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Use of the inter-Laennec approach for laparoscopic anatomical right posterior sectionectomy in semi-prone position

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ABSTRACT

Background: Among the laparoscopic anatomical liver resections, the right posterior sectionectomy is highly demanding [1, 2], particularly when exposing the right hepatic vein (RHV). To standardize the procedure, the inter-Laennec approach was developed based on the Laennec's capsule structure, composed of two layers surrounding the RHV. One is derived from the proper membrane (hepatic Laennec's capsule) and the other from the pericardium (cardiac Laennec's capsule) [3]. The inter-Laennec approach is a new strategy to expose the RHV by entering the space between the two layers. Herein, we present the concept and procedure of the inter-Laennec approach.

Methods: The patient with 15-mm metastatic tumor close to the right posterior Glissonean pedicle and RHV was placed in left semi-prone position to obtain a good visual field [4]. After the isolation of the extrahepatic right posterior Glissonean pedicle and mobilization of the right liver, we transected the inferior vena cava ligament that facilitated entry into the inter-Laennec space between the hepatic and cardiac Laennec's capsules. We started the liver parenchyma transection between the right posterior section and caudate lobe, followed by cranio-caudal parenchymal dissection along the inter-Laennec space that safely facilitated the exposure of the RHV and confluences of the V7s.

Results: The operative time and estimated blood loss were 538 min and 250 mL, respectively. The surface of the RHV was completely exposed with a whitish and shiny appearance, suggesting it was covered by the cardiac Laennec's capsule.

Conclusion: The inter-Laennec approach is a feasible procedure to standardize laparoscopic right posterior sectionectomy.

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Conflicts of interest

Drs. Gozo Kiguchi, Atsushi Sugioka, Yutaro Kato, and Ichiro Uyama have no conflicts of interest or financial ties to disclose.

Authors' contribution

GK and AS conceived the new approach used in this study and GK

performed the surgery. GK and AS wrote the manuscript. All authors read and approved the final manuscript.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.suronc.2019.05.001>.

Abbreviations: RHV, right hepatic vein; V7s, tributaries of the right hepatic veins draining segment 7

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