Salvage Surgery in Endoscopic Era

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Received: 06 Aug 2011/ Accepted: 29 Sept 2011 © OMSB, 2011

Abstract

Common bile duct stones are usually managed by Gastroenterologists using Endoscopic Retrograde Cholangiopancreaticography (ERCP) and services of Surgeons are required if the stone is large or impacted. But at times, emergency bile duct explorations become mandatory in some unusual complications of ERCP. We describe one such situation of impacted dormia basket during ERCP which required rescue surgery.

Keywords: Unusual complication; Endoscopic Retrograde Cholangiopancreatography.

Introduction

In today’s era of endoscopic and minimally invasive procedures, Endoscopic Retrograde Cholangiopancreatography (ERCP) is the predominant method of treating Common bile duct (CBD) stones. But this procedure is not free from complications like bleeding, pancreatitis, and perforation, amongst others. This report presents an uncommon complication of ERCP which required emergency rescue surgery.

Case Report

A 35 years old female with cholelithiasis and choledocholithiasis was referred to the Gastroenterology department for ERCP and clearance of her CBD. She had a single stone measuring approximately 1.5 cm in distal CBD on Cholangiogram. Endoscopic Sphincterotomy was done and the stone was engaged in the dormia basket. But on pulling the basket, it got stuck at the ampulla. Several attempts to pull the basket were futile and disengagement of the dormia basket failed as the stone became impacted in the wires of the basket. Sphincterotomy was extended and retrieval of the basket was attempted but failed. The facilities for mechanical or extracorporeal shock wave lithotripsy were unavailable at our institute, thus a laparatomy with CBD exploration was planned. On exploring the bile duct, the basket was strongly adhered to the substance of the stone impacted at the ampulla (Fig. 1). The wire was cut and the dormia basket along with the stone was removed (Fig. 2). The bile duct was explored for the presence of any other stone and closed over a T-tube. The patient had an uneventful post operative period and the T-tube was removed on the 14th day after a normal T-tube cholangiogram.

Discussion

Bile duct stones are successfully treated with ERCP combined with sphincterotomy, Dormia basket or mechanical lithotripsy in 85-90% of cases. Complications of ERCP have been reported to occur in 5-10% of cases, which generally include bleeding, perforation, sepsis, cholangitis and pancreatitis. Dormia impaction is a very infrequent complication of ERCP. On the other hand; stone impaction, stone size and stone to bile duct...
ratio are predictors of unsuccessful retrieval of stones even when mechanical lithotripsy is used. Various successful endoscopic methods have been used for management of impacted dormia basket with stone trapped in it. These include mechanical lithotripsy, Endoscopic or Extracorporeal shock wave lithotripsy, and Endoscopic laser lithotripsy.

Katsinelos et al. have described a simple procedure of extending the sphincterotomy plus large balloon dilatation for removing impacted dormia basket, thus avoiding complex and sophisticated endoscopic or surgical procedures. In our patient, although the sphincterotomy was extended, the dormia basket however was stuck at the ampulla which made it impossible to push the balloon into the duct. On the other hand, the other described endoscopic methods are not widely available or limited experience in these lead to unsuccessful outcomes. In such situations, Common bile exploration is the ‘Salvage’ procedure.

**Conclusion**

In the reported patient, extended sphincterotomy failed and lack of mechanical or extracorporeal lithotripsy forced us to resort to Common Bile duct Exploration with successful outcome.

**Acknowledgements**

The authors reported no conflict of interest and no funding was received on this work.

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