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IN BRIEF

THERAPY

Combination therapy reduces cyst progression in ADPKD

A combination of the vasopressin type 2 receptor antagonist tolvaptan and the somatostatin analogue pasireotide synergistically reduces cyst progression in a *PKD1* mutant mouse model of autosomal dominant polycystic kidney disease (ADPKD). Both drugs indirectly inhibit adenylyl cyclase 6 activity, leading to a reduction in levels of 3', 5'-cAMP, which are decreased to those of wild-type controls by combination therapy. The dual therapy also results in smaller cystic and fibrotic volume, suggesting that it might be an effective treatment for ADPKD.

Original article Hopp, K. *et al.* Tolvaptan plus pasireotide shows enhanced efficacy in a PKD1 model. *J. Am. Soc. Nephrol.* doi:10.1681/ASN.2013121312

EPIDEMIOLOGY

Early risk factors predict CKD 30 years before diagnosis

Data from the Framingham Offspring Study show that hypertension, obesity and high triglyceride levels (odds ratios 1.76, 1.71 and 1.43, respectively) are all predictive of chronic kidney disease (CKD) development 30 years before diagnosis. After diagnosis of CKD, intensive risk factor management is generally recommended. This study suggests that early risk factor identification and subsequent management might enable CKD to be avoided later in life.

Original article McMahon, G. M. *et al.* Mid-adulthood risk factor profiles for CKD. *J. Am. Soc. Nephrol.* doi:10.1681/ASN.2013070750

GENETICS

Mutation type dictates primary hyperoxaluria type 1 severity

In the largest study of its kind to date, comprising 526 patients, the type of mutation in peroxisomal alanine-glyoxylate aminotransferase (*AGXT*), has been shown to affect the age at which end-stage renal disease (ESRD) is diagnosed in patients with primary hyperoxaluria type 1 (PH1). Median age for ESRD was lowest (9.9 years) in patients with homozygous *AGXT* null mutations. By contrast, in patients with G170R substitutions in *AGXT*, median age for ESRD was the highest of the major subgroups (33.9 years), with distinct variations in age of ESRD presentation also detectable for other *AGXT* mutations. In 43% of patients, ESRD was present at PH1 diagnosis, indicating a need for greater awareness of this condition.

Original article Mandrile, G. *et al.* Data from a large European study indicate that the outcome of primary hyperoxaluria type 1 correlates with the *AGXT* mutation type. *Kidney Int.* doi:10.1038/ki.2014.222

CYSTIC KIDNEY DISEASE

Plasma copeptin levels reflect ADPKD-induced GFR decline

Plasma copeptin is a marker of vasopressin and, in autosomal dominant polycystic kidney disease (ADPKD), might also indicate the extent of kidney damage. Patients with ADPKD ($n=122$) had significantly higher mean plasma copetin levels than healthy kidney donors ($n=134$), before and after donation ($P<0.001$). In these patients, but not in kidney donors, copeptin was significantly associated with glomerular filtration rate ($P<0.001$), implying that plasma copeptin is an ADPKD-specific indicator of renal function.

Original article Zittema, D. *et al.* Kidney function and plasma copeptin levels in healthy kidney donors and autosomal dominant polycystic kidney disease patients. *Clin. J. Am. Soc. Nephrol.* doi:10.2215/CJN.08690813