

## IMAGE OF THE MONTH

### Obstructive jaundice secondary to duodenal diverticulum (Lemmel's syndrome)

### Ictericia obstructiva secundaria a divertículo duodenal (síndrome de Lemmel)

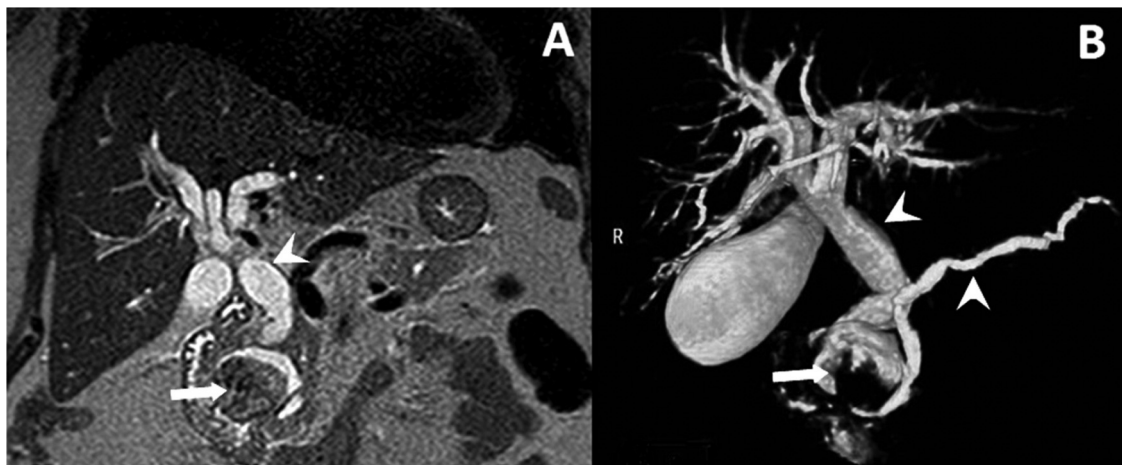
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Lemmel's syndrome is an uncommon pathology first described in 1934,<sup>1</sup> and is defined as an obstructive jaundice caused by a periampullary duodenal diverticulum compressing the intra-pancreatic part of the common bile duct resulting in upstream dilatation of the extra- and intra-hepatic bile ducts.<sup>2</sup>

A 74-year-old woman presented to the emergency department without any significant past medical history. The patient was being studied by the surgery department after having suffered several episodes of abdominal pain in the right hypocondrium, fever and jaundice. In addition, alkaline phosphatase, serum aspartate aminotransferase (AST),



**Figure 1** (A) T2-weighted coronal MR images of the abdomen and (B) MRCP with maximum intensity projection (MIP) demonstrated improved visualization of the dilated intra and extrahepatic bile ducts and pancreatic duct (arrow heads) caused by duodenal diverticulum (white arrow).

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**Figure 2** Contrast enhanced coronal CT, in which a duodenal diverticulum (black arrow) with air fluid level is observed (arrow head). Secondary dilatation of the common bile duct (white arrow).

alanine transaminase (ALT), and bilirubin metabolites were all elevated.

Ultrasound revealed intra- and extra-hepatic biliary ductal dilatation, without apparent cause. The patient

underwent an magnetic resonance cholangiopancreatography (MRCP) which proved dilatation of the biliary tract as well as a large duodenal diverticulum with an air-fluid level in its interior that was displacing and compressing the main biliary tract (Fig. 1), with no images suggesting cholelithiasis or choledocholithiasis; this finding was consistent with a subsequent CT study (Fig. 2). Other causes of obstruction of the bile duct were not recognized. These findings were compatible with Lemmel syndrome.

### Conflict of interest

The authors declare that they have no competing interest.

### References

1. Lemmel G. Die klinische Bedeutung der Duodenaldivertikel. *Digestion*. 1934;56:59–70, <http://dx.doi.org/10.1159/000196978>.
2. Desai K, Wermers JD, Beteselassie N. Lemmel syndrome secondary to duodenal diverticulitis: a case report. *Cureus*. 2017;9:e1066, <http://dx.doi.org/10.7759/cureus.1066>.