

PICTURES IN DIGESTIVE PATHOLOGY

Bronchobiliary fistula

Emilia Martínez-Velado¹, Luis Miguel Palomar-Rodríguez¹ and Juan Ramón Olivo-Esteban²

Departments of ¹Internal Medicine and ²Diagnostic Radiology. Complejo Asistencial de Zamora. Zamora, Spain

CASE REPORT

An 87-year-old man with irrelevant clinical record was admitted to the hospital with a 3-day history of fever up to 39 °C, biliary expectoration and vomiting, together with dysnea. Physical examination showed mildly lowered level of consciousness, tachypnea, basal rhonchi and abdominal distention. Plain abdomen and chest radiographies demonstrated dilation of small bowel loops and right basal condensation, respectively. Scleroatrophic gallbladder with cholelithiasis were detected by abdominal sonography. Biliary content after insertion of nasogastric tube. Thoraco-abdominal computed tomography (CT) confirmed right basal pneumonic infiltrate and subphrenic abscess. Ceftriaxone, gentamicin and metronidazole combination therapy was empirically administered. Vancomycin-sensitive *Enterococcus faecium* grew at an abscess sample culture, so antibiotherapy was changed. Helical three-dimensional CT scan reconstruction performed by contrast injection through previously-implanted percutaneous drainage catheter (Fig. 1 A and B, lower arrows) evidenced a bronchobiliary fistula (Fig. 1 A and B, upper arrows), presenting clear pathway between both structures. Laparoscopic cholecystectomy as well as completion of abscess evacuation were carried out. Satisfactory evolution after 6-month follow-up.

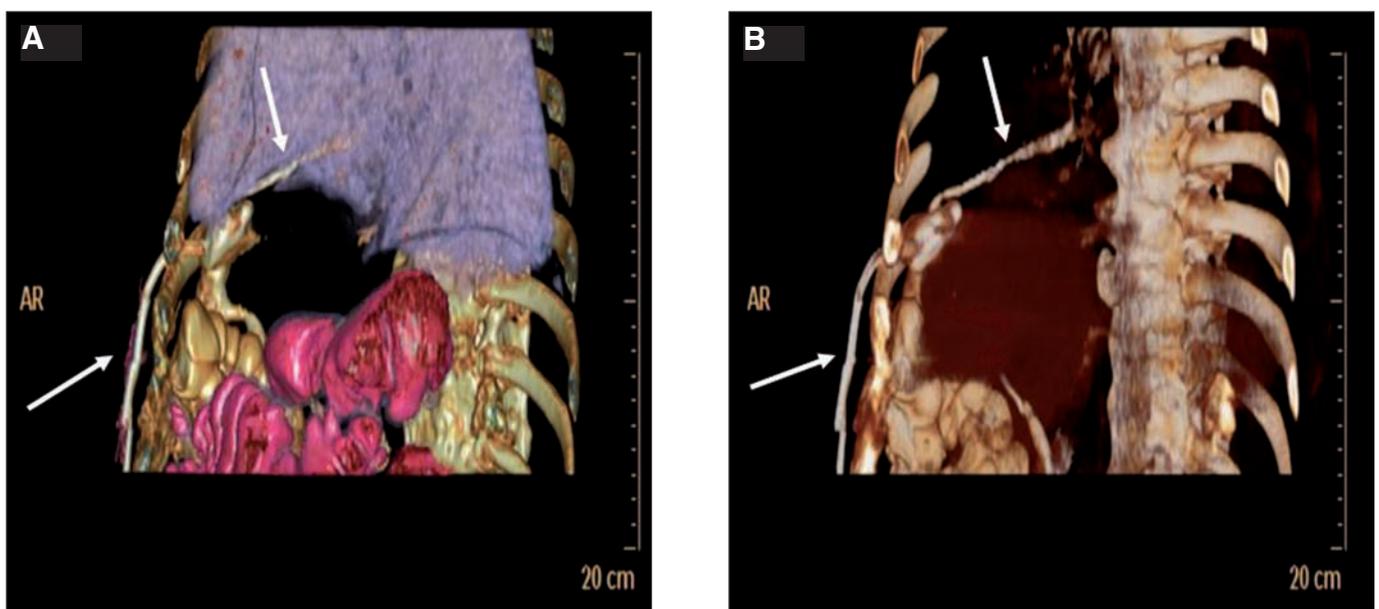


Fig. 1 A and B. CT scan 3-D reconstruction showing a percutaneous biliary drainage (lower arrows) which leads to identify a fistulous bronchobiliary pathway after contrast administration (upper arrows).

DISCUSSION

Biliobronchial fistula is an infrequent entity, often linked to hydatidosis or biliary obstruction (1), as a result of a local inflammatory process with abscessification and rupture towards lung and bronchi. It can lead to significative complications, including chemical and bacterial pneumonitis, or mediastinitis, with morbimortality up to 12.2% (2).

Biliary sputum –bilioptysis– is pathognomonic (3). CT scan offers a first subphrenic and basal lung assessment. Endoscopic retrograde or percutaneous cholangiography display the biliary anatomy. Contrast-enhanced magnetic resonance adds functional information (4).

Therapy is based on endoscopic decompression with stent o percutaneous puncture. If these options are not feasible, an open surgical desobstruction is indicated, together with abscess evacuation and excision of the fistulous tract (5).

REFERENCES

1. Gugenheim J, Ciardullo M, Traynor O, Bismuth H. Bronchobiliary fistulas in adults. *Ann Surg* 1988;207:90-4.
2. Al-Mezem SS, Al-Jahdali HH. Chronic cough due to bronchobiliary fistula. *Respiration* 1999;66:473-6.
3. Eryigit H, Oztas S, Urek S, Olgac G, Kurutepe M, Kutlu CA. Management of acquired bronchobiliary fistula: 3 case reports and a literature review. *J Cardiothorac Surg* 2007;2:52.
4. Aduna M, Larena JA, Martin D, Martinez-Guereñu B, Aguirre I, Astigarraga E. Bile duct leaks after laparoscopic cholecystectomy: value of contrast-enhanced MRCP. *Abdom Imaging* 2005;30:480-7.
5. Chong CF, Chong VH, Jalihal A, Mathews L. Bronchobiliary fistula successfully treated surgically. *Singapore Med J* 2008;49:208-11.