Common Bile Duct Obstruction Due to Surgical Clips Following Laparoscopic Cholecystectomy Treated with Percutaneous Balloon Dilatation

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Received: 26 January 2016 / Accepted: 14 March 2016 / Published online: 23 March 2016
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Abstract Bile duct injury is a commonly seen complication of the laparoscopic cholecystectomy (LC) approach, which can even lead to a life-threatening condition and endoscopic retrograde cholangiopancreatography (ERCP) is the first-line choice in treatment. Beside this, it can be concluded that percutaneous transhepatic cholangiography (PTC) and balloon dilatation methods may also constitute a reasonable selection with non-invasive, feasible and effective aspects prior to open surgery. In the present case, we report the management of a bile duct obstruction due to surgical clips following LC, treated with PTC and balloon dilatation instead of surgical procedure in a child patient.

Keywords Percutaneous transhepatic cholangiography · Balloon dilatation · Laparoscopic cholecystectomy · Bile duct injury

An 11-year-old girl was admitted to our emergency department with abdominal pain and jaundice complains 1 week following laparoscopic cholecystectomy (LC). Biliary ductus dilatation extending toward the placement site of the surgical clips was detected in computerized tomography and magnetic resonance cholangiopancreatography images (Fig. 1). In endoscopic retrograde cholangiopancreatography (ERCP), the guide wire could not pass through the distal obstruction part due to surgical clip compression. Percutaneous transhepatic cholangiography (PTC) was performed. In PTC images, expansion of the biliary system was detected reaching up to the surgical clip site. The injected contrast matter could not pass the obstruction. Distal of the clips was passed via using a hydrophilic guide wire, and balloon dilatation was applied to open the obstruction (Fig. 2). There was no biliary system dilation observed in controls 18 months after discharge from the hospital.

Bile duct injury is a commonly seen complication of the LC approach, which can even lead to a life-threatening condition, and ERCP is the first-line choice in treatment [1]. Beside this, it can be concluded that PTC and balloon dilatation methods may also constitute a reasonable selection with

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Fig. 1 In CT (a–c) and MRCP (d) images. Bile duct dilatations (asterisks), obstruction place due to clips (arrows), and normal distal choledock (circle) are observed

Fig. 2 In PTC images. Surgical clips (circle) (a), obstruction site with balloon dilatation (arrow) (b), and post-operative normal opaque fluid passage control image of the choledock (ellipse) (c)

non-invasive, feasible, and effective aspects prior to open surgery.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Reference

1. Csendes A, Navarrete C, Burdiles P, Yarmuch J (2001) Treatment of common bile duct injuries during laparoscopic cholecystectomy: endoscopic and surgical management. *World J Surg* 25: 1346–1351