Shortness of breath and jaundice

JAD Stewart, MC Gunn, BJ Rathbone, GSM Robertson

A 72-year-old woman was admitted from out-patients for investigation. She complained of increasing shortness of breath with reduced exercise tolerance, coughing mucoid sputum and a hoarse voice over the previous three months. Her daughter (a nurse) had noticed that her mother had also gradually become jaundiced. On systems review there were no other symptoms. Her general practitioner had checked her full blood count and found her haemoglobin to be 8.2 g/dl with a normochromic/normocytic picture. She had been started on ferrous sulphate for this but was taking no other medication. Three years prior to this illness she had undergone a laparoscopic cholecystectomy, without apparent complication, the gall bladder being removed intact. Medical history also included left nephrectomy (for renal stones), and hysterectomy. She had no risk factors for liver disease.

On examination she was clinically anaemic and jaundiced. There were no stigmata of chronic liver disease. Her voice was noted to be hoarse. Cardiovascular examination was unhelpful. Respiratory examination showed her trachea to be central, with dullness to percussion and decreased air entry at the right base. Her abdomen was noted to be soft with a 2 cm liver edge palpable, rectal examination was normal.

Initial investigation revealed a normochromic/normocytic anaemia with a haemoglobin of 7.1 g/dl. Her bilirubin was raised at 57 $\mu\text{mol/l}$ with normal liver enzymes. A chest X-ray showed a raised right hemidiaphragm but no other abnormality. It was noted that a chest X-ray taken a year prior to presentation had a similar appearance. An ultrasound of the abdomen showed a fluid collection, possibly under the right hemidiaphragm, and subsequently a computed tomography (CT) scan was performed.

Figure 1

Figure 2

Endoscopy Unit,
Windsor Building,
Leicester Royal
Infirmary, Leicester
LE1 5WW, UK

JAD Stewart
MC Gunn
BJ Rathbone
GSM Robertson

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Questions

- 1 What abnormality is seen on the abdominal CT scan (figure 1)?
- 2 What is seen within this abnormality (figure 2)?
- 3 How would you manage this problem?

Answers

QUESTION 1

There is a large subphrenic abscess.

QUESTION 2

A surgical endoclip is seen within the abscess.

QUESTION 3

The patient was treated by insertion of a drain into the abscess under ultrasound guidance and oral ciprofloxacin. A total of 1200 ml of pus was drained, which grew coliform bacilli.

Discussion

Review of the history, clinical findings, and radiological abnormalities, suggests that this patient developed a collection under her right hemidiaphragm secondary to a clip migrating either during or following the laparoscopic cholecystectomy. The clip migration may have caused either a reactive effusion which subsequently became secondarily infected, or a small biliary leak at the time of the operation which was asymptomatic for three years. A CT scan seven weeks after discharge showed that fluid remained above the liver. This was thought to be a sterile serous collection and as the patient was well there were no plans for further drainage.

Treatment of cholelithiasis by laparoscopic cholecystectomy has become increasingly popular in the last decade and has now largely replaced elective open cholecystectomy. The operation time is approximately 70 min, average in-patient stay two days and the majority of patients require a maximum of two weeks convalescence. In addition, post-operative pain is reduced and the cosmetic result superior to open cholecystectomy. The complication rate is around 2% (compared

Summary points

- endoclip migration can occur after laparoscopic cholecystectomy and cause late onset pathology
- migration can occur to any site within the abdomen
- dyspnoea in association with right basal lung signs may be due to hepatic pathology

with 20% for the open procedure).¹ Endoclip migration is a rare complication of laparoscopic cholecystectomy and has been predominantly described in relation to metallic clips causing damage to the common bile duct and acting as nidus for stone formation.²⁻⁶

The majority of papers detail cases of endoclip migration into the common bile duct which manifest clinically within two years of the procedure with obstructive jaundice. A single case of clip migration into the peritoneum with final position on the right ovary has also been described.³ Nonbiliary complications of laparoscopic cholecystectomy (including postoperative subphrenic collection) represent approximately 4% of all complications. However, the majority present early and are predominantly secondary to bile spillage. The literature does not mention subphrenic collection secondary to clip migration and such a late complication has not been described.

Final diagnosis

Subphrenic abscess caused by migration of a surgical endoclip following laparoscopic cholecystectomy three years earlier.

Keywords: laparoscopic cholecystectomy, endoclip migration.

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