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IN BRIEF

BASIC RESEARCH

CD47 blockade may prevent renal ischaemia–reperfusion injury

Researchers in the USA say that inhibition of CD47 might be useful in preventing ischaemia–reperfusion-mediated damage in kidney transplants. Rogers *et al.* found that expression of both CD47 and its ligand thrombospondin-1 were upregulated following renal ischaemia–reperfusion injury, and that CD47-knockout mice were protected from renal dysfunction and tubular damage. In addition, they showed that mice treated with a CD47-blocking antibody were protected from renal dysfunction and tubular damage.

Original article Rogers, N. M. *et al.* Activation of parenchymal CD47 promotes renal ischemia-reperfusion injury. *J. Am. Soc. Nephrol.* doi:10.1681/ASN.2012020137

ACUTE KIDNEY INJURY

Tubular cell autophagy is renoprotective in AKI

Tubular cell autophagy seems to have a renoprotective role in acute kidney injury (AKI), according to a recent study. Using mouse models of AKI induced by cisplatin and by ischaemia–reperfusion, researchers showed that chloroquine, which inhibits autophagy, increased AKI. By contrast, rapamycin, which activates autophagy, protected against cisplatin-induced AKI. Knockout mice lacking a renal proximal tubule-specific autophagy-related gene were also shown to be more sensitive to cisplatin-induced AKI than were wild-type mice.

Original article Jiang, M. *et al.* Autophagy in proximal tubules protects against acute kidney injury. *Kidney Int.* doi:10.1038/ki.2012.261

BASIC RESEARCH

AQP2 may be involved in development of kidney tubular structure and maintenance

A new study has shown that aquaporin 2 (AQP2) is not solely a water channel but that it is also involved in cell migration and epithelial morphogenesis. Chen *et al.* showed that AQP2-deficient mice had renal damage and abnormal kidney morphology, and demonstrated that AQP2 interacts with integrin $\beta 1$. *In vitro* experiments showed that inhibiting the interaction between AQP2 and integrin $\beta 1$ resulted in reduced endocytosis, integrin $\beta 1$ retention at the cell surface, and defective cell migration and tubulogenesis.

Original article Chen, Y. *et al.* Aquaporin 2 promotes cell migration and epithelial morphogenesis. *J. Am. Soc. Nephrol.* doi:10.1681/ASN.2012010079

RISK FACTORS

HBV plus increased ALT associated with renal dysfunction

A Chinese study has shown that hepatitis B virus (HBV) infection together with an increased alanine aminotransferase (ALT) level, but not HBV infection or elevated ALT alone, is associated with reduced renal function. Cai and co-workers obtained these results by measuring levels of serum hepatitis B surface antigen, ALT, creatinine, and urinary albumin-to-creatinine ratio in a representative sample of 6,854 Chinese adults.

Original article Cai, J. *et al.* Association of reduced renal function with hepatitis B virus infection and elevated alanine aminotransferase. *Clin. J. Am. Soc. Nephrol.* doi:10.2215/CJN.07410711