

Abdominal Pain: An Unusual Case

S.W. Lim, D-M. Rigby, S. Shamshuddin

CLINICAL PRESENTATION

80-year-old patient with known gallstones presented with acute abdominal pain, distension and vomiting. Abdominal radiograph (AXR) was requested to rule out bowel obstruction and a subsequent CT performed.

IMAGES

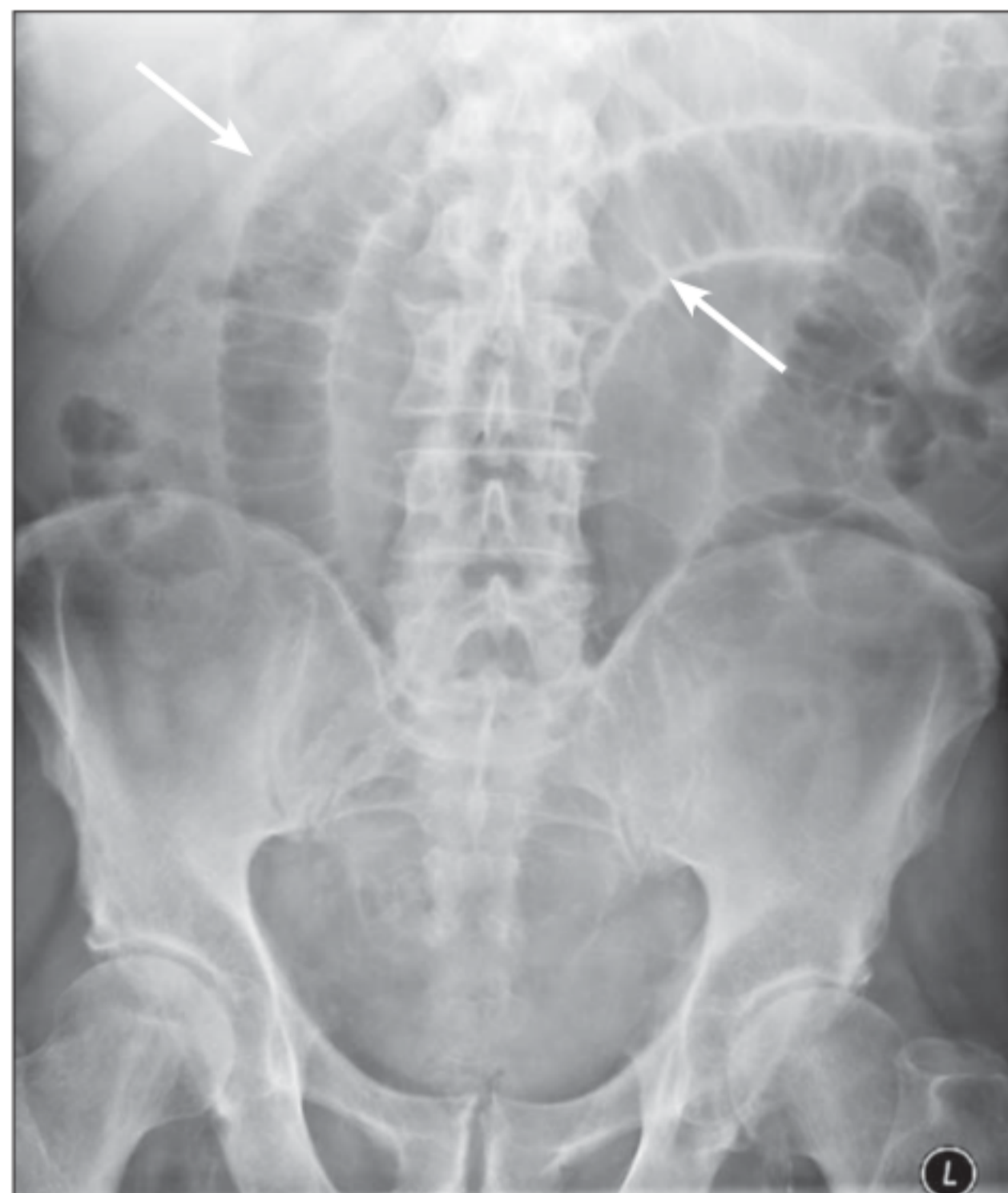


Figure 1: AXR shows dilated gaseous small bowel loops in the central abdomen



Figure 2: Coronal image shows pneumobilia in the central hepatic region (short white arrow), 'Mercedes-Benz' sign (long white arrow), and intraluminal calcified gallstone with long segment of dilated small bowel loops

DIAGNOSIS

Small bowel obstruction secondary to gallstone ileus.

RADIOGRAPHIC FEATURES

- Dilated central small bowel loops
- Gallstone within the small bowel
- Pneumobilia (gas within the biliary tree): linear branching gas predominantly in the central liver
- Site of fistulation from the gallbladder to small bowel may be visible
- *Rigler's triad*: small bowel obstruction, pneumobilia and gallstone
- *Mercedes-Benz sign*: tri-radiate (star-shaped) pattern of gas fissuring within gallstone

GALLSTONE ILEUS

Small bowel obstruction secondary to gallstone impaction is relatively uncommon. However, it is not unheard of especially in patients with background of chronic cholecystitis and gallstones. Recurrent inflammation of the gallbladder can cause adhesions between the gallbladder and small bowel, forming a fistulous communication. Mechanical small bowel obstruction occurs when a gallstone passes into the small bowel via the fistula and causes impaction (typically at the ileocaecal junction but may obstruct at any other location along the bowel).

