

Submission No.: PG04-5406

Session : Postgraduate Course 4

Date & Time, Place : November 17 (Thu), 10:30-12:00, Room 5F-1

Session Title : Multi-organ recovery video session

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## Liver

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Hilar dissection before perfusion (warm dissection technique) was the standard procedure for liver graft retrieval in deceased donors from 1960's to early 1980's. Thereafter, in-situ flushing and sequential hilar dissection after perfusion (cold dissection technique) were introduced as a means of rapid procurement of all abdominal organs [3]. Because of drawbacks in warm dissection technique such as operation time prolongation, a deterrent to collaboration between abdomen and chest teams, a relatively difficult procedure in less experienced surgeons, the possibility of organ damage, and so on, the cold dissection technique has been replaced with warm dissection technique, especially for multi-organ harvest. As soon as the cruciate incision was made from the xiphoid process to the pubis, the liver was inspected to know its color and texture and then a liver wedge biopsy was performed. After ligation of the cystic duct, the distal common bile duct was transected, and the bile was irrigated with saline. The quantity and quality of bitterness was checked. Anatomical variation of the hepatic artery (e.g., left hepatic artery from the left gastric artery, a right hepatic artery from the superior mesenteric artery) was checked by palpation. The Cattell-Braasch maneuver was performed to expose the inferior vena cava and aorta. The terminal abdominal aorta was dissected to insert an aortic perfusion catheter. The superior mesenteric vein or inferior mesenteric vein was dissected to insert a portal perfusion catheter. After incision of the diaphragmatic crura, the subdiaphragmatic aorta was encircled with nylon tape. The hepatic hilum was dissected before cross-clamping the aorta. The gastroduodenal artery was isolated or ligated and divided. The common hepatic artery, left gastric artery, and splenic artery were identified. Aortic and portal cannulas were placed after systemic heparinization, and then infusion of histidine-tryptophan-ketoglutarate (HTK) perfusion solution started. This warm dissection technique required an additional procedure time of 20-40 minutes. This procurement procedure has been the preferred method of liver graft retrieval during the last 20 years in our institution. After finishing in-situ perfusion, the liver graft was then excised along the usual standard technique. Donor surgeons have to be familiar with both cold and warm dissection techniques because they have complementary roles thus being associated and not being opposed. If the vital sign of the deceased donor becomes unstable, rapid procurement of all organs is mandatory. In contrast, the warm dissection technique may be helpful to decrease the cold ischemic

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preservation time and also have potential advantages in donors whose livers are in the marginal quality.