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Purely Laparoscopic Left Hepatectomy with Intracorporeal Choledochojejunostomy for Recurrent Pyogenic Cholangitis with Vaginal Extraction

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Background

Laparoscopic liver resection is currently being done for benign lesions of the biliary tract, with some biliary diseases needing bypass surgery as well as liver resection. Many centers have been trying to reduce the extent of operative wounds using various methods. In this video, we introduce the purely laparoscopic left hemihepatectomy with choledochojejunostomy and specimen extraction through the vagina.

Video contents

The patient was placed in lithotomy position, with the main operator on the patient's right side. We initially placed a 15mm skin incision just below the umbilicus then inserted a 12mm optic port. A 10mm laparoscopic flexible scope was used. Four additional working ports were inserted subcostally. Intraoperatively, there were moderate adhesions in the peritoneal cavity, mainly in the upper abdomen, due to previous open cholecystectomy and due to recurrent cholangitis. After adhesiolysis using an energy device, we then identified the atrophic left liver. Transection of the falciform ligament and mobilization of the left liver lobe was then performed. The dilated common bile duct was identified during hilar dissection. Because of obliterization of the left portal vein, a prominently demarcated ischemic line was identified after ligation of the left hepatic artery. Without doing the Pringle maneuver, superficial parenchymal dissection was then performed using an energy device while the deeper parenchyma of the liver was dissected using CUSA. During dissection, the middle hepatic vein was exposed and preserved. The left glissonean pedicle was ligated and transected using the Endo-stapler. The left hepatic vein was ligated using hemo-clips. After transection of the common bile duct, three openings were identified: right main hepatic duct, left main hepatic duct, and the caudate duct. Intracorporeal choledochojejunostomy was then done using a continuous suture. The jejuno-jejunostomy was completed using Endo-stapler. The liver specimen was placed inside an extraction bag and removed via the vagina by the gynecologist.

The operation took 200 minutes and estimated blood loss was at 200 ml. The patient was discharged 4 days after the operation with no postoperative complications. The final histopathologic report showed hepatic atrophy and hepatolithiasis without any signs of malignancy.

Conclusion

This video shows the technical feasibility of purely laparoscopic left hemihepatectomy with intracorporeal choledochojejunostomy for recurrent intrahepatic pyogenic cholangitis. In addition, specimen extraction through the vagina is a useful adjunct technique for minimally invasive surgery.