COMMUNICATING PATHWAYS BETWEEN MAJOR HEPATIC ARTERIES. MYTH OR REALITY?

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Key words: *liver, blood supply, duodenopancreatectomy, angiography*

Background. The resources of anastomoses between major hepatic arteries are underestimated and do not used by HPB surgeons. It is supposed that this is only theoretical knowledge

Aim. To show the importance of this knowledge to practical purposes

Material and Methods. Analysis of 10 cases of liver survival due to communicating interlobar artery after major pancreatic and gastric resections and hepatic artery embolization, accompanied by dearterialization of one of the liver lobes. Monitoring of liver arterial supply intraoperatively was carried out by US Doppler of liver parenchyma, and after surgery — by CT angiography (CTA) and angiography.

Results and Discussion. Distal pancreatectomy with celiac (CA) and gastroduodenal artery resection (Michels IV), total duodenopancreatectomy with CA resection (Michels III), pancreaticoduodenectomy with common hepatic artery resection (Michels IX), total gastrectomy with resection of right hepatic artery originated from the CA (Michels I), total duodenopancreatectomy with resection of the left hepatic and embolization of the right hepatic artery and embolysatioembolization of the right hepatic arteries for multiple gunshot injuries (Michels I) and for huge hepatocellular carcinoma (Michels I) were performed without vascular reconstructions and ischemic sequelae within short- and long- term postoperative period. Postsurgical CTAs have shown that arterial supply to the liver lobes lacking their main arteries is provided through the anastomoses between major hepatic arteries.

Conclusions. The knowledge about the capability of anastomoses between major hepatic arteries allows to resect or embolise the main feeding lobar hepatic artery without reconstruction. In so doing intraoperative monitoring of blood supply must be used, which depending on circumstances can be ultrasound Doppler or angiography.

SPLEEN-PRESERVING DISTAL PANCREATECTOMY WITH SPLENIC VESSELS RESECTION. WHICH ARTERIES CAN WE RELY ON?

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Key words: *spleen, splenic vessels resection, surgery, pancreatectomy*

Background. The knowledge of spleen collaterals is important as for distal spleen-preserving pancreatectomy with splenic vessels resection (DSPPSVR), so as for possible upper GI surgery for these patients.

Aim. To clarify the sources of spleen blood supply after DSPPSVR.

Material and Methods. Perfusion of the cadaveric left gastric artery with a colouring agent after the occlusion of all arteries except for the short gastrics (n=10); Intraoperative Doppler ultrasound (IDU) for the evaluation of the splenic blood flow during distal pancreatectomy (n=18) after the splenic artery clamping, following the clamping of the splenic and the left gastro-epiploic arteries (LGEA) and after the clamping of the splenic and the short gastric arteries (SGA); CT-angiography (CTA) of gastric and splenic vessels before and after DSPPSVR (n=39).

Results and Discussion. The perfusion of cadaveric arteries after the occlusion of all the arteries except for the SGA never only once revealed a dyestuff in the spleen (through the accessory left gastric artery); IDU never detected any blood flow in the splenic hilum after the clamping of the splenic and the LGEAs; CTA after DSPPSVR never delineated SGA supplying the spleen. Postoperative CT revealed three types of splenic blood supply after DSPPSVR: with gastro-epiploic arcade (GEA) as a main collateral artery (n29, 74.3%), with the SGAs as a main collateral (n3, 7.7%) and intermediate type (n7, 18%)

Conclusions. The LGEA is the «main player» after DSPPSVR and must be carefully preserved. SGAs serves as a main collateral in very rare cases.