

Is endoscopic ultrasound-assisted cholecystogastrostomy sufficient to resolve malignant distal biliary obstruction from pancreatic cancer?

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Dear Editor:

First and foremost, we would like to congratulate Dr. Pinto et al. on their presentation of a Colombian case in which their technical success was evident throughout a surgery that required a high level of experience in endoscopic ultrasound and was performed remarkably well (1).

Endoscopic retrograde cholangiopancreatography (ERCP) is currently the standard treatment for jaundice caused by distal malignant biliary obstruction in patients with advanced disease or for palliative purposes (2, 3). In cases in which ERCP is not feasible or unsuccessful, without access to the papilla, endoscopic ultrasound-guided (EUS-guided) biliary drainage is considered an effective alternative treatment (3-5). EUS-guided choledoduodenostomy is the endoscopic technique preferred by many authors when biliary obstruction is distal, while hepaticogastrostomy is preferred in cases of proximal biliary obstruction or when there is no access through the duodenum (3, 4).

In cases in which ERCP is unsuccessful and EUS-guided biliary drainage is not possible, a transhepatic biliary drainage (percutaneous drainage) may be more efficient and safer. Most tertiary care centers offer interventional radiology services and, in terms of frequency, transparietohepatic biliary drainage is more common, considering that there may be more familiarity with the technique, which is highly relevant since it could reduce the risks associated with the procedure.

The experience of transparietohepatic biliary drainage in bile duct obstruction was detailed in a recently published study conducted in two universities of a Latin American country. With a sample of more than 500 patients, most cases were caused by malignant biliary obstruction; catheter patency was equal to or greater than 6 months in more than 70.4% of these cases, while complications (hemobilia and infection) occurred in 12.2% of the cases (6).

In cases of biliary obstruction, gallbladder drainage may have a residual impact on the bile load in the main bile duct, especially as one of the functions of spiral valves of Heister in the cystic duct is to prevent retrograde bile flow from the common bile duct to the gallbladder (7). In the cases referred to in the article prepared by Dr. Pinto et al., gallbladder drainage was performed in one case after attempting hepaticogastrostomy. After puncturing and drawing the biliary tree, it was concluded that drainage could not be carried out through this route (8). In the other cases discussed, EUS-guided

gallbladder drainage was performed in the context of acute cholecystitis and did not occur specifically due to biliary obstruction (9-13).

To date, only one retrospective study is known. It included 12 patients with malignant biliary obstruction who had their gallbladders drained using EUS-guided gallbladder drainage. In that study, this technique was used as a rescue therapy in an attempt to drain the bile duct in individuals in whom EUS-guided biliary drainage was not possible or refused percutaneous drainage because they wanted to avoid the external drainage tube. Technical success was reported in 100% of patients and functional success in 91% (functional success was defined as a reduction of more than 50% of total bilirubin in the 2-week follow-up); nevertheless, complications occurred in 16.9% (14).

Although the gallbladder is a large and often more convenient target for puncturing and draining, the goal of effectively draining the bile duct in malignant biliary obstructions may not always be achieved.

In this situation, in which enlarged gallbladder and cystic duct were evident, it may be of interest to pass a Fogarty catheter through the cystogastrostomy as a complement to biliary drainage to occlude it. Then, a contrast agent should be injected to perform a transcystic cholangiogram, followed by the passing of a guidewire to the bile duct, and finally using this gastrocystic communication to drain the bile duct with a double pigtail biliary stent. Another plausible option could be the passage of a conventional endoscope through cystogastrostomy, advance a guidewire

directly to the choledochus, and drain the bile duct with a double-tail pig stent.

In endoscopic interventionism, it is necessary to be very clear about the objectives and the target to be used for the approach. On the one hand, in cases of cholecystitis, a hydropic gallbladder that causes symptoms in patients who are not surgical candidates or patients who reject percutaneous drainage, EUS-guided gallbladder drainage should be attempted; but if the clinical problem is biliary obstruction, the target should be the bile duct (either EUS-guided or transparietohepatic) in the first place. On the other hand, in cases with duodenal obstruction, in which the duodenoscope fails to overcome duodenal stenosis (as described in this case), an attempt should be made to resolve gastric outflow obstruction using duodenal stenting or EUS-guided gastrojejunostomy to completely alleviate the patient's clinical problems.

In conclusion, EUS-guided cystogastrostomy is an excellent option in the context of acute cholecystitis or symptomatic hydropic gallbladder in patients who are not surgical candidates, whereas the benefits of biliary drainage using a cystogastrostomy may be limited.

In cases of distal malignant biliary obstruction in which ERCP or EUS-guided biliary drainage are not feasible, a transparietohepatic biliary drainage could be more effective and safer. However, in cases where transparietohepatic biliary drainage is not feasible or refused, EUS-guided gallbladder drainage could be offered as a compassionate rescue method.

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