

Renal Session 1: State of the art of AKI

Chairs

Mignon McCulloch

Tim Bunchman

Definition, Epidemiology and Outcomes of Acute Kidney Injury

Jordan Symons

"Acute kidney injury (AKI) is a common complication for critically ill children and has a significant impact on outcome. As critical care advances the causes of AKI seen in the ICU have continued to evolve; better definitions of AKI may provide further clarity. While any critically ill child may develop AKI, select populations may be at increased risk."

UTILITY OF BIOMARKERS IN DAIGNOSIS OF AKI IN CRITICAL CARE

Michael Zappitelli

"Current methods of diagnosing AKI are unsatisfactory. In children, SCr also rises too late to allow for early institution of potential therapies to mitigate the renal tubular injury which occurs with most AKI.

Biomarkers of renal tissue injury may help to sort out this ever present challenging clinical scenario.

These have included better markers of renal function than SCr (Cystatin C), several urinary protein biomarkers of tubular injury and urinary markers of cell cycle arrest (upregulated with renal cell death). It is likely that incorporating information from different biomarkers, in the context of an appropriate clinical scenario, will lead to the highest predictive ability of newly identified biomarkers. The current challenge is thus to determine *which* biomarkers will work best in *what patients*, at *what times*."

Cardio Renal Syndrome and the Aware Study Rajit Basu

Presentation of updated data and diagnosis that combines renal tubule and function data to enhance the early diagnosis of AKI. Combined with world wide data of the AWARE study that identifies the true incidence of AKI in Pediatric intensive care units in 32 units in over 5000 children.

Non-Dialytic options for AKI Tim Bunchman

Evaluation of techniques (e.g. hemodynamics) and interventions (use of theophylline or uric acid manipulation) to enhance AKI recovery and AKI prevention.

AKI in Liver Disease Akash Deep

Discusses causes and outcome of AKI associated with both acute and chronic liver failure. Additionally looking at techniques to enhance urine output and reversal of “hepatic renal” syndrome with use of Terlipressin and oncotic replacement.