A Complication Associated with Gallstones Spilled into the Abdominal Cavity During Laparoscopic Cholecystectomy: Ileus

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Introduction

Foreign bodies forgotten in the abdominal cavity are rare. Gauze and towels are the most commonly retained surgical foreign bodies and rarely, surgical instruments may be inadvertently left in the abdomen [1]. Complications such as abscesses; ileus or fistulas may be the first manifestations of foreign bodies inadvertently left in the abdominal cavity [2].

Gallbladder perforation and gallstone spillage into the abdominal cavity are among common complications of laparoscopic cholecystectomy procedures [3]. Gallbladder perforation may occur in 30% of laparoscopic cholecystectomy procedures [4]. However, 16 to 50% of spilled gallstones cannot be retrieved [4]. In most instances, gallstones left in the abdominal cavity remain silent [5]. Mesenteric cysts are usually asymptomatic and diagnosed incidentally. If symptomatic, the most common symptoms include abdominal pain, palpable masses in the abdomen, nausea and vomiting. Very rarely, mesenteric cysts may complicate with perforation, peritonitis or ileus [6,7].

Herein, we present a case of foreign body reaction to a gallstone dropped into the abdominal cavity during prior laparoscopic gallbladder surgery in a patient who presented with signs and symptoms of ileus and underwent surgery as a preliminary diagnosis of mesenteric cyst with volvulus was made based preoperative workup.

Case Presentation

A 73-year-old female patient who presented with nausea, vomiting and abdominal pain was seen at the internal emergency room of the department of Internal Medicine and underwent routine blood tests and whole abdominal ultrasound; abdominal X-rays were taken in a standing position. Whole abdominal ultrasound revealed an intraperitoneal mass, multiple enlarged lymph nodes in the mesenteric adipose tissue on the right side of the umbilicus, in the patient who had a history of a laparoscopic cholecystectomy procedure 7 years ago. X-rays taken in a standing position revealed small bowel air-fluid levels. Blood tests revealed a leukocyte count of 14,500 /mm³, a CRP concentration of 46 mg/L, a hemoglobin concentration of 7.4 g/dl and a hematocrit value of 25.4%. However, as the hemoglobin concentration measured 2 months ago was 10.2 g/dl in the patient’s medical records, a preliminary diagnosis of gastrointestinal bleeding was made and the patient was admitted to the internal medicine clinic. A consultation was requested from the department of gastroenterology under emergency conditions and the patient underwent an esophagogastroscope procedure on the same day. Esophagogastroscope did not reveal any active bleeding, while intragastric bile content was more than one liter. 2 units of red cell concentrate were transfused to the patient. A whole abdominal computed tomography scan was done under emergency conditions and the CT scan revealed extremely dilated upper jejunal segments, fluid-air levels, an ileus appearance along with findings secondary to ileus including thickening at the root of mesentery around the upper jejunal segments and reactive free fluid around intestinal loops with an average depth of 2 cm. A cystic mass of mesentery origin was detected at the level right middle quadrant, at the location where the bowel became obstructed and the caliber of the jejunum became thinner. The cystic mass was 49x57x58 mm in dimensions; it contained fat and had regular contours. At this level, a volvulus of a jejunal loop was detected. Although a certain amount of stool and gas was observed in the colonic lumen, descending colon, sigmoid colon and rectum appeared to be empty (Image 1).
The assessment of previous patient records revealed that the patient had presented with abdominal pain 6 months ago and she had undergone an abdominal ultrasound at that time. The abdominal ultrasound had revealed a thin-walled, hyperechoic mass, 64x59x58 mm in dimensions, on the left side, at the level of the umbilicus and a CT had been performed. Although abdominal CT scans had provided further support to ultrasound findings and she had been offered surgery, she had refused surgical removal of the mass lesion (Image 2).

The patient underwent surgery under emergency conditions as the mass was considered to have crossed from the left side to the right side as a result of a volvulus and caused ileal compression and obstruction. The surgical procedure was initiated and completed as a laparoscopic procedure. During the procedure, an ileal loop was found to be partly dilated and partly thinned. The mass lesion was considered to be originated from the mesentery and the mass lesion and a band were found to cause ileus by compressing the jejunum (Image 3).
The mass lesion which had been previously detected in the left side of the abdominal cavity on the ultrasound scans had crossed to the right side leading to a volvulus. In our patient the cyst was found to be a cyst caused by gallstone spillage during prior surgery.

In conclusion, we aim at emphasizing that past medical history obtained from a patient at emergency admission should be as detailed as possible. We should keep in mind that the causes of mechanical bowel obstructions in patients who have undergone open/laparoscopic surgery may not be limited to adhesions or masses and foreign bodies are also among the underlying causes of ileus. We aimed to emphasize that if a gallstone spillage occurs during cholecystectomy procedures complicated by gallbladder perforation, spilled gallstones should be retrieved, if possible and serious complications may result from spilled gallstones when their retrieval is not possible.

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