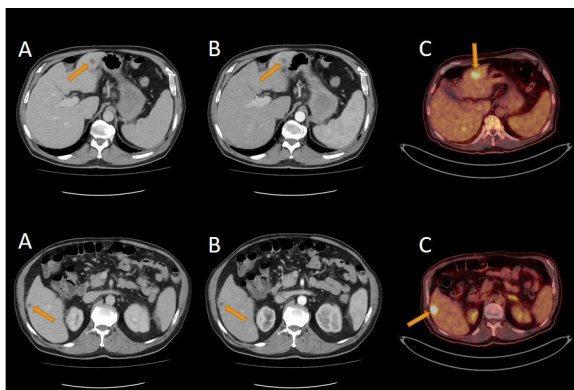


## EDITOR'S QUIZ: GI SNAPSHOT

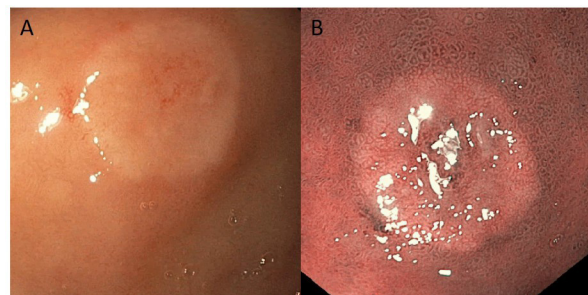
## Duodenal and liver lesions in an adult with generalised weakness

### CLINICAL PRESENTATION

A 73-year-old man with a history of heart failure and hypertension presented with a several-week history of generalised weakness, anorexia, 5 kg weight loss, intermittent small volume hematochezia and right upper quadrant abdominal pain. He denied fever, chills, dysphagia, nausea, vomiting, diarrhoea and constipation. He had no previous endoscopy or colorectal cancer screening.



**Figure 1** Venous (A) and arterial (B) phase CT image and  $^{18}\text{F}$ -FDG PET (C).



**Figure 2** White-light and narrow-band imaging of duodenal lesion on oesophagogastroduodenoscopy.

His admission vital signs were normal. He was anaemic (haemoglobin 8.6 g/dL reference 12–18 g/dL), with mean corpuscular volume 83 (81–100 fL/cell), ferritin 321.9 (11–336 ng/mL), alkaline phosphatase 174 (38–127 IU/L), albumin 2.4 (3.5–4.9 g/dL), total bilirubin 0.8 (0.2–1.2 mg/dL) and aspartate aminotransferase/alanine aminotransferase 28/21 (10–40 U/L, 7–56 U/L). Serological tests for hepatitis and HIV were negative. RPR was negative 1 month previously. CT imaging with intravenous contrast ([figure 1](#)) revealed six target-like liver lesions (0.7 to 1 cm) with peripheral arterial enhancement and several enlarged coeliac lymph nodes (largest 0.8 cm). Due to anaemia/hematochezia, upper and lower endoscopy were performed. His oesophagogastroduodenoscopy showed a 1 cm elevated round lesion with clear margins and depressed centre with no clear ulceration in the duodenum ([figure 2](#)), and biopsy of the lesion was obtained. Colonoscopy was normal. PET/CT showed several areas of FDG-avid uptake in the liver ([figure 1](#)) and retroperitoneal lymph node enhancement. Liver biopsy was obtained.

### QUESTION

What is the most likely diagnosis?

*See page 1581 for answer*

# Duodenal and liver lesions in an adult with generalised weakness

See page 1554 for question

## DISCUSSION

Liver biopsy showed a dense population of S100-positive spindle cells in nests and fascicles with dense inflammatory infiltrate, abscess formation and focal granulomata (figure 3). The immunohistochemical profile was not consistent with vascular, hepatocellular or melanocytic neoplasms. Stains for acid-fast bacillus and fungal organisms were negative. An initial diagnosis of inflammatory pseudotumour was rendered. Duodenal biopsy showed severe acute and chronic mucosal inflammation, but no *Helicobacter pylori*. He was discharged but readmitted after 4 days with fever (temperature 39°C) and leucocytosis (white blood cells  $16 \times 10^9/L$ ) with 86% neutrophils). Rapid plasma reagin (RPR) was positive (1:64) with confirmation by microhemagglutination assay for *Treponema pallidum* antibodies. Steiner stain of the liver (figure 4) and duodenal biopsies showed spirochetes and he was diagnosed with secondary syphilis. On learning the diagnosis, the patient admitted recent oral sexual behaviour with one female partner but no high-risk sexual behaviours. Follow-up CT 2 weeks after a 3-week course of penicillin injections showed interval decrease in the size of his liver lesions and resolution of lymphadenopathy with complete resolution of symptoms and an expectation of full recovery.

This case describes a now rare manifestation of secondary syphilis presenting as liver and duodenal lesions. GI manifestations typically appear as mucosal oedema, erosions, superficial ulceration, nodularity or hypertrophy of gastric folds that are

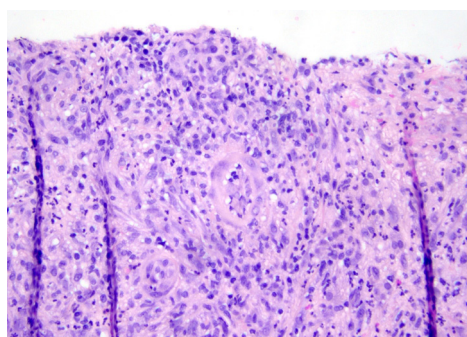


Figure 3 H&E stain showing focal granulomatous inflammation.

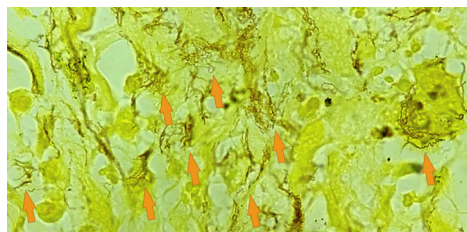


Figure 4 Steiner treponemal stain.

most often reported in the stomach but may also be present in the duodenum.<sup>1,2</sup> Direct infection of the mucosal surface by treponemal organisms is the mechanism for lesion formation as seen in figure 4. Inflammatory pseudotumours of the liver are another rare manifestation of secondary syphilis.<sup>3,4</sup> Given recent CDC data showing a resurgence in the incidence of syphilis, non-specific complaints with systemic manifestations within the GI tract should prompt a thorough sexual history and a low threshold for serological testing for syphilis.<sup>5</sup>

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