gallstones, especially in patients with co-existing Gilbert's syndrome,[1–3] which are usually asymptomatic and do not need any medical intervention. However, the development of cholangitis and cholecystitis is uncommon, and surgical intervention may be indicated. Our patient was treated with ERCP first. Then, she underwent cholecystectomy.

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CONFLICT OF INTERESTS

The authors have no conflict of interest relevant to this case.

AUTHOR CONTRIBUTIONS

Both authors (Waail Rozi and Mohamed Yassin) contributed equally to the writing and preparation of this article, critically reviewed the initial and the final draft of the manuscript, and approved it for submission. Waail Rozi wrote the initial draft of the manuscript and performed the literature review. The draft was revised and updated by Waail Rozi with support from Dr. Mohamed Yassin. Mohamed A. Yassin supervised, revised, and updated the draft.

ETHICAL APPROVAL

Ethics approval and consent to participate. Medical Research Committee at Hamad Medical Corporation approved the case study for publication (MRC-04–21–324).

CONSENT

Written informed consent was obtained from the patient for the publication of this clinical image report.

DATA AVAILABILITY STATEMENT

Data and materials regarding the case report are available to the editor in chief and can be requested from the corresponding author.

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