

Postoperative Peritonitis Associated with Spilled Gallstones During Laparoscopic Cholecystectomy : Case Report

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Laparoscopic cholecystectomy is currently the preferred treatment of symptomatic cholelithiasis. Spillage of bile and gallstones may occur during laparoscopic cholecystectomy. Spilled gallstones may be difficult to retrieve and may be lost in the peritoneal cavity. A case of early postoperative peritonitis associated with spilled gallstones during laparoscopic cholecystectomy is reported in this study. Retained gallstones in the peritoneal cavity may cause complications and every effort should be made to retrieve the spilled gallstones during laparoscopic cholecystectomy. [Journal of Turgut Özal Medical Center 1996;3(4):347-349]

Key Words: Laparoscopic cholecystectomy, spilled gallstones, peritonitis

Laparoskopik kolesistektomi esnasında düşmüş safra taşlarına bağlı postoperatif peritonit : olgu sunumu

Laparoskopik kolesistektomi günümüzde semptomatik kolelithiasis tedavisinde tercih edilen tedavi yöntemidir. Laparoskopik kolesistektomi esnasında safra ve safra taşları periton boşluğuna yayılabilir. Düşmüş safra taşlarının çıkarılması zor olabilir ve bunlar periton boşluğunda kaybolabilir. Bu çalışmada laparoskopik kolesistektomi esnasında düşmüş safra taşlarına bağlı bir erken postoperatif peritonit vakası bildirilmiştir. Periton boşluğunda bırakılmış safra taşları komplikasyonlara yol açabilir ve laparoskopik kolesistektomi esnasında düşmüş safra taşlarının çıkarılması için tüm çaba sarfedilmelidir. [Turgut Özal Tıp Merkezi Dergisi 1996;3(4):347-349]

Anahtar Kelimeler: Laparoskopik kolesistektomi, düşmüş safra taşları, peritonit

Laparoscopic cholecystectomy is currently the treatment of choice for symptomatic cholelithiasis (1). This has been accompanied by a number of unusual complications due to spilling of gallstones during the procedure. Gallstones may fall into the peritoneal cavity from a tear in the gallbladder wall

either during the laparoscopic dissection or during the retrieval of the gallbladder through the abdominal wall. Initially stone spillage and lost gallstones had been considered as harmless, but recent reports suggest that remaining gallstones in

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the peritoneal cavity may cause severe complications such that retrieval is advised (2-7).

Herein we report a case of early postoperative peritonitis due to spilled gallstones during laparoscopic cholecystectomy which necessitated laparotomy.

CASE REPORT

A 46 year-old man was admitted to the Department of Surgery, Royal Infirmary, Glasgow, UK with biliary colic and laparoscopic cholecystectomy was performed in usual manner a few days later. The operation was uneventful but the surgeon was aware that some small stones had been spilled and not all recovered. The patient did well postoperatively until 10 hours after surgery when he developed severe abdominal pain with signs of peritonitis. He was afebrile with a white cell count of $9600/\text{mm}^3$. His amylase and liver function tests were completely normal. On the following day, he had not settled clinically and underwent laparotomy which showed no signs of bile leak or haemorrhage. After thorough exploration of the abdomen, nothing except multiple small gallstones (approximately 12) were found in various parts of the peritoneal cavity, including one from the pelvis. There were no operative signs of acute pancreatitis.

Despite normal liver function tests on the morning after surgery, clips were removed from the cystic duct and an intraoperative cholangiogram was obtained. This showed a normal biliary tree with satisfactory flow through into the duodenum. Following reassurance, the cystic duct was secured with suture. All the intraperitoneal gallstones were removed and the peritoneal cavity was irrigated copiously with saline prior to closure.

The patient had an uneventful postoperative course after laparotomy and was discharged home five days later. No bacteria were cultured from the peritoneal fluid.

DISCUSSION

Laparoscopic cholecystectomy has become the preferred treatment for symptomatic gallstone disease (1). Gallbladder perforation during laparoscopic cholecystectomy and spillage of

gallstones are reported in between 10-40% and the incidence increases up to 50% in patients with acute cholecystitis (6). Some controversy exists as to what strategy should be followed when gallstones are lost during laparoscopic cholecystectomy. Initially it had been considered that gallstones left in the peritoneal cavity were harmless, but recent studies documented various complications including early postoperative small bowel obstruction, intraabdominal abscess and subhepatic inflammatory mass caused by spilled gallstones during cholecystectomy (2,3,6,7). They may serve as the nidus of an abscess particularly if there is associated bile (4). Complications due to spilled gallstones may develop within hours following laparoscopic cholecystectomy or late during the follow-up period (6).

Residual spilled gallstones are more comprehensively retrieved at an open operation. During laparoscopic cholecystectomy, spilled gallstones may be grasped and removed either by a stone forceps or after placing in a sterile bag or modified surgical glove (5), but it is difficult to retrieve multiple small gallstones (<3 mm) particularly those which drop beyond the confines of the right subhepatic space. The use of a large bore plastic drain (size 32 F) for aspiration which fits through a 10 mm port facilitates the retrieval of multiple small gallstones after instillation of copious saline which causes gallstones to float to the gas-fluid interface (2).

In order to prevent early and late complications due to the spillage of gallstones, precautions should be taken to avoid stone and bile leakage. If spillage of gallstones occurs, we recommend that every effort should be made to retrieve the spilled gallstones during laparoscopic cholecystectomy. For this particular patient, repeated laparoscopy would have been an alternative approach, but the degree of severity of clinical signs caused such concern that an open operation was performed. It is not possible to totally convince a sceptic that these remaining stones were responsible for his presentation but improvement after open surgery argues in favour of this explanation.

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