A 91-year-old woman presented with jaundice. She denied abdominal pain and fever. Her medical history included hypertension and ischemic heart disease. Physical examination revealed stable vital signs and no abdominal tenderness. Complete blood count showed a white blood cell count of 9000/mm³, hemoglobin levels of 11.9 g/dl, and a platelet count of 191000/mm³. Biochemical tests detected elevated levels of C-reactive protein (6.27 mg/dl [reference range, <0.14 mg/dl]), total bilirubin (3.7 mg/dl [0.4–1.5 mg/dl]), aspartate aminotransferase (263 U/l [13–30 U/l]), alanine aminotransferase (293 U/l [7–23 U/l]), γ-glutamyl transpeptidase (265 U/l [9–32 U/l]), and alkaline phosphatase (1181 U/l [106–322 U/l]). Computed tomography (CT) showed dilation of the common bile duct (CBD; 10 mm in size) and a duodenal diverticulum (36 mm in size) but no CBD stones. Due to suspicion of acute cholangitis, endoscopic retrograde cholangiopancreatography was performed. A large juxtapapillary duodenal diverticulum was noted (FIGURE 1A), and no gallstones or tumor was identified (FIGURE 1B). The distal CBD was laterally compressed by the enlarged juxtapapillary diverticulum with endoscopic air insufflation (FIGURE 1C). This compression was resolved with air suction. Acute cholangitis caused by Lemmel syndrome was diagnosed. Endoscopic sphincterotomy was performed. No lithiasis was present, and the bile culture yielded growth of Klebsiella pneumoniae. The patient’s condition improved with antibiotics, and she has remained asymptomatic for 2 years.

Lemmel’s syndrome is defined as obstructive jaundice due to a juxtapapillary diverticulum in the absence of cholelithiasis or other detectable obstacles. The following pathological mechanisms have been proposed; 1) distal CBD or ampulla can be directly compressed by a juxtapapillary diverticulum filled with food material or enterolith; 2) diverticulitis may cause chronic inflammation of an ampulla; and 3) a juxtapapillary diverticulum was noted (FIGURE 1A), and no gallstones or tumor was identified (FIGURE 1B). The distal CBD was laterally compressed by the enlarged juxtapapillary diverticulum with endoscopic air insufflation (FIGURE 1C). This compression was resolved with air suction. Acute cholangitis caused by Lemmel syndrome was diagnosed. Endoscopic sphincterotomy was performed. No lithiasis was present, and the bile culture yielded growth of Klebsiella pneumoniae. The patient’s condition improved with antibiotics, and she has remained asymptomatic for 2 years.

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diverticulum may cause sphincter of Oddi dys- 
function.\(^1\)\(^3\) Although CT, magnetic 
resonance cholangiopancreatography, and 
endoscopic ultrasonography are safe and 
useful modalities in the diagnostic workup 
of patients with obstructive jaundice, 
endoscopic retrograde cholangiopancreatography 
allows the real-time diagnosis and treatment, 
as shown in this case. Preferred treatment 
options include endoscopic sphincterotomy 
and biliary stent placement, which were 
reported to reduce the risk of morbidity 
and mortality.\(^1\)\(^4\) In conclusion, although 
rare, Lemmel’s syndrome should be included 
in the differential diagnosis of biliary 
stenosis if a juxtapapillary diverticulum is present.

ARTICLE INFORMATION

CONFLICT OF INTEREST None declared.

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