

# Choledocho-colonic fistula: A Rare Biliary-Enteric Fistula Causing Refractory Diarrhoea

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## Citation

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## Abstract

The spontaneous biliary-colonic fistula is one of the causes for choleric enteropathy. Surgery is required to relieve the symptoms. We report a case of choledocho-colonic fistula causing diarrhoea, steatorrhoea, weakness and emaciation, refractory to medical treatment. It was managed successfully by surgical intervention.

## INTRODUCTION

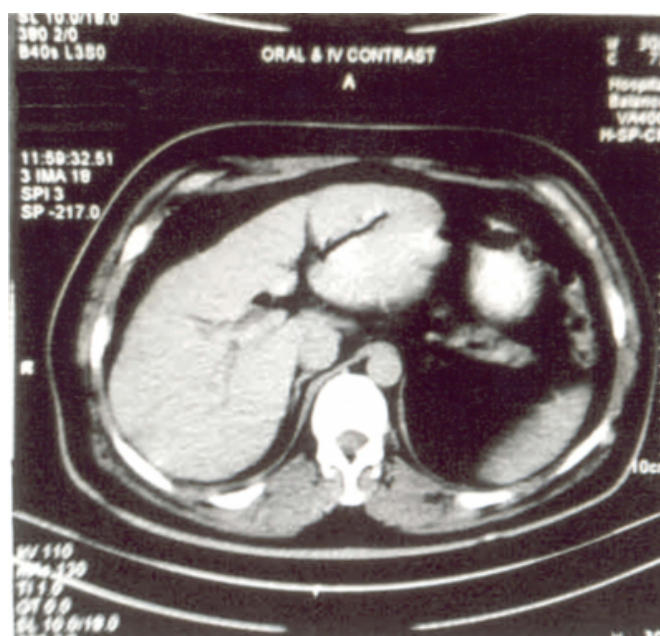
Biliary calculus disease is responsible for spontaneous biliary-enteric fistula in 90% of cases. <sup>1</sup> The cholecysto-enteric fistula accounts for 75-85% of all biliary fistulas <sup>2</sup>, whereas choledocho-enteric fistula is rare. The incidence of choledocho-colonic fistula is far less, only few cases are reported in the world literature. These fistulas are often missed preoperatively if doctors do not proceed with high suspicion. We report a case of choledocho-colonic fistula, a rare type of biliary-enteric fistula causing refractory diarrhoea, which was managed successfully.

## CASE REPORT

A 54-year-old male of rural background was referred to us for refractory diarrhea, not responding to medical treatment. He had 5-6 episodes of loose, bulky, slippery stools per day for the last 3 months along with malaise, anorexia and asthenia. In the past, the patient had suffered from jaundice a year back, treated by a general practitioner. The past records of the patient did not reveal the diagnosis. On examination, the patient was pale and emaciated. The abdominal examination was normal. Per rectal digital examination stained the finger with dark greenish fecal matter. The biochemical tests including liver function tests and electrolytes were within normal limits. Stool test showed fat globules. The preliminary ultrasound examination was normal. CT scan of the abdomen was normal except pneumobilia (Figure 1). This finding lead to high suspicion for fistulous communication, but upper and lower gastrointestinal endoscopies did not reveal any positive findings.

