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Splenic Artery Embolization after Adult-to-adult Liver Transplantation

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**Background:**

Hypersplenism (thrombocytopenia, leukocytopenia, anemia) syndrome and ascites after orthotopic liver transplantation (OLT) are not rare complications. Commonly, such conditions treated by open splenectomy. But open splenectomy have many negative sides. As alternative surgical measure, splenic artery embolization (SAE) has been reported in literature. Our report presents the outcomes of SAE in 3 patients after liver transplantation with hypersplenism and/or ascites.
Methods
Between January 2013 and January 2016 in our Center we performed 32 OLT: 24 from living donor (1 – left lobe, 23 – right), 8 – from cadaver. Three patients after OLT received partial splenic artery embolization. Before OLT 2 recipients (both – female) with primary biliary cirrhosis, 1 – Hepatitis B Virus-related liver cirrhosis (male). Two patients after right lobe living OLT, one – cadaveric OLT. SAE in 3 cases were performed after 12, 8 and 6 month respectively. The indications for SAE was based on clinical examination, ultrasonography and CT (ascites, splenomegaly) and laboratory criteria (thrombocytopenia, when PLT<60x10⁹/l, leukocytopenia, when WBC<2x10⁹/l). Two recipient has leuko-thrombocytopenia and refractory ascites, 1 – only thrombocytopenia.

Results
The size of spleens were between 8.5-12.5 cm to 17.5-22.0 cm. Patients ascites were more than 1000 ml. Total spleen embolization volume was approximately 70%. Ascites decreased after SAE in all patients. After SAE the platelets levels increased in all patients too. In one patient (who has leukocytopenia), WBS level normalized for 3 days. After SAE: 2 patients had analgesia none-needed abdominal pain, 2 – had fever (max T° was 38.5°C) during 3 days. The patients was discharged 6, 8, 9 days after SAE.
Conclusion
Hereby, SAE, although limited by the minimal cases, is a safety minimally invasive methods for treatment hypersplenism and ascites of recipients after liver transplantations. Also, this method justified in patients under immunosuppression as alternatives to open total splenectomy.

Thank You for attention!