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Spontaneous perforation of common bile duct in a young female: An intra-operative surprise

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ABSTRACT

INTRODUCTION: Spontaneous CBD perforation is one of the rare causes of acute abdomen in infants and extremely rare in adults. It is rarely suspected and correctly diagnosed preoperatively.
PRESENTATION OF CASE: A 17 year old female presented to Emergency Department with sudden onset of pain and distention of abdomen, associated with vomiting and non-passage of flatus and stool for 3 days and features of generalized peritonitis. On exploration, a perforation of size 0.5 cm in diameter was present on the antero-lateral surface of supraduodenal part of common bile duct (CBD) below the junction of cystic duct and common hepatic duct. Cholecystectomy done and the CBD repaired over a T-tube.
DISCUSSION: Spontaneous perforation of bile duct should ideally manage with T-tube drainage of the CBD along with cholecystectomy. In case with distal obstruction of the CBD, a biliary enteric bypass should be done.
CONCLUSION: Due to the paucity of cases, the index of suspicion for this diagnosis is low. But bilious peritoneal tap, features of generalized peritonitis and absence of free gas under diaphragm in abdominal x-ray may be considered as clues for suspicion. Accordingly, Surgery remains the mainstay of treatment.

1. Introduction

Spontaneous perforation of common bile duct was first reported by Freeland, in 1882 [1]. This condition is rarely seen in infants and occasionally it has been reported in adult following invasive procedure in and around Common Bile Duct (CBD) [2,3]. Because of rarity of cases preoperative diagnosis is difficult and delayed. We report an interesting, rare case of spontaneous CBD perforation in a young female with review of relevant literatures.

2. Case report

A 17 year old female presented to Emergency Department with sudden onset of pain and distention of abdomen, associated with vomiting and non-passage of flatus and stool for 3 days. There was no previous history of fever, hepatobiliary diseases, trauma or surgery. On examination, she was pale, febrile and dehydrated, with tachycardia and hypotension. The abdomen was distended. There was tenderness and guarding in the whole abdomen. Shifting dullness was positive without obliteration of the liver dullness. Peritoneal tap revealed biliary aspirate. Erect x-ray of abdomen showed no free gas under the diaphragm. Ultrasonography of the abdomen revealed moderate ascites with multiple septations. Blood parameters were within normal limit. She was resuscitated and planned for emergency laparotomy with a provisional diagnosis of peptic perforation.

On exploration, about 1.5 l of bilious fluid drained out. Stomach and duodenum were normal. Whole of small and large bowel found to be normal. Gall bladder wall was thickened without any stone or perforation. A perforation of size 0.5 cm in diameter detected on the antero-lateral surface of supraduodenal part of common bile duct (CBD) below the junction of cystic duct and common hepatic duct, Fig. 1. Cholecystectomy done and CBD explored. The CBD found normal caliber without any calculus. Distal patency of CBD was checked with 10 Fr infant feeding tube, as facility for intra operative cholangiogram was not available. The CBD repaired over a T-tube, Fig. 2. Peritoneal lavage done with warm saline and abdomen closed with

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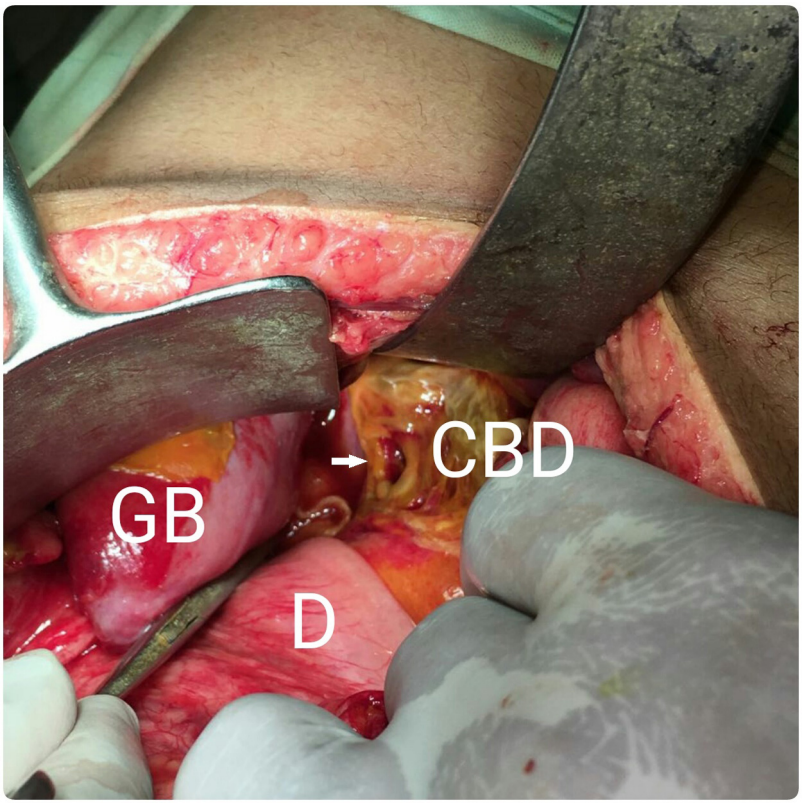

Fig. 1. Perforation of size 0.5 cm in diameter (*arrow*) on the antero-lateral surface of supraduodenal part of common bile duct (CBD) below the junction of cystic duct and common hepatic duct. (GB = Gall Bladder, D = Duodenum).

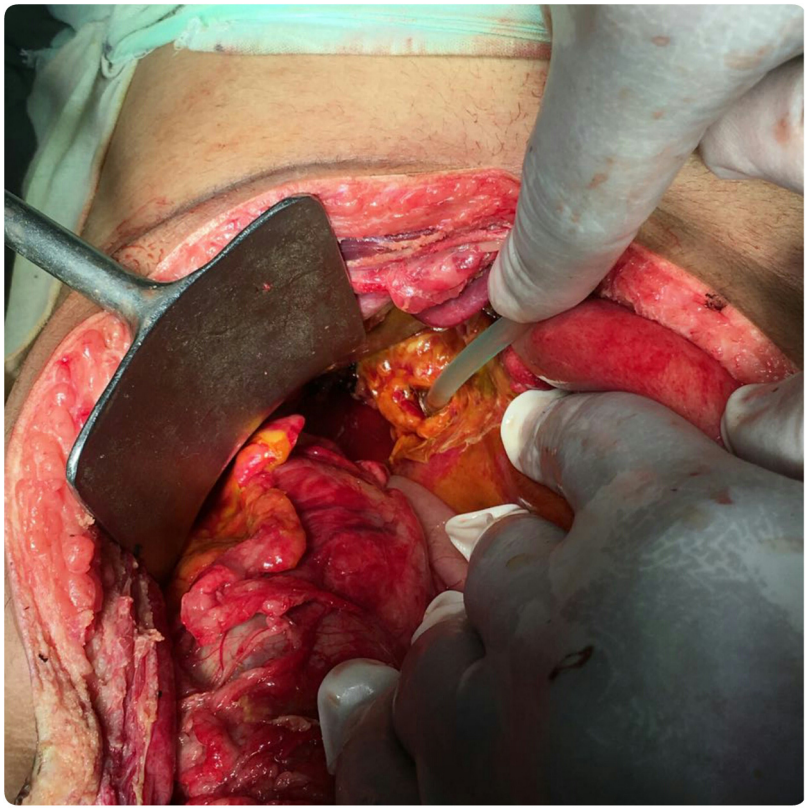

Fig. 2. Placement of T-tube at the site of perforation.