## Figure 1

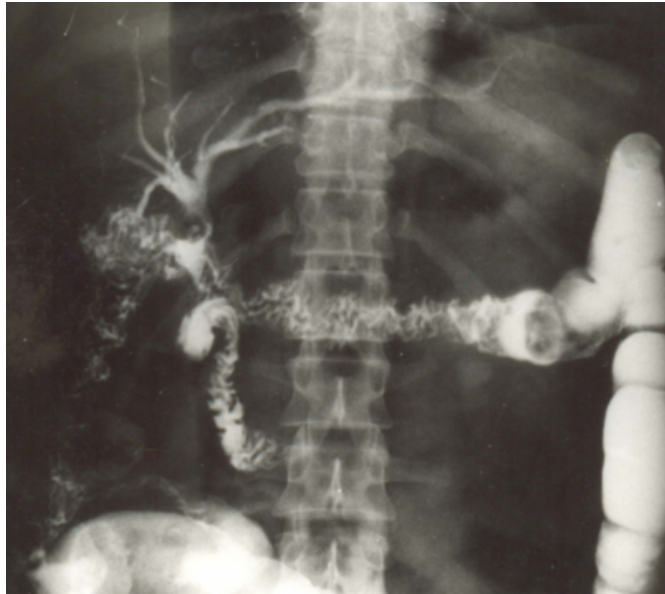
Figure 1: CT scan showing pneumobilia



The patient was subjected to barium contrast study. Extravasation of dye from the hepatic flexure of the colon into the biliary channel was the astonishing finding. (Figure 2) These two findings confirmed the biliary-colonic fistula.

**Figure 2**

Figure 2: Barium enema showing extravasations of dye in the biliary channel



Surgical exploration was planned after taking the informed consent. On exploration, severe adhesions were present in the sub hepatic space. Small and large bowel adhered to the antero-inferior surface of liver. On adhesiolysis, a small, contracted gallbladder was found. Calot's triangle was distorted. The hepatic flexure of the colon was severely adhered to the common bile duct (CBD). The fistulous communication between the colon and CBD was recognised and dismantled. The defect in the colon was resected and repaired by Vicryl 2-0 in a single layer, full-thickness, interrupted sutures. The rent in the CBD was further extended for exploration. No stone or other abnormalities were detected in the CBD. The bougie was passing into the duodenum through the papilla of Vater. The CBD was repaired by PDS 4-0 over a T-tube. Partial cholecystectomy was done and no stone was found in the gallbladder. Post exploratory T-tube cholangiography showed normal passage of dye in the duodenum and the T-tube was removed after 10 days. The recovery of the patient was satisfactory. The patient was gradually relieved of his symptoms. The histology of gall bladder and fistulous tract came out to be of a chronic inflammatory lesion.

## DISCUSSION

Biliary-colonic fistula is one of the causes for cholerich enteropathy. The cholecysto-colonic fistula accounts for 15-30% of all cholecysto-enteric fistulas.<sup>3</sup> The incidence of choledocho-colonic fistula is rare and few cases are reported, associated with agenesis of gall bladder,<sup>4</sup> cholangio-

carcinoma,<sup>5</sup> with cystic duct remnant,<sup>6</sup> and primary CBD stone.<sup>7</sup> In our case, since no stone was found, one possibility is that of a primary common bile duct stone, passed away after causing inflammation, erosion and fistula formation between bile duct and colon. The other possibility may be that of recurrent pyogenic cholangitis/oriental cholangitis leading to fistulous communication. The history of jaundice in the past and the histology of the excised fistulous tract support a cholangitis/chronic inflammatory condition. Cholerich enteropathy is characterized by secretory diarrhoea, steatorrhoea because of fat malabsorption, electrolyte imbalance and other deficiencies.<sup>8</sup> Increased load of primary bile acids in the colon and impaired enterohepatic circulation of bile are the cause for this enteropathy. Endoscopic retrograde cholangiography/magnetic resonance cholangiography could have been the choice if a choledocho-enteric fistula was suspected and the facility would have been there. Barium contrast study may define the fistulous communication. Surgery is the mainstay of the treatment in the symptomatic biliary-enteric fistula.<sup>9</sup> In this era of minimal access surgery, laparoscopic management has shown a good result.<sup>10</sup>

## CONCLUSION

Biliary-colonic fistula requires intervention. Endoscopic retrograde cholangiography and magnetic resonance cholangiography have the high sensitivity index to define the suspected biliary-enteric fistula. In our case, the fistula was defined by barium enema study. Surgical intervention made the finding clear and the outcome was satisfactory.

## CORRESPONDENCE TO

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