



Obstructive choledocholithiasis requiring intervention in a three week old neonate: A case report and review of the literature



Lindsay E. Peters, Alan P. Ladd, Troy A. Markel*

Department of Surgery, Section of Pediatric Surgery, Riley Hospital for Children at Indiana University Health, The Indiana University School of Medicine, 705 Riley Hospital Dr., RI 2500, Indianapolis, IN 46202, USA

ARTICLE INFO

Article history:

Received 2 September 2015

Received in revised form

8 November 2015

Accepted 9 November 2015

Key words:

Choledocholithiasis

Neonate

Biliary obstruction

Common bile duct stone

Infant

ABSTRACT

The discovery of cholelithiasis in neonates is often incidental, however obstructing common bile duct stones are rare. Herein we report the case of a 3 week old neonate who presented with obstructive choledocholithiasis. The patient was treated conservatively with antibiotics and ursodeoxycholic acid but did not improve. He was therefore taken to surgery for cholecystectomy and stone extraction. The operation was successful and his transaminases and bilirubin levels declined. Trials of conservative management can be attempted in asymptomatic infants with choledocholithiasis. However, failure of the stone to pass or ongoing signs of cholecystitis should be met with operative intervention to remove the obstruction.

© 2016 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Cholelithiasis is often an incidental finding in the neonatal population. Obstructing common bile duct stones, however, are quite rare. Herein we report the case of a 3 week old neonate with choledocholithiasis and acute cholecystitis who required operative intervention to relieve the obstructing stone.

1. Case report

The patient is a 3 week old, 3.9 kg infant male born at 39 weeks and 3 days gestation. He is blood type B+, coombs negative, and had a normal newborn screen. He was referred to the hospital with a working diagnosis of pyloric stenosis, as he was experiencing projectile emesis and failure to thrive. However, blood chemistries revealed elevated transaminases (ALT 166 Units/L, AST 324 Units/L) and bilirubin (total bilirubin 2.7 mg/dL, direct bilirubin 0.6 mg/dL). Abdominal ultrasound showed gallbladder sludge, a cystic duct stone, pericholecystic fluid, and a normal pylorus (Fig. 1).

He was admitted for fluid resuscitation and was started on cefepime. Laboratory assessment the following day showed worsening bilirubin values (Fig. 2), and a repeat ultrasound showed that the stone was now lodged in the common bile duct near the pancreatic head. The common bile duct was dilated proximally to

4–5 mm and the stone measured 4 × 7 × 3 mm. He was started on ursodeoxycholic acid and surgical consultation was obtained. As he was virtually asymptomatic, he had serial daily ultrasounds and blood chemistry assessments for 3 days to determine if the stone would pass spontaneously. Assessment of these parameters did not indicate resolution of the stone. He then underwent MRCP (Fig. 3) to assess his biliary anatomy and to ensure that there was no choledochal cyst. The stone was confirmed to be lodged in the common bile duct at the pancreatic head, the common bile duct was dilated to 4–5 mm, and there was no anatomic biliary ductal abnormality appreciated. As the stone was not passing and there were continued signs of cholecystitis on imaging, we proceeded to the operating room for cholecystectomy and intraoperative stone extraction. ERCP was not an option as our gastroenterologists did not have an endoscope small enough to complete the procedure.

In the operating room, a right subcostal incision was made and the gallbladder was readily identified under the liver edge. It was fairly hard in texture. A cholangiogram was performed and clear bile was expressed from the gallbladder (Fig. 4A). The cholangiogram noted patent right and left hepatic ductal systems and an obstructive stone at the distal common bile duct (Fig. 4B). The biliary system was flushed several times with normal saline but this did not move the stone. We then proceeded to pass a 2 French Fogarty catheter through the gallbladder and into the distal biliary system but the catheter was too pliable and it created a false passage in the gallbladder lumen. We then opened the gallbladder

* Corresponding author. Tel.: +1 317 437 2506.

E-mail address: tmarkel@iupui.edu (T.A. Markel).

