How Can We Treat Acute Graft versus Host Disease after Liver Transplantation Recipient: 2 Case Reports

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Background
Acute Graft-versus-host disease (GVHD) after liver transplantation (LT) is a rare but serious complication with an incidence of 1-2% and a mortality rate of more than 80%. Effective therapeutic option has not yet been established. We experienced 2 cases of acute GVHD following LT at our institution and present our treatment modality herein.

Case Reports
One patient was a 53-year-old female with hepatitis B related liver cirrhosis who underwent living donor LT. Five weeks after LT, the patient presented with severe headache and lower back pain. After readmission, she developed fever and skin rash in her both palm which was rapidly progressed to whole body with desquamation. We performed skin biopsy and started intravenous methylprednisolone (200mg/d), immunoglobulin for 3 days and stopped calcineurin inhibitor. But, Skin rash and pancytopenia were rapidly progressed and she died of sepsis at 46 days after LT.

The other patient was 64-year-old male with hepatitis B related liver cirrhosis who underwent deceased donor LT. At 8 weeks after LT, he presented with fever and erythematosus papular skin rash over his trunk and arms (Fig 1-A). With high index of clinical suspicion for acute GVHD, we started intravenous methylprednisolone (250mg/d) followed by 200mg for 6days. Blood level of tacrolimus was maintained between 5-8 ng/dL and 750mg of mycophenolate mofetil was added twice daily. After pathologic confirmation of GVHD by skin biopsy (Fig 2.), we started etanercept (0.4mg/kg twice a week, subcutaneously) and maintained for 4 weeks. The skin rash was disappeared gradually within 2 weeks after etanercept treatment. Desquamation and pigmentation of skin was observed subsequently (Fig 1-B). The patient was discharged on postoperative day 54 with good condition and has been followed for 24 months without recurrence of symptom.

Conclusion
Due to low incidence of disease, diagnosis and treatment of acute GVHD following LT are difficult. Therefore, high clinical suspicion and early treatment will be needed for a favorable outcome. Although our successful treatment with etanercept, steroid and mycophenolate mofetil, further study is necessary to establish effective therapeutic modalities for acute GVHD following LT.

Fig 1. (A) The maculopapular rash on the skin of the patient’s trunk (B) Desquamation and pigmentation of skin

Fig 2. Skin Biopsy showed
(1) Subepidermal cleft formation
(2) Dyskeratosis & spongiosis
(3) Exocytosis, lymphocytic