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## Laparoscopic Left Hepatectomy For Intrahepatic Duct Stone With Recurrent Cholangitis After Open Pancreatoduodenectomy For Ampulla Of Vater Cancer

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**Background** : Laparoscopic anatomical liver resection after open pancreatoduodenectomy (PD) has not reported yet and the authors report a case here to share the surgical experience.

**Methods** : An 81 years old male patient presented with epigastric pain, fever and chills. He underwent open pylorus preserving PD 8 years ago at other hospital for Ampulla of Vater cancer (pT3N1) and received adjuvant CCRT and chemotherapy for 5-month period at UUH. 4 years after the open PPPD, intraductal stones developed at left hepatic duct and numerous enhancing nodular lesions smaller than 1cm in diameter developed at right liver on MR. These nodular lesions were diagnosed as necrotizing granulomatous inflammation on biopsy performed at other hospital. During the next 3.5 years, enhancing nodular lesions in the right liver increased a little in size, left intrahepatic duct stones showed no change but left hepatic duct dilatations were being aggravated on the following imaging studies. It was decided to perform laparoscopic left hepatectomy to resolve recurrent cholangitis attacks. BMI was 21.44. The operation was performed in supine position. 5 trocars (12mm \* 2, 5mm \* 3) were inserted. After some adhesiolysis, hepaticojejunostomy was located and protected from injury throughout the entire operative procedure. By meticulous dissection, left hepatic artery was identified and divided. Left portal vein was located and clamped with bulldog clamp. Surface discoloration along the Cantlie line was identified and tattooed with electrocautery. Parenchymal transection was done along the left border of the middle hepatic vein with an energy device and CUSA without Pringle maneuver. After fully exposing the left Glissonean pedicle by intrahepatic approach, the left Glissonean pedicle encompassing now the left portal vein and left bile duct was divided with stapler (EndoGIA tan 60mm), confirming no stone was left behind and also avoiding any injury to the hepaticojejunostomy. Finally left hepatic vein was divided at it root. Laparoscopic left hepatectomy was finished

**Results** : The operation took 265 minutes. EBL was 200mL. There was no postoperative complication. Postoperative hospital stay was 6 days. The patient was cholangitis-free and did well 5 months after the operation.

**Conclusions** : Laparoscopic left hepatectomy can be done safely without Pringle maneuver even after open PD. Application of both the hilar individual approach to left hepatic artery and left portal vein and the intrahepatic Glissonean approach are the keys for anatomical left hepatectomy without injury to important structures to leave behind in this situation.

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