Lateral access of arcuate ligament in Whipple procedure with video

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Whipple procedure is characterized by the division of gastroduodenal artery (GDA) and the pancreatic duodenal arteries, which constitutes the substitution system between the celiac trunk and the superior mesenteric artery (SMA). The median arcuate ligament syndrome (10\% of the population) leads to a coeliac trunk stenosis. During the pancreatoduodenectomy, GDA and the substitution system are divided, potentially leading to an ischemia of the upper gastrointestinal compartment. Consequently, preoperative (arterial CT scan) and peroperative (hepatic artery doppler after GDA clamping) evaluation of the hepatic arterial flow should be performed. This video (Fig. 1) shows intraoperative management of patients with median arcuate ligament syndrome (approach and division). Preoperative enhanced CT scan showed a median arcuate ligament syndrome. Before any digestive resection, the procedure started by lateral dissection up to the right diaphragmatic crura. SMA, located at the top of the junction between the left renal vein and the inferior vena cava, was exposed with a vessel-loop. The dissection of the right diaphragmatic crus exposed the right inferior phrenic artery, which was ligated to avoid bleeding [1]. The celiac trunk was exposed and observed to be rejected on the left side. Initial clamping test of the GDA with doppler of the hepatic artery was performed and showed an insufficient hepatic arterial flow. Section of the arcuate ligament was performed at the top of the celiac trunk origin. After this intraoperative management, a second clamping test of the GDA showed a sufficient vascular flow in the right hepatic artery [2].

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Figure 1. Video extract of "Lateral access of arcuate ligament in Whipple procedure".

Author contributions

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Disclosure of interest

The authors declare that they have no competing interest.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at http://dx.doi.org/10.1016/j.jviscsurg.2015.11.003.

References