

## **Different protective effect of N-acetyl cysteine and tempol on mouse renal interstitial fibrosis**

Sakai Mayu, Iori Tani, Iori Soma, Kazuma Komine, Shigeyoshi Honma, Makoto Yoshida

*Dept. Pathophysiol., Fac. Pharmacy, Takasaki University of Health and welfare*

Unilateral ureteral obstruction (UUO) is a well-established model for the study of interstitial fibrosis in the kidney. In this study, we investigated effects of two antioxidants, N-acetyl cysteine (NAC) and tempol, on UUO-induced renal interstitial fibrosis in mice. Fibrotic area of Masson trichrome-stained section significantly increased by UUO. This change was inhibited by the treatment of NAC, but not by tempol. Tempol administration increased the amount of hydrogen peroxide in the kidney. Catalase activity was not different between NAC and tempol. Glutathion peroxidase activity was inhibited by UUO, and this effect was diminished by NAC. Collectively, these results suggest that NAC may increase the glutathion peroxidase activity, ameliorating the renal interstitial fibrosis induced by UUO.