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Robo-Lap Approach for Anatomical Resections of Postero-Superior Liver Segments by Indocyanine Green Fluorescence: Intraoperative Navigation Based on Vascular Landmarks

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Abstract
Cornerstones elements of surgical technique to achieve a good efficacy and safety profile in robotic anatomical resections of postero-superior segments have not yet reached an adequate level of standardization. In this technical note, surgical details to perform anatomical resections of postero-superior segments of the liver (Sg7 and Sg8) based on the identification of vascular landmarks and assisted by use of negative staining with indocyanine green (ICG) fluorescence will be described. In Sg7 segmentectomy, dorsal approach to portobiliary pedicle is suggested, followed by root to periphery approach to right hepatic vein along the negative staining demarcation line by indocyanine green. In Sg8 segmentectomy, root to periphery approach to middle hepatic vein allows comfortable indentification of Sg8 portobiliary pedicle. Approach to right hepatic vein is made easier by negative staining demarcation line. Robo-Lap approach allows to perform these procedures with an adequate level of safety and reproducibility.
Key words: robotic, liver surgery, postero-superior, navigation, indocyanine green