
LV OP 2-2**Surgical tips of pure laparoscopic donor right hemihepatectomy for donors with portal vein anatomical variations**

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Introduction : Several reports from centers highly specialized in living-donor liver transplantation and laparoscopic liver surgery addressed good outcomes of total laparoscopic living donor hepatectomy for adults. However, donors with anatomical variations of the right portal vein or hepatic ducts or with marginal liver grafts are considered unsuitable for this procedure by most centers

Methods : From March 2017 to November 2018, 15 cases of pure laparoscopic right hemihepatectomy in a donor with portal vein variation were performed by the single experienced surgeon. We describe in this report about the standardized procedure for safe totally laparoscopic adult living donor hepatectomy for donors with variations of the right portal vein

Results : Right hepatic artery should be temporary clamped for making demarcation line. We usually do not dissect around artery for preventing hidden injury of the hepatic artery. Instead, we clamped right side of Glissonian tissue bluntly after isolating right portal vein. Bile duct division was performed using ICG cholangiography. We usually used bulldog clamp during the first bile duct division for preventing bile spillage that disturbing ICG cholangiography during the division of the other bile duct. There are different methods to control the right portal vein branches including 1)Hem-o-lock clips supported with metal clips.2)Laparoscopic vascular staplers.3)Hem-o-lock clips to temporary control the portal vein branches stumps which are then replaced with sutures (continuous prolene 5/0 sutures). Then hem-o-lock clips could be removed from the portal vein stumps.

Conclusions : Portal vein anatomic variations can be overcome by appropriate surgical procedures

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