Combined tests can predict kidney injury risk in critically ill children

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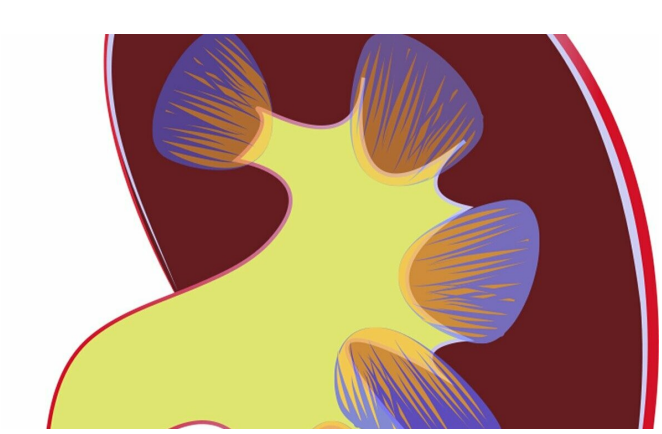

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Combining 2 tests can improve predictions of severe acute kidney injury in children in intensive care. The findings come from a study that will be presented at ASN Kidney Week 2019 November 5-November 10 at the Walter E. Washington Convention Center in Washington, DC.

Two assessments—the Renal Angina Index (RAI) and measurement of urinary Neutrophil Gelatinase Associated Lipocalin (NGAL)—can be used to determine patients' risk of developing severe acute kidney injury. Kelli Krallman (Cincinnati Children's Hospital Medical Center) and her colleagues looked to determine the potential benefits of combining these assessments.

The team's analysis included 627 pediatric intensive care unit (PICU) admissions. The RAI calculated at 12 hours was found to be a significant predictor of the development of severe acute kidney injury during PICU days 2-4. Adding urinary NGAL assessments for those at risk based off a high RAI score improved the prediction significantly. These RAI+/NGAL+ patients were not only at higher risk for severe acute kidney injury, but also for the need of kidney replacement therapy such as dialysis, longer PICU stay, and longer hospital stay.

"Integration of the RAI and urinary NGAL assessments can be used early in the PICU course to identify patients truly at risk for acute kidney injury and its associated morbidity," said Krallman.

More information: Study: "Predicting Severe AKI, Fluid Overload, and Renal Replacement Therapy with the Renal Angina Index in Critically Ill Children"

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