

血管支架置放處理兒童肝移植後門靜脈或肝靜脈狹窄或阻塞之初期成果報告

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The efficacy of stent placement for management of portal vein or hepatic vein or occlusion after pediatric liver transplantation: a preliminary report

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Purpose:

Portal vein (PV) or hepatic vein (HV) stenosis after pediatric liver transplantation (PLT) is not rare. Usually, these complications can be initially managed by balloon angioplasty but in cases with total occlusion or recurrent stenosis after angioplasty, stent placement or surgical revision are warranted. Although stent placement is less invasive than surgery, some potential risks, such as stent thrombosis, in-stent or stent edge restenosis and functional stenosis of a growing child make transplant surgeons hesitate to use stents in children. Therefore, we conducted a study to evaluate the efficacy of stent placement for treatment of PV and HV complications after PLT.

Materials and methods:

Between October 2004 and September 2015, 36 pediatric patients (pts) who were younger than 10 years of age and underwent liver transplantation in our institute were reviewed. Stent placement in PV or HV was performed in 5 pts with self-expandable stents. The stent diameter for each case was oversized by 1 to 2 mm with respect to the measured diameter of recipient's PV or graft's HV adjacent to the stenosis. Technical and clinical success, complications, serial image findings and patency of stents were analyzed.

Results:

Technical and clinical success was achieved in all pts (PV: 3 pts; HV: 2 pts), and all stents were patent at the end of study. The median age and the median body weight of study group during liver transplantation were 9 months (range, 6–11 months) and 9.9 kg (range, 9–12 kg). The median follow-up time was 54 months (range, 20–99 months). The stent sizes were 8 to 9 mm in diameter and 4 cm in length for PV; 9 to 10 mm in diameter and 2 to 4 cm long for HV. Hourglass deformities of stents were initially shown in 4 pts (PV: 2 pts; HV: 2 pts), but they all spontaneously resolved with time. In addition, functional stenosis did not occur in any of these pts.

Conclusion:

Based on our report, PV and HV complications after PLT often occur in children younger than one year old and less than 10 kg. Stent placement is a safe and effective method to manage these problems. However, longer follow-up is still required.