Letter to the Editor

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Hepatico-jejunostomy: risk factors

Sir,

A scientific debate has been recently opened about the incidence of stricture after Roux-en-Y hepatico-jejunostomy (HJ). We consider this complication often related to previous inflammatory or vascular sufferings, which cause, at first, a biliary leak.

We arrived to this conclusion re-examining retrospectively 100 cases of HJ performed in the years 1995-2010 on adult patients, as single procedure or part of a more complex surgery. The indications were: common bile duct injury after cholecystectomy (19 cases), recurrent lithiasis (23), ascending cholangitis after choledoco-duodenostomy (16), Mirizzi's syndrome (2), unresectable cancers of the pancreas head (28), reconstruction after pancreatico-duodenectomy for pancreatic adenocarcinoma (12).

Only 5 cases (5%) presented post-operative complications, all beginning with an external biliary fistula: 3 patients operated for advanced pancreatic cancers, 1 for biliary peritonitis due to transection of the common bile duct after laparoscopic cholecystectomy, and 1 for recurrent choledoco-lithiasis. All these patients were successfully treated with trans-hepatic drainage and stent. In the remaining cases, the follow-up was satisfactory, excluding the final evolution of the known neoplastic disease.

In our experience, some guiding principles must be respected in planning and performing HJ.² First of all, inflammatory-infective risks must be avoided, because they can cause leak in the bilio-enteric anastomosis and subsequent stricture. We consider HJ contraindicated in case of concomitant acute peritonitis, acute cholangitis, and severe pancreatitis, where an external or internal biliary drainage remains the treatment of choice.³ For this reason, we also suggest the construction of a bilio-enteric anastomosis in a termino-lateral way, in order to prevent the 'sump syndrome', secondary to stagnant and infected biliary sludge in the blind biliary stump.

Moreover, leakage from the bilio-jejunal anastomosis can be favoured by vascular sufferance, venous congestion or ischaemia, of the biliary duct or jejunal loop. Venous congestion must be discovered pre-operatively with a CT- or MR-scan, which can demonstrate portal hypertension, or even a portal cavernoma. Ischaemia of the biliary stump can be detected intra-operatively: it

must be prevented through a careful dissection, and obliges to perform a high bilio-enteric anastomosis at the hepatic hilum.

The ischaemic risk can involve contemporarily the jejunal loop and its mesentery, when not 'tension-free' mounted, or constructed without attention to their vascular network. At mid- or long-term malfunction of the jejunal loop, biliary stasis and infection can follow.⁴

A temporary external biliary drainage, performed with a Kehr's T-tube or according to the Voelker's technique, decompresses the anastomosis in the early post-operative, so reducing the risk of leak, and favours radiological controls.⁵ A calibre of the common bile duct < 1 cm makes the bilio-enteric anastomosis more difficult and demands particular technical adjustements.⁶

These general principles help to decrease HJ complications, especially today when many radiological procedures, diagnostic and interventional, allow a better selection of cases. They can be also applied to bilioenteric anastomoses performed at the liver hilum or with the intra-hepatic ducts.⁷

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