Royal Australasian College of Surgeons

Re: Chilaiditi's sign: a rare presentation of pseudo-pneumoperitoneum masquerading as an acute abdomen

Dear Editor,

We read the article by Nassour *et al*.,[1] which was published in your esteemed journal, with great interest. We have a few additional comments regarding this sign, which will place Chilaiditi syndrome – coexistence of the radiological sign with abdominal symptoms – in context.

The authors state that surgical management should be considered in patients who fail conservative management or develop complications.[1] We agree with the authors entirely and would like to add an essential point regarding Chilaiditi syndrome. Surgeons should be aware that Chilaiditi syndrome may be the initial presentation of a colonic malignancy.[2,3] Patients with carcinoma rectum can also present with Chilaiditi syndrome.[3]

Patients who fail conservative management even without complications can be managed by laparoscopic colopexy. Recently, colopexy has been performed using da Vinci Si (Intuitive Surgical) with multi-port technique.[4]

The index case is an important example that mild abdominal pain with distension of the abdomen and subphrenic free air may not always suggest a surgical abdomen. Although dyspnoea was because of pneumonia in this particular case, many cases of dyspnoea with Chilaiditi sign have been reported without respiratory pathology. Therefore, chest physicians should be aware that dyspnoea is not always due to a problem in the chest. A combination of detailed clinical history, physical examination and imaging techniques such as computed tomography may help arrive at a correct diagnosis and avoid unnecessary surgery.

Author contributions

Vipul D. Yagnik: Conceptualization; design; formal analysis; validation; methodology; writing – original draft (lead); writing – review and editing. **Sushil Dawka:** Methodology; supervision; validation; writing – original draft (supportive); writing – review and editing. **Pankaj Garg:** Design; methodology; supervision; validation; writing – original draft (supportive); writing – review and editing.

References

1. Nassour AJ, Ashrafi D, Gatmaitan R, Ashrafi D, Raufian K. Chilaiditi's sign: a rare presentation of pseudo-pneumoperitoneum masquerading as an acute abdomen. *ANZ J. Surg.* 2021; **91**: 2540–2. https://doi.org/10.1111/ans.16747.
2. Yagnik VD. Chilaiditi sign. *Lung India* 2010; **27**: 190.
3. Yagnik VD. Chilaiditi syndrome with carcinoma rectum: rare entity. *Saudi J. Gastroenterol.* 2011; **17**: 85–6.
4. Garcia O, Rayhrer C. Surgical management of Chilaiditi syndrome with da Vinci® robotic system. *Int. J. Surg. Case Rep.* 2017; **41**: 450–2.

Vipul D. Yagnik,* MS, FMAS, FIAGES, FAIS, FISCP
Sushil Dawka,† MS
Pankaj Garg,‡ MS, FASCRS
**Department of surgical gastroenterology, Nishtha Surgical Hospital and Research Centre, Patan, India, †Department of Surgery, SSR Medical College, Belle Rive, Mauritius and ‡Department of colorectal surgery, Garg Fistula Research Institute (GFRI), Panchkula, India*

doi: 10.1111/ans.17257

Spontaneous visceral pseudoaneurysm rupture and COVID-19 vaccination

Dear Editor,

We would like to share ideas on Chue *et al*.'s study.[1] This is a rare clinical presentation. We agree that the case is rare and might be a possible complication of COVID-19 vaccination. An interesting question is whether there is any pathological mechanism explaining interrelationship between spontaneous visceral pseudoaneurysm rupture and COVID-19 vaccination. Generally, pseudoaneurysm might silently exist. After vaccination, increased blood viscosity might occur.[2] Hyperviscosity might be a trigger factor for vascular problems including rupture of aneurysm.[3] It is advised that there should be a good monitoring plan for any patient with aneurysm and other vascular diseases after COVID-19 vaccination.

References

1. Chue KM, Tok NWK, Gao Y. Spontaneous rare visceral pseudoaneurysm presenting with rupture after COVID-19 vaccination. *ANZ J. Surg.* 2021. https://doi.org/10.1111/ans.17199.
2. Joob B, Wiwanitkit V. Expected viscosity after COVID-19 vaccination, hyperviscosity and previous COVID-19. *Clin. Appl. Thromb. Hemost.* 2021; **27**: 10760296211020833.
3. Gonzalez-Urquijo M, de Zamacona RG, Mendoza AKM *et al*. 3D modeling of blood flow in simulated abdominal aortic aneurysm. *Vasc. Endovascular. Surg.* 2021; **55**: 677–83.

Pathum Sookaromdee,* PhD
Viroj Wiwanitkit,† MD
*Private Academic Consultant, Bangkok, Thailand and
†Department of Community Medicine, Dr DY Patil University, Pune, India

doi: 10.1111/ans.17224

Bouveret syndrome: a rare case of gastric outlet obstruction in a young patient

Dear Editor,

A 37-year-old Asian female with a history of hereditary spherocytosis presented to our institution with complaints of acute epigastric pain and non-bilious emesis. Physical examination showed marked jaundice and epigastric tenderness. Laboratory investigations revealed elevated white cell count of 20.59×10^9 cells/L (normal range $3.83–9.91 \times 10^9$ cells/L) and bilirubin level of 128 μmol/L (normal range 3–21 μmol/L). Computed tomography scan of the abdomen showed Rigler's triad of duodenal obstruction, a gallstone outside the gallbladder and pneumobilia (Fig. 1).

