

Spontaneous perforation of the ductus choledochus: case report

Spontan koledok perforasyonu: olgu sunumu

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Özet

Safra yollarının travma dışı bir nedenle perforasyonu çok nadir görülen bir durumdur. Bu makalede nontravmatik bir safra yolu perforasyon olgusu irdelenmiştir. Hastanın hastanemize başvurduğunda cerrahi bir girişim gerektiren akut batın bulguları mevcuttu. Bu olgudaki tecrübemiz ve literatür bilgileri, bu tip hastalarda acil cerrahi yaklaşımın önemine dikkat çekmektedir.

Anahtar sözcükler: Koledok kanalı, perforasyon

Abstract

Nontraumatic perforation of the bile duct is a very rare entity. Here we report a case with nontraumatic perforation of the bile duct. He had acute abdominal pain requiring surgical intervention. Our experience along with a review of the literature indicate that emergency biliary decompression is the treatment of choice for this condition.

Keywords: Ductus choledochus, perforation

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Introduction

Non traumatic perforation of the bile duct, without trauma or iatrogenic injury, is a rare entity [1]. The diagnosis usually is not made preoperatively. We herein report the case of a 57-year-old man who underwent emergency laparotomy for bile peritonitis due to a spontaneous perforation of the common bile duct. The aim of this report is to bring the attention to this rare entity.

Case report

A.Ç., 57-year-old man, admitted to our clinic with abdominal pain for 5 days. He had nausea and vomiting. Abdominal computed tomography showed fluid collections around the perihepatic and perisplenic area (Figure 1).



Fig-1: Fluid collections around the perihepatic and perisplenic area at computed tomography.

Because of developing signs of peritoneal irritation we decided to perform laparotomy. At abdominal exploration, a 3-mm perforation was found in the right lateral wall of the choledochus. Choledochus wall was paper-thin, and 1500-ml bile was aspirated from the abdominal cavity. Gallbladder stones were observed and the peritoneal cavity was contaminated with bile. Two stones, (5 mm in diameter) from the gallbladder, and one stone (1 cm in diameter) from the common bile duct were removed. He underwent intraoperative cholangioscopy demonstrating a swollen papilla of Vater.

Surgical treatment consisted of drainage of ductus choledochus by T drain and cholecystectomy. T drain was inserted through perforation side. Drains were inserted near the area of perforation and Douglas in the peritoneal cavity after irrigation with a large amount of normal saline.

Postoperative period was uneventful. Postoperative T-tube cholangiography showed no filling defect in the CBD and no evidence of leakage on postoperative day 21. The T tube and the drain were removed, after we confirmed the drainage of bile into the duodenum after a 24-hour clamping of the tube (Figure 2).



Figure 2 Postoperative T-tube cholangiography showed no filling defect in the CBD.

Discussion

Nontraumatic perforation of the bile duct is manifested as an acute abdominal pain requiring surgical intervention [1, 2]. Nontraumatic perforation of the bile duct is difficult to diagnose before an operation, and in most cases, surgical intervention is performed for diffuse peritonitis. Sung et al, concluded that nontraumatic perforation of the bile duct should be suspected if perihepatic abscess or peritonitis is combined with biliary stone disease [3]. Abdominal ultrasonography and computed tomography were very informative for detecting the pathologic primary lesion and perihepatic fluid collection.

The pathogenesis of nontraumatic perforation of the bile duct in adults may be related to multiple factors. It has been suggested that any disease increasing the intraductal pressure (stasis, distal obstruction of the choledochus, or disease of the sphincter of Oddi), diverticulum in the bile duct wall, infection of bile duct, a connective tissue defect, or ischemia of bile duct [4-6]. In this case, we found swollen papilla and stone in choledochus. It seems likely that, the elevated intraductal pressure due to the swollen papilla following stone impaction caused the perforation of the choledochus of this patient. Furthermore, the excessive friability of the common bile duct of unknown etiology may also have contributed to the perforation. Nontraumatic perforation of the bile duct is uncommonly associated with a tumor because the slow rise of intraductal pressure caused by a tumor is much less likely to cause rupture of the duct than a sudden increase in pressure, such as that associated with stone disease [3].

Surgical treatment protocols are controversial, but the primary choice is decompressing drainage of biliary tract. In this case, primary repair of the perforation site could not be performed because of severe inflammation around the perforation site. Howard et al, advised cholecystoenterostomy using a Roux-en-Y loop of jejunum as the treatment of choice [7].

The prognosis depends on the severity of the illness and the time for operative management [8]. High morbidity and mortality rates have been reported in cases of delayed management [1-4]. This experience along with a review of the literature indicates that emergency biliary decompression is the treatment of choice for this condition.

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