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ROBOTIC HILAR DISSECTION FOR LEFT HEPATECTOMY INCLUDING CAUDATE LOBE WITH BILE DUCT RESECTION

Jae Hoon LEE [1]

[1] *Hepatobiliary Pancreatic Surgery, Asan Medical Center, University of Ulsan, Republic of Korea*

Background : Compared to other liver malignancies, the minimally invasive treatment of perihilar malignancy is a relatively novel field. Laparoscopic resection is still not universally considered an acceptable option for open procedure, primarily because of the challenges faced during the deep dissection of complex hilar structure and the concern of oncological adequacy. The recent development of robotics in HBP surgery has been considered an appealing alternative for treating perihilar tumors.

Methods : Case #1. 62-years-man, perihilar cholangiocarcinoma type IIIb was suspected, and he needed combined gastrectomy due to gastric cancer. #2. 47-years-woman, the possibility of malignant stricture in B4 with left hepatic duct involvement was suspected, and she had artery variation of right hepatic artery from SMA and accessory left hepatic artery was seen. Robotic left hepatectomy including caudate lobe and bile duct resection was decided for both patients.

Results : For dissection of hilar structure, maryland bipolar dissector and monopolar scissor were used in da Vinci XI robotic system. There were identified and ligated in the order left hepatic artery, distal bile duct and left portal vein. Segment 1 was released safely from IVC. Total operation time was 520 and 435 min, respectively. Both patients were discharged on postoperative days 8 and 9 without any complications. Pathological findings revealed an adenocarcinoma and granular cell tumor with complete resection.

Conclusions : Robotic approaches could improve accessibility to minimally invasive liver resection of hilar malignancy with selected patients. The robotic surgical system, associated instruments, and flexible and precise movements can be suitable for small perihilar tumor.

Corresponding Author : **Jae Hoon LEE** (hbpsurgeon@gmail.com)