

CARTAS AL EDITOR

Diagnosis and management of patients with an intermediate probability of choledocholithiasis

Key words: Choledocholithiasis. Common bile duct. Endoscopic retrograde cholangiopancreatography. Endoscopic ultrasonography. Magnetic resonance cholangiopancreatography. Cholecystectomy. Intraoperative cholangiography.

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Dear Editor,

We thank Dr. Dib for his interest in our prospective study, in which we assessed the accuracy of the American Society for Gastrointestinal Endoscopy guidelines for the prediction of choledocholithiasis (CL) (1).

The guidelines suggest the option of using a less-invasive initial test including endoscopic ultrasonography (EUS) or magnetic resonance cholangiopancreatography (MRCP) in patients with intermediate probability of CL (2). However, there is a paucity of published literature supporting this recommendation. Furthermore, in the study by Adams et al. (3) such a recommendation is not supported by their data. Additionally, because the prevalence of CL varies among ethnic groups, we did not consider performing pre-ERCP (endoscopic retrograde cholangiopancreatography) imaging studies in our study.

We speculate that if we had performed pre-ERCP imaging (EUS or MRCP), the accuracy of the guidelines would have improved from 41% to ~60% in this intermediate-probability subgroup. This was implied by analyzing those patients in our database with an intermediate and high probability of CL, the latter based solely on the presence of a common bile duct (CBD) stone on abdominal ultrasound (Table I). These patients with the presence of a CBD stone on ultrasound that did not fulfill any of the other high-probability criteria had a 61% probability of CL. Thus, even if we had used pre-ERCP imaging studies in the intermediate-probability subgroup, the rate of unnecessary ERCPs would probably continue to be unacceptably high (~40%) and even at a higher cost.

In this subgroup of patients, the cholecystectomy and intraoperative cholangiography (IOC) is a better diagnostic and therapeutic approach (4). Therefore, based on ERCP expertise the performance of cholecystectomy and IOC is a reasonable approach, so ERCP is performed postoperatively when the IOC is positive for CL or if needed for other complications (e.g., bile leak, duct injury) (5).

Table I. Probability of choledocholithiasis based on abdominal ultrasound*

Test result	ERCP finding		Total
	CL present	CL absent	
CBD stone on abdominal US	5 (71.4%)	2 (28.6%)	7
US negative	16 (41%)	23 (59%)	39
Total	21	25	46

Sensitivity = 24%; Specificity = 92%; PPV = 71%; NPV = 59%; Accuracy = 61%

Data were drawn from the database used in Narváez et al. Rev Esp Enferm Dig. 2016;108(6):309-14. Data are presented as absolute values; percentages are based on US result. ERCP: Endoscopic retrograde cholangiopancreatography; CL: Choledocholithiasis; CBD: Common bile duct; US: Ultrasound. PPV: Positive predictive value; NPV: Negative predictive value. *We analyzed patients in our database with intermediate-probability (US negative for CBD stone) and those with high-probability, the latter determined only for the presence of a CBD stone on the US (excluding those with either clinical ascending cholangitis, bilirubin > 4 mg/dL or the combination of the strong predictors, bilirubin level 1.8-4 mg/dL + CBD on US > 6 mm).

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