liver transplantation.

Result: The hepatic parenchymal infarct of non-vascular origin is found routinely with liver enzyme elevation. Liver cell damage is correlated with the extent of the infracted area. Almost of the patients with non-vascular liver ischemia have good recovery, sometimes it required with plasmapheresis or long recovery period. On classification, patients on non-vascular infracted liver with central focal type and central diffuse type had bad prognosis with more advanced hepatic failure and more increased infracted area.

Conclusion: The hepatic parenchymal infarct of non-vascular origin following liver transplantation is very rare event. We can manage the patients who have peripheral focal or geographic infracted liver with conservative management, but they are sometimes required of intensive care and plasmapheresis. On otherwise, if the patients whose configuration of infracted area were cental type (focal, or diffuse), they must be care with attention because of more increasing extent of infracted area and the risk of hepatic failure.

VII-5

Prospective Clinical Trial of the Effect and Safety of Reduced Dose of Mycophenolate Mofetil with Tacrolimus Combination Immunosuppression in Living Donor Liver Transplant

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**Purpose:** Mycophenolate mofetil (MMF) is a powerful immunosuppressant used with calcineurin inhibitors following liver transplantation (LT). Usually, the therapeutic drug monitoring (TDM) is not recommended for MMF, which is still commonly administered at fixed doses (1 or 1.5 g daily). If the dose of MMF is lowered because of the drug toxicity, rejection in renal and heart transplant recipients is significantly increased. However, the relationship of MMF dose and post-LT rejection is obscure.

**Materials and Methods:** We performed a prospective clinical trial in 15 adult living donor liver transplant recipients (14 male: 1 female, median age, 58 years) at Seoul National University Hospital between October 2009 and December 2010. Their original liver disease was mainly Hepatitis B virus-related liver cirrhosis (n=13). Tacrolimus (through level: 5-8 ng/mL) and MMF (1.0 gm daily dose) were administered in all recipients. They were followed up mean 6 months (range 3 to 12 months) after LT. Plasma levels of cMPA (concentration of the active metabolite of MMF) and the area under the curve (AUC<sub>0-6</sub>) at POD 7 and 14 were checked. Protocol liver biopsy was taken on around POD 10.

**Results:** There is no correlation between  $C_0$  and  $AUC_{0-6}$ . The best correlation between cMPA and the  $AUC_{0-6}$  was found at  $C_1$  and then  $C_2$  on both POD 7 and 14  $(C_1/C_2 \ r^2=0.896/0.839 \ on POD 7, \ C_1/C_2 \ r^2=0.812/0.786 \ on POD14, p<0.01 in all). Mean <math>C_1$  was 2.93/2.24  $\mu$  g/mL and  $C_2$  2.76/2.82  $\mu$  g/mL on POD 7/14 each other. There is no side effect associated with the MMF or tacrolimus in all patients. In addition to, there is no acute rejection proved by protocol biopsy on around POD 10 and no graft loss.

**Conclusions:** In early post-transplant days,  $AUC_{0-6}$  of cMPA was strongly correlated with  $C_1$  or  $C_2$  rather than  $C_0$ . Although cMPA  $C_{0-6}$  and values of  $AUC_{0-6}$  were markedly low, there was no rejection or graft loss. Therefore, reduced dose of tacrolimus and MMF in combination can be attempted without post-LT rejection in living donor liver transplant recipients.

VII-6

## Outcome of Alnedronate on Liver Transplantation Recipients with Osteoporosis

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**Introduction:** Osteoporosis is a major side-effect after liver transplantation. The purpose of this study was to evaluate the preventive effects of alendronate on the decrease of bone mineral density (BMD) and the incidence of pathologic fracture after liver trans-