Successful laparoscopic management of four cases of cholecystoduodenal fistula

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Dear Editor,

Cholecystoduodenal fistula (CDF) is an uncommon clinical entity with reported incidences ranging from 0.15% to 5% of biliary disease.¹ Chronic cholecystitis with gallstones is the primary aetiology in as many as 75% of CDF patients.² Cholecystoduodenal type accounts for as many as 80% of cholecystoenteric fistulas (CF).³ Cholecystoduodenal fistula is generally considered to be a relative contraindication to laparoscopic cholecystectomy because of difficulties in its management intra-operatively.⁴ Laparoscopic stapling technique have been reported as feasible and safe methods to treat such fistula.^{1,3,5} However, these procedures are not always performed successfully. We are reporting four cases of CDF, managed successfully by laparoscopic approach due to the correct pre-operative diagnosis in one case, and experienced and skilful laparoscopic technique in other three cases.

From June 2009 to March 2011, 418 patients underwent laparoscopic cholecystectomy (LC) for calculus cholecystitis (CC) in our hospital. Four (0.95%) of them were identified as having CDF. This study retrospectively reviewed the medical records of four patients of CDF. Pre-operative ultrasound revealed pneumobilia in a 65-year-old lady having symptoms of chronic CC without jaundice, suggesting a diagnosis of CF. The other three patients were also females of 41, 46, and 54 years of age with symptoms of chronic CC without jaundice. These three patients were diagnosed as CDF pre-operatively. Laparoscopic surgery was performed using the standard four ports technique. Cholecystoduodenal fistula was clearly demonstrated after careful dissection (Figure 1). The endoscopic stapling device was used through the epigastric port. Due precaution was taken to visualise the blade behind the fistulous tract before firing the stapler (Figure 2). None of the patients needed conversion to open surgery. There were no postoperative complications. None of the CDF was caused by malignancy. The hospital stay of four patients ranged from seven to 10 days. Patients were followed up for one month after surgery and found to be asymptomatic.

The development of fistulous tract from gallbladder is associated with gall stones in 90% of cases.² Patients with CDF are commonly presented with signs and symptoms of chronic cholecystitis. Lack of specific symptoms poses difficulty in pre-operative diagnosis of CDF.

The treatment for CDF is cholecystectomy and closure of fistulous communication. Making a knot either intra-corporeally or extra-corporeally cannot secure the difficult fistula closure.

Endoloop application after division of fistula is a difficult and unreliable procedure. Endostapler device is easy to use and is effective. However, safety measures were adopted to prevent complications. The fistulous tract should be dissected clearly to demonstrate all around anatomy and create adequate space to apply the endostapler. A blade of the endostapler with the locking device at its end should be seen clearly across the communicating tract to ensure safe stapling locking without involvement of other tissue.

Cholecystoduodenal fistula is a difficult problem usually diagnosed intra-operatively. A high degree of suspicion is mandatory in difficult cases during surgery to prevent complications. Our report shows that with increasing experience and confidence, contraindication to laparoscopic CDF management is

Figure 1 Clear demonstration of fistulous tract.

Figure 2 Judicious use of stapler device.

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diminishing. However, laparoscopic management of CDF with endostapler device is feasible and safe, if CDF is diagnosed correctly pre-operatively and managed carefully by an experienced surgeon.

REFERENCES

1. Angrisani L, Corcione F, Tartaglia A, et al. Cholecystoenteric fistula is not a contraindication for laparoscopic surgery. *Surg Endosc* 2001; 15:1038–1041.
2. Wang WK, Yeh CN, Jan YY. Successful laparoscopic management for cholecystoenteric fistula. *World J Gastroenterol* 2006;12:772–775.
3. Sharma A, Sullivan M, English H, Foley R. Laparoscopic repair of cholecystoduodenal fistulae. *Surg Laparosc Endosc* 1994;4: 433–435.
4. Macintyre IM, Wilson RG. Laparoscopic cholecystectomy. *Br J Surg* 1993;80:552–559.
5. Latic A, Latic F, Delibegovic M, Samardzic J, Kraljik D, Delibegovic S. Successful laparoscopic treatment of cholecystoduodenal fistula. *Med Arh* 2010;64:379–380.

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