3-P-075

Poster Sessions

Effects of pravastatin on vascular endothelial dysfunction in acute kidney injury.

Keisuke Nakagawa¹, Yusuke Nakatani¹, Shuhei Kobuchi², Ryosuke Tanaka¹, Mamoru Ohkita¹, Yasuo Matsumura¹

¹Lab. Pathol. and Mol. Pharmacol., Osaka Univ. Pharmaceut. Sci., ²Dept. Pharm., Pharmacol., Hyogo Univ. Health Sci.

Background : We have confirmed that indoxyl sulfate (IS), one of the uremic toxin, is involved in vascular endothelial dysfunction of ischemic acute kidney injury (IAKI). SLCO4C1, one of the organic anion transporters, expressed in kidney and is involved in urinary excretion of IS. In this study, we examined the effect of pravastatin with SLCO4C1 activating action on vascular endothelial dysfunction in IAKI.

Methods : IAKI models were divided into two groups that were administrated pravastatin (IR-Pravastatin group) or vehicle (IR group). 1, 7 and 28 day after IR, blood and urine were collected, and renal function and IS concentration were measured. Vascular endothelial function was assessed by Magnus method.

Results : 1 day after IR, renal function was attenuated in IR and IR-Pravastatin group. 7 and 28 days after IR, renal function recovered to the same extent as sham. 28 days after IR, attenuation of vascular endothelial function was observed in IR group, but it was improved in IR-Pravastatin group. Furthermore, IS clearance tends to increase in IR-Pravastatin group.

Conclusion : These results suggest that IS excretion promoting action by pravastatin with SLCO4C1 activation contributes partly to improvement of vascular endothelial dysfunction in IAKI.