A diagnosis of Bouveret syndrome (BS) and cholecystoduodenal fistula was made. The patient underwent urgent laparoscopic converted to open pyloroduodenotomy with intraoperative oesophagogastroduodenoscopy. The impacted gallstone was crushed and removed using Desjardins gallstone forceps and endoscopic Roth Net retriever. The gallbladder was not removed to minimize emergency operative duration. The patient made an uneventful recovery with normalization of white cell count and bilirubin level. Cholecystectomy and closure of the cholecystoduodenal fistula was offered as a second-stage procedure during subsequent clinic review but was declined by the patient.

First reported by Leon Bouveret in 1896, BS is defined as gastric outlet obstruction by a gallstone.[1] It is a rare cause of gallstone ileus, comprising <3% of reported cases.[2] The large gallstone typically associated with BS causes a cholecystoduodenal fistula, leading to gallstone impaction in the pylorus or proximal duodenum. Although usually seen in elderly females,[3] our young patient has hereditary spherocytosis, which predisposes to a higher risk of gallstone formation, resulting in her earlier presentation.

Management options include surgical enterolithotomy and/or endoscopic lithotripsy with net extraction techniques.[4] Cholecystectomy with fistula repair at index surgery or as a staged procedure is contentious, as patients are usually elderly with significant co-morbidities. There remains no consensus regarding this. Treatment should be individualized based on the overall fitness, co-morbidities and perioperative condition of the patient.

Informed consent was obtained from the patient for the purposes of publication.

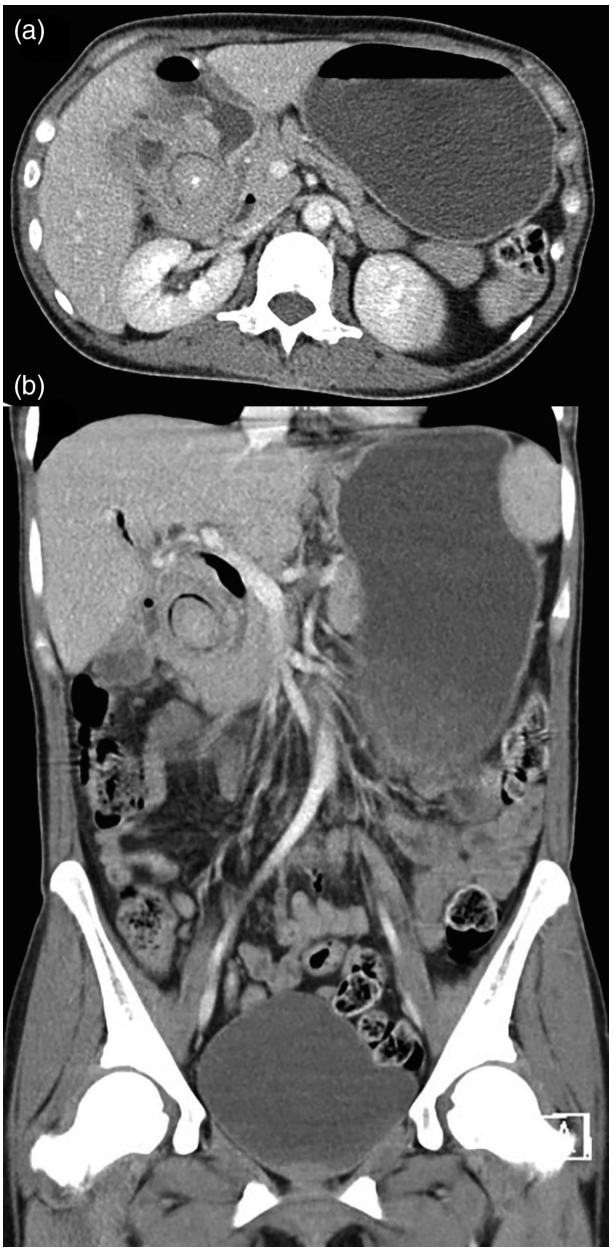

Fig 1. Computed tomography scan of the abdomen with Rigler's triad demonstrated in (a) axial view showing gallstone impacted at the second part of duodenum and (b) coronal view showing a 3 × 2 cm gallstone outside the gallbladder and pneumobilia.

Author contributions

Shaun Chan: Conceptualization; writing – original draft; writing – review and editing. **Chun Hai Tan:** Writing – review and editing. **Kheng Tian Lim:** Supervision; writing – review and editing.

References

1. Bouveret L. Stenose du pylore adherent a la vesicule. *Rev Med (Paris)*. 1896; **16**: 1–16.