DIFFERENTIAL DIAGNOSES FOR SMALL BOWEL OBSTRUCTION

- Hernia
- Adhesions
- Tumour
- Volvulus

FURTHER EXAMPLES DEMONSTRATING THE RADIOGRAPHIC FEATURES OF GALLSTONE ILEUS ON CT

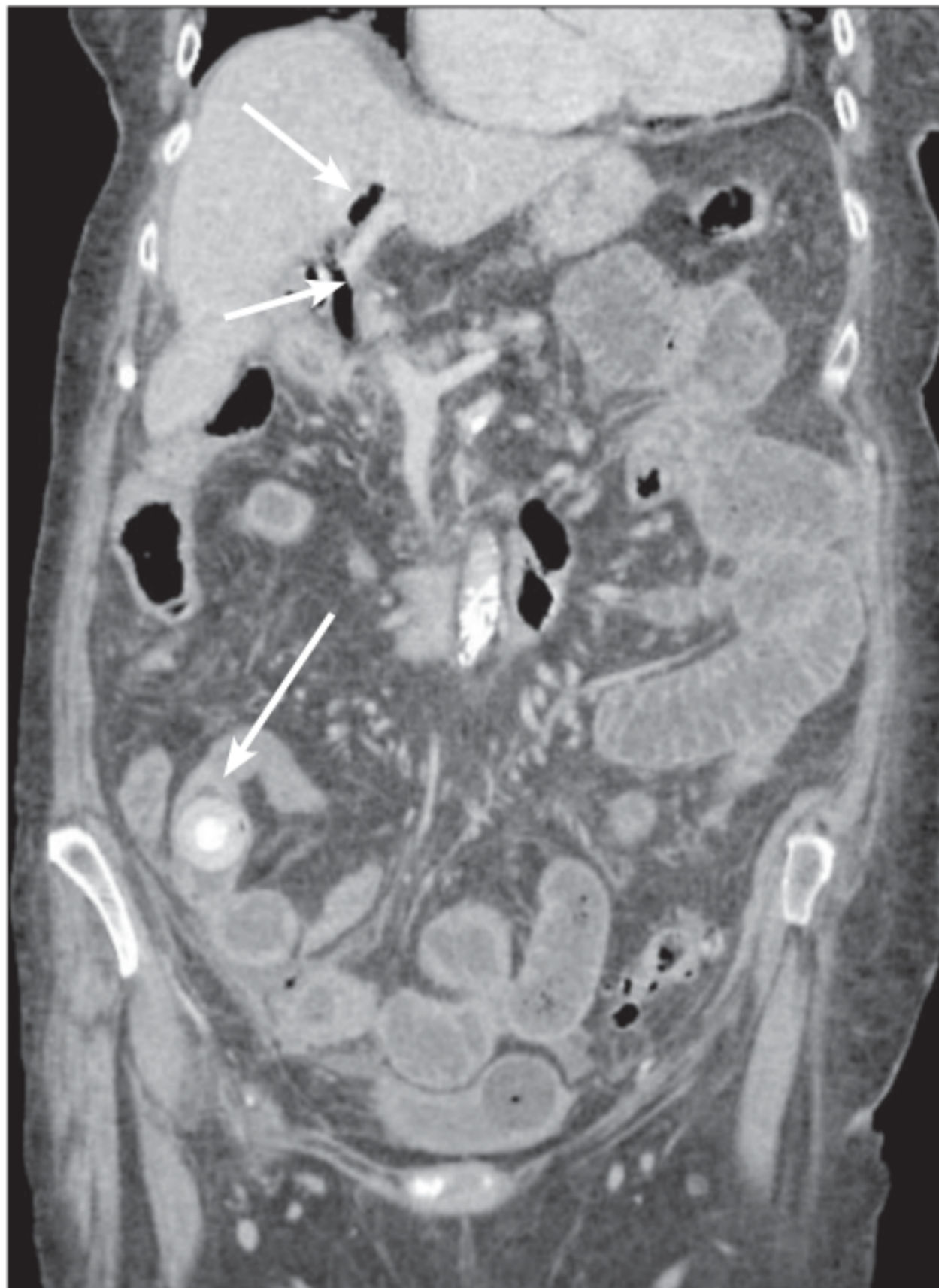


Figure 3: *Rigler's triad:* Pneumobilia (short white arrows), dilated small bowel loops, intraluminal lamellated calcified gallstone in the right iliac fossa impacted at ileocaecal junction (long white arrow)



Figure 4: *Mercedes-Benz sign* indicating a large gallstone

REFERENCES

RLI Museum of Cases, 2016. Department of Radiology, Royal Lancaster Infirmary

Radiopaedia.org, 2016. *Gallstone Ileus*. [online] See <http://radiopaedia.org/articles/gallstone-ileus>

Correspondence to:
S. Shamshuddin
Consultant Radiographer, RLI