Challenges of ABO-incompatible living donor liver transplantation in developing country (Mongolia)

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Background: In Mongolia, there is a high prevalence of hepatitis B virus (HBV), hepatitis C virus (HCV) and hepatocellular carcinoma (HCC), which is the main reason of liver cirrhosis. The most effective treatment of end stage liver disease (ESLD) is liver transplantation (LT). There are many difficulties with LT in low and middle income countries (LMIC) such as Mongolia including cost to patients, cost to the healthcare system, and lifelong follow-up. Despite these challenges, Mongolia successfully started a LT program in 2011 as a collaboration between Mongolian National University of Medical Science, Mongolian First Central Hospital and Asan Medical Center. Since 2011 the Mongolian transplantation team had done 80 cases, however there are deficit of donor for LT. The Mongolian LT team first time had done successfully ABO-incompatible case.

Methods: A 55 year old male patient with liver cirrhosis due to HBV, HDV and HCV, with HCC (Child-Pugh score-B, model for end-stage liver disease-16). Blood type was O+, EVL1 splenomegaly, ascites, hepatic encephalopathy, recurrent HCC in the S2/S4 sp TACE/S8. His body weight is 66, Ht 170 cm, BMI 22.8, BSA 1.77 m².

Results: Complete the ABO-incompatible living donor LT is much expensive than compatible living donor LT in developing country, however reducing of donor deficit is a good point. Because of the Mongolian religious mindset, most of the families do not agree to donate the liver from the dead body, so that hospital cannot have a enough stock of the cadaveric donor. There is no difference from surgical side for the ABO-incompatible LT, blood transfusion should be focused carefully postoperative days.

Conclusions: Although ABO-incompatible LT has high cost, it will reduce the donor deficit in developing country like Mongolia.

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