Extraluminal gallstone causing bowel obstruction

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A 60-year-old woman presented to the Accident and Emergency department of our institute with symptoms of abdominal pain, distension, pyrexia, and malaise. Blood tests revealed a raised white cell count. The symptoms had started 48 hours earlier and gradually worsened. The patient had not had a bowel motion for the last 3 days. The initial clinical diagnosis was that of acute bowel obstruction. The patient did not have any significant medical history although she had had a laparoscopic cholecystectomy 14 years ago.

Plain radiograph of the abdomen, ultrasound examination and multidetector row CT (MDCT) scan of the abdomen and pelvis were performed.

At surgery, a calculus with surrounding inflammation was found adherent to the distal terminal ileum. There was also a small purulent collection around the terminal ileum. The calculus was removed and the collection was drained surgically. On examination the calculus was found to be of a mixed bilirubinate composition.

Laparoscopic cholecystectomy is now increasingly used for treatment of acute cholecystitis due to its low overall complication rates as compared to that of the open surgical approach. However, two complications occur more frequently with the laparoscopic technique; first, there is an increased incidence of bile duct injury, and secondly an increased incidence of gall bladder perforation with resultant bile leakage and spillage of...
The incidence of gall bladder perforation during laparoscopic cholecystectomy is estimated at 15-30%. The incidence of dropped gallstones is estimated at 10-12%. Late complications of dropped gallstones, such as abscess formation are actually quite rare (0.3%) and can occur years after the procedure.[1] Bilirubinate stones are more likely to cause infectious complications as they often contain viable bacteria. Inflammation and abscess formation usually occurs in the subhepatic space or in the retroperitoneum below the subhepatic space. Unusual locations have also been reported which include subphrenic space, right thorax, at trocar sites, pouch of Douglas and the ovary.[2-3] The varying locations of dropped gallstones are due to the employment of pneumoperitoneum and peritoneal irrigation during the surgical procedure. The reported time range for abscess formation due to a spilled gallstone is between 4 months to 10 years. CT and ultrasound imaging are reliable in the diagnosis of the complications of dropped gallstones.[4-6]

In summary, we report a case of a dropped gallstone, which being in a slightly atypical anatomical location raised the differential diagnosis of Meckel’s diverticulitis and appendicitis. The multiplanar imaging capability available with MDCT was crucial in reaching the correct diagnosis. We emphasize that the finding of a collection with contained calculus within the abdomen or pelvis should alert radiologists to the possibility of an inflamed, dropped gallstone even years after surgery.

References