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IN BRIEF

CRITICAL CARE

Hydroxyethyl starch versus saline in the ICU

A new study reports that hydroxyethyl starch (HES) does not provide clinical benefit over saline for fluid resuscitation in the intensive care unit (ICU). Myburgh *et al.*'s study randomly assigned 7,000 patients admitted to an ICU to receive either 6% HES or saline for all fluid resuscitation until discharge, death or 90 days after randomization. Mortality at 90 days was similar in the two groups, and renal replacement therapy use was higher in the HES group. In addition, HES was associated with an increased incidence of adverse events, particularly pruritis and rash.

Original article Myburgh, J. A. *et al.* Hydroxyethyl starch or saline for fluid resuscitation in intensive care. *N. Engl. J. Med.* 367, 1901–1911 (2012)

DIALYSIS

Cellular cholesterol efflux impairment in dialysis patients

Dysfunctional high-density lipoprotein (HDL) might drive the high rate of cardiovascular events in patients on chronic haemodialysis and might explain why these patients seem resistant to statins, say researchers. Yamamoto *et al.* found that HDL from patients on chronic dialysis was less effective than HDL from controls in accepting cholesterol from macrophages. *In vitro* activation of cellular cholesterol transporters led to increased cholesterol efflux to both control HDL and HDL from dialysis patients, and the authors suggest that cellular cholesterol transporters might be targets for reducing cardiovascular risk in dialysis patients.

Original article Yamamoto, S. *et al.* Dysfunctional high-density lipoprotein in patients on chronic hemodialysis. *J. Am. Coll. Cardiol.* doi:10.1016/j.jacc.2012.09.013

DEVELOPMENT

New insights into mechanisms of kidney tubule elongation

A letter in *Nature Genetics* reports on the cellular mechanisms involved in the elongation of normal vertebrate kidney tubules. The authors used *in vivo* imaging to show that cells in the *Xenopus* elongating nephron underwent repeated rounds of mediolaterally oriented intercalation, and found that the elongation was largely driven by a myosin-dependent, multicellular rosette-based mechanism dependent on non-canonical Wnt and planar cell polarity signalling. The authors state that their insights into this mechanism have the potential to be manipulated for therapeutic purposes.

Original article Lienkamp, S. S. *et al.* Vertebrate kidney tubules elongate using a planar cell polarity-dependent, rosette-based mechanism of convergent extension. *Nat. Genet.* doi:10.1038/ng.2452

ACUTE KIDNEY INJURY

CSF-1 signalling is involved in repair following AKI

Researchers in Tennessee have shown that macrophage colony-stimulating factor (CSF-1)-mediated expansion and polarization of resident renal macrophages and dendritic cells is important in the regeneration of renal tubule epithelium following acute kidney injury (AKI). For their study, Zhang *et al.* used two distinct models of AKI—one caused by ischaemia–reperfusion and one caused by administration of diphtheria toxin to transgenic mice expressing the human diphtheria toxin receptor selectively in the proximal tubule.

Original article Zhang, M.-Z. *et al.* CSF-1 signaling mediates recovery from acute kidney injury. *J. Clin. Invest.* doi:10.1172/JCI60363