Biliary pneumatosis: a new finding in a patient with cholangitis

A 72-year-old man with a previous history of renal transplantation for autosomal dominant polycystic kidney disease and secondary sclerosing cholangitis caused by recurrent bile duct injury with hepatolithiasis was admitted with a new episode of cholangitis, with a gallstone, but no signs of septic shock. Additionally, he had undergone cholecystectomy and Roux-en-Y hepaticojejunostomy 2 years previously.

During the current hospital admission, percutaneous transhepatic cholangiography showed multiple strictures along the right and left intrahepatic ducts, with a gallstone in the left duct. Percutaneous radiological management failed because of an impassable stenosis. Thereafter, endoscopic duodenojjunostomy with a lumen-apposing metal stent (LAMS; Hot-AXIOS; Boston Scientific Co., Marlborough, Massachusetts, USA) was performed to facilitate access to the afferent limb and complete an evaluation of the left intrahepatic duct. A gastroscope was introduced into the hepaticojejunostomy through the LAMS (Video 1). A calculus within segment III of the liver was observed and fragmented using electrohydraulic lithotripsy (Fig. 1 and Fig. 2a). Additionally, the endoscopy revealed submucosal blebs in the left intrahepatic bile duct (Fig. 2b, c; Video 1), resulting in benign bile duct strictures. Some of the blebs were punctured with a sclerotherapy needle to confirm the presence of gas in the hepatic duct walls (Fig. 2d).

The appearance of the gas-filled blebs was consistent with biliary pneumatosis. The patient was discharged home on day 3 after his endoscopy.

This novel finding had not been observed on other previous imaging tests and persisted in the following endoscopic examinations. No additional signs of pneumatosis intestinalis were seen. Given the mechanisms of pneumatosis cystoides intestinalis, either mechanical damage due to previous radiological interventions or a bacterial etiology in the setting of multiple episodes of cholangitis could explain the submucosal bleb formation [1–3]. Finally, considering the evolution of advanced endoscopy for biliary access and endoscopic exploration of the biliary ducts, this could be the first description of many other cases.

Competing interests

Dr. Aparicio is a consultant for Boston Scientific. The remaining authors declare that they have no conflict of interest.
The authors

Carolina Mangas-Sanjuan, Belén Martínez-Moreno, Juan Martínez, Luis Compañy, Francisco Ruiz, Juan Antonio Casellas, José Ramón Aparicio
Hospital General Universitario de Alicante, Instituto de Investigación Sanitaria y Biomédica de Alicante, ISABIAL, Spain

Corresponding author

José Ramón Aparicio, MD
Endoscopy Unit, Hospital General Universitario de Alicante, C/ Pintor Baeza 12, 03010 Alicante, Spain
japariciot@gmail.com

References


Bibliography

Endoscopy 2021; 53: E211–E212
DOI 10.1055/a-1244-9419
ISSN 0013-726X
published online 11.9.2020
© 2020. Thieme. All rights reserved.
Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

ENDOSCOPY E-VIDEOS
https://eref.thieme.de/e-videos

Endoscopy E-Videos is a free access online section, reporting on interesting cases and new techniques in gastroenterological endoscopy. All papers include a high quality video and all contributions are freely accessible online.

This section has its own submission website at https://mc.manuscriptcentral.com/e-videos

Fig. 2 Endoscopic views showing: a hepatolithiasis fragmentation using electrohydraulic lithotripsy; b the hepatic duct bifurcation with a gas-filled bleb; c another submucosal bleb within the left intrahepatic duct; d puncture of a bleb with a sclerotherapy needle releasing gas.