

NOVEL TECHNIQUE OF FLAWLESS LIVING DONOR LIVER TRANSPLANTATION TO THE SITUS INVERSUS RECIPIENT USING MODIFIED RIGHT LOBE GRAFT WITH INFERIOR RIGHT HEPATIC VEINS

Sung-Min KIM¹, Deok-Bog MOON¹, Woo-Hyung KANG¹, Byeong-Gon NA¹, Rak-kyun OH¹

¹ *Division of Hepatobiliary Surgery And Liver Transplantation, Asan Medical Center, University of Ulsan, Republic of Korea*

Background : Situs inversus totalis (SIT) is a rare congenital anomaly in which the major visceral organs are reversed from their normal positions. Considering living donor liver transplantation (LDLT) using a modified right lobe (mRL) graft in an SIT recipient presents a significant challenge regarding graft placement and vessel reconstruction. For the first time, we reported "A novel technique of LDLT using an mRL graft from an SIT donor in a conventional recipient." Here, despite the anatomical reversal in the SIT recipient, we successfully performed mRL LDLT by applying the same concept of operative procedures.

Methods : The recipient, with hepatitis B virus cirrhosis, received an mRL graft from a donor with normal anatomy. The graft, with one V5, V8, and two inferior right hepatic vein (IRHV) openings, was placed in the left upper quadrant, rotated 150 degrees along the inferior vena cava (IVC) groove, and 80 degrees upward to align with the recipient's IVC. Two hepatic vein (HV) openings were created on the new axis: one large orifice, including the right hepatic vein (RHV), V8, and IRHVs, was anastomosed to the recipient's RHV-middle HV-left HV common opening using the umbilical vein. The other, V5, was fenced with cryopreserved IVC and connected to the recipient's IVC.

Results : One year after LDLT, graft function has been maintained well without complications.

Conclusions : From this case and previously reported cases, we suggest that our novel surgical strategy should be universally applied for successful LDLT using an SIT donor and/or recipient.

Corresponding Author : **Deok-Bog MOON** (mdb1@amc.seoul.kr)