Impacted intrahepatic stone: Laparoscopic-endoscopic approach using flexible cholangioscopy

Litiasis biliar intrahepática impactada: abordaje laparoendoscópico empleando colangioscopia flexible

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Endoscopic transampullar examination of the biliary tract is considered the standard method of treatment for stones in its interior, but it is not effective in all scenarios. That procedure is successful in stones impacted in the intrahepatic ducts when additional resources are used, such as cholangioscopy and lithotripsy (electrohydraulic or laser), and with the possibility of their repetition, which significantly increases costs.

We describe the case herein of a young man that sought medical attention due to obstructive jaundice and recurrent episodes of cholangitis. Diagnosis was choledolithiasis with multiple stones, one of which was impacted (fig. 1 a,b).

Figure 1  Cholangio-NMR: The arrows point to the stone impacted in the right posterior segmental duct and in the common bile duct. a) 3D reconstruction. b) Axial view in T2.

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Antibiotic therapy was begun and cholecystectomy with laparoscopic examination of the bile ducts was performed using a flexible video-endoscope with a 5.3-mm diameter, a 2-mm working channel, and a Dormia basket (figs. 2 and 3 a-d). Complete stone extraction was achieved. The patient progressed satisfactorily and was released 48 h after the procedure. In the case described, cholecystectomy, laparoscopic examination of the biliary tract, and intraoperative cholangioscopy were a cost-effective treatment option.

**Ethical disclosures**

**Protection of human and animal subjects.** The authors declare that no experiments were performed on humans or animals for this study.

**Confidentiality of data.** The authors declare that they have followed the protocols of their work center on the publication of patient data.

**Right to privacy and informed consent.** The authors declare that no patient data appear in this article.

**Financial disclosure**

No financial support was received in relation to this article.

**Conflict of interest**

The authors declare that there is no conflict of interest.

Figure 2  Laparoscopic dissection of the common bile duct landmarked with sutures (Prolene® 3-0).

Figure 3  Series showing the steps during the laparoscopic examination of the biliary tract: a) choledocotomy; b) laparoscopic cholangioscopy (impacted intrahepatic duct stone); c) extraction of multiple stones with the Dormia basket; d) cholangioscopy after extraction of the stones.