Retained gall-stone as a differential diagnosis of acute appendicitis

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INTRODUCTION

In laparoscopic cholecystectomy it is not uncommon for the gall bladder to be punctured during dissection or ruptured during its removal, as reported by Soper and Dunnegan (1991) in up to one third of cases. Peters et al (1991) reported spillage of gall-stones in up to 40% of cases, usually without serious consequence, although latterly there are increasing numbers of reports of complications related to retained stones. This report describes a patient who presented with complications related to a retained gall-stone 8 weeks after laparoscopic cholecystectomy and with signs and symptoms suggesting acute appendicitis, which required further operative treatment.

CASE REPORT

A 52-year-old female suffering repeated attacks of cholecystitis underwent an otherwise straightforward laparoscopic cholecystectomy. At completion the gall bladder was seen through the laparoscope to rupture during its removal via the umbilical incision. A single stone was noted to fall from the gall bladder into the peritoneal cavity and this was easily retrieved. No other spilled stones were seen at completion laparoscopy. The immediate postoperative recovery was uneventful and the patient was allowed home on the following day.

Eight weeks later the patient presented as an emergency with central abdominal pain which radiated to the right iliac fossa. There was associated nausea and vomiting and a tachycardia but no fever or bowel upset. Clinical findings included tenderness and guarding in the right iliac fossa but normal bowel sounds and rectal examination. Chest and abdominal radiographs were normal, as were blood count, glucose, amylase, renal and liver function tests. A clinical diagnosis of acute appendicitis was suspected and the right iliac fossa was explored through a muscle-splitting incision. A normal appendix was found and was removed but there were fibrinous adhesions and inflammation around a gallstone surrounded by the mesentery of the terminal ileum. The adhesions were divided and the gallstone removed, followed by peritoneal lavage. The patient again made an uneventful recovery and was allowed home, free of symptoms, 72 hours later.

DISCUSSION

Although intraoperative gall-stone loss during laparoscopic cholecystectomy is thought to be common, serious sequelae are reported by Peters et al (1991) to be unusual. Retrieval of spilled stones may be incomplete and several complications have been recorded from such stones. Campbell and McGarity (1992) reported abscess formation, Janu and Donellan (1995) sinus formation, Kankani and Bhullar (1995) and Draganic and Reece-Smith (1997) erosion into adjacent organs, respectively sigmoid colon or terminal ileum, the latter resulting in gall-stone ileus. Finally, Van Brunt and Lanzafame (1994) described subhepatic inflammatory mass formation.

A Medline literature search has uncovered 17 such cases in total. This patient suffered an inflammatory mass similar to that reported by Van Brunt and Lanzafame (1994) but in a different site and without the fever, rigors, and leucocytosis noted by these authors.

Since it is increasingly clear that spilled gall-stones may give rise to a range of complications, Targarona et al (1995) recommend that every effort should be made to avoid loss of stones during cholecystectomy. A careful search and retrieval of spilled stones is encouraged by Harvey and Pardoe (1994) to help avoid such complications. Loss of gall-stones occurs during dissection of the cystic duct and gall bladder, and also during removal of the gall bladder from the abdomen. Loss of stones during the latter phase of gall bladder removal can be avoided by placement of the gall bladder in a bag for endoscopic retrieval of tissue such as the 'BERT' bag (Vernon-Carus Ltd, Preston, UK). This simple device is also useful for collecting spilled stones for removal. Although the reported incidence of complications from spilled stones remains low, the small extra cost (less than £20) for the use of a disposable bag is surely justified because complications from spilled stones can be serious both for the patient, necessitating further surgical intervention, and also for the inevitable medicolegal consequences. HM

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