Partial Splenic Artery Embolization for Hypersplenism in Liver Transplant Recipient

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Background: Hypersplenism after liver transplantation is a widely recognized clinical complication that may occur thrombocytopenia (<60,000/mm³), massive ascites. Recently partial splenic artery embolization (SAE) which performed via a percutaneous femoral artery approach is regarded as a less invasive and effective treatment of hypersplenism. In this report we review the result of partial SAE in liver transplant recipient.

Methods: Between October 2008 and December 2009, 7 partial SAE procedures performed in liver transplant recipient for hypersplenism were retrospectively analyzed.

Results: The mean age was 36.4 (10−67) years, and 4 of the patients were male (57.4%). The primary liver disease were biliary atresia in 2 patients, viral induced liver cirrhosis in 3, fulminant hepatitis in 1 and alcoholic induced liver cirrhosis in 1. Five grafts were living donor graft and 2 grafts were deceased. There were not ABO incompatible donor grafts and small-for-size grafts. The major axis spleen size was 12.1−23.4 cm. Indication for partial SAE were massive ascites (n_4), thrombocytopenia (n_2), splenic artery aneurysm (n_1) The average volume embolized was 76.4% (70−80%). The patients were followed for 30 days to 14 months. The platelet counts significantly increased after partial SAE in all patients and maintained greater than 100,000/mm³ for follow up period. The massive ascites markedly decreased after partial SAE in 5 patients. Post-embolization symptoms were fever in 2 patients, abdominal pain in 5 and abdominal distension in 2. There were not splenic abscesses, splenic rupture, pancreatic infarction and sepsis.

Conclusions: Partial SAE is an effective and safe procedure for hypersplenism in liver transplant recipient, especially with thrombocytopenia and massive ascites.