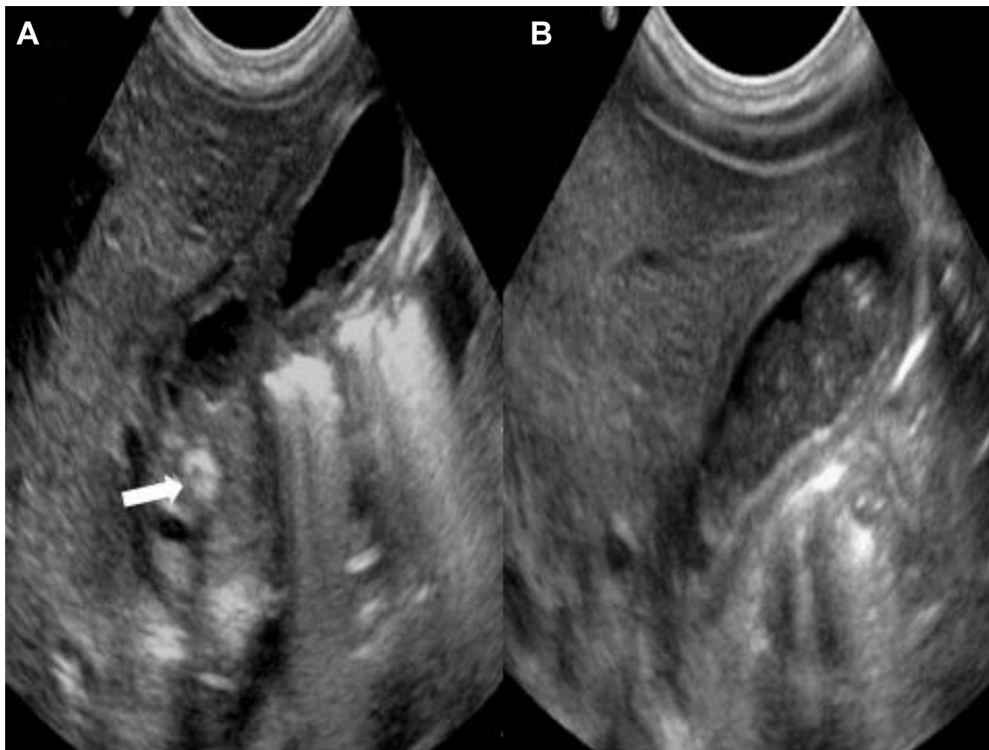


Fig. 1. (A) Abdominal ultrasound denoting the longitudinal view of the gallbladder with a visualized calculus in the cystic duct (white arrow). (B) Longitudinal view of the gallbladder showing sludge within the lumen.

lumen longitudinally toward the cystic duct orifice. A 0.035" Glidewire (Boston Scientific) was then passed into the distal bile duct and a 3 French open ended ureteral stent catheter (Cook) was deployed over the wire. The Glidewire was then withdrawn and a 1.5 French stone extraction basket (Cook) was deployed through the ureteral stent. It was able to pass around the stone, and a portion of the stone was retrieved (Fig. 5A). A subsequent cholangiogram demonstrated a portion of the stone still in place (Fig. 5B). A second

pass of the basket was performed and this action dislodged the stone into the duodenum thereby alleviating the obstruction and allowing free flow of contrast into the duodenum. The ureteral stent and basket were then removed and a cholecystectomy was performed.

The day after the surgery his bilirubin was still elevated to a total of 3.0 mg/dL but this dropped to 2.1 mg/dL with a direct component of 1.3 mg/dL. He was discharged from the hospital with instructions to follow up in clinic in two days. He came back to clinic on post-operative day 6 and his total bilirubin had normalized to 1.0 mg/dL and his direct component was just slightly elevated at 0.4 mg/dL. He was eating and stooling normally and gaining weight as expected. At post-operative day 21, his laboratory parameters had normalized.

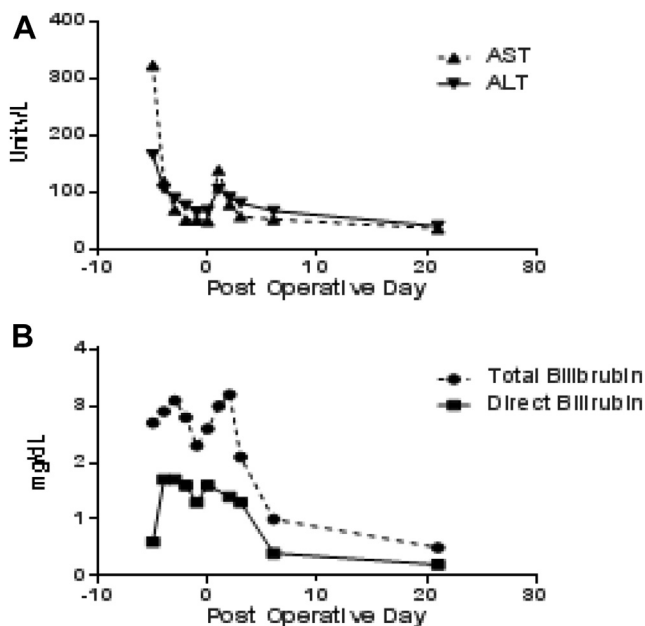


Fig. 2. Progression of (A) liver transaminases and (B) bilirubin levels over the course of hospitalization (AST and ALT in Units/L, Total bilirubin and Direct Bilirubin in mg/dL).



Fig. 3. Magnetic resonance cholangiopancreatography image demonstrating dilated common bile duct and obstructing common bile duct stone (white arrow).

Download English Version:

<https://daneshyari.com/en/article/4161232>

Download Persian Version:

<https://daneshyari.com/article/4161232>

[Daneshyari.com](https://daneshyari.com)