

**慢性腎不全ラットにおけるインドキシル硫酸濃度と****腎機能に対する経口吸着剤の効果**

瀧 健太郎, 丹羽 利充\*\*

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**Effects of Oral Sorbents on Indoxyl Sulfate Levels and  
Kidney Function in Uremic Rats**

Kentaro TAKI and Toshimitsu NIWA

**Summary**

Indoxyl sulfate shows nephrotoxicity, and is a stimulating factor for progression of chronic renal failure (CRF). This study was aimed at determining whether the indoxyl sulfate-lowering capacity of oral sorbents (Kremezin® and Merckmezin®) affects the prognosis of kidney function in CRF. Experimental uremic rats were produced by four-fifths nephrectomy. The rats were randomized into three groups, control rats, Merckmezin-treated rats and Kremezin-treated rats. Kremezin and Merckmezin were administered to the rats at a dose of 4 g/kg with powder chow for 16 weeks, whereas powder chow alone was administered to control rats. Administration of Kremezin significantly decreased the serum and urine levels of indoxyl sulfate and serum creatinine, and significantly increased creatinine clearance as compared with the control group. The change of serum indoxyl sulfate from the initial to the final week showed a positive correlation with the change of serum creatinine and a negative correlation with the change of creatinine clearance. The indoxyl sulfate-lowering capacity of oral adsorbents did affect the prognosis of kidney function in CRF. The more serum indoxyl sulfate was reduced, the more kidney function was preserved. Thus, the reduction in serum and urine levels of indoxyl sulfate by Kremezin may slow the progression of CRF.

**Key words**

Oral sorbent, Indoxyl sulfate, Chronic renal failure, Kidney function, Rat, Uremic toxin,  
Pharmacology