

Molecular subtypes linked to outcomes in acute kidney injury

November 15 2018



(HealthDay)—Two molecularly distinct sub-phenotypes of acute kidney

injury (AKI) are associated with different clinical outcomes and response to vasopressin therapy, according to a study recently published in the *American Journal of Respiratory and Critical Care Medicine*.

Pavan K. Bhatraju, M.D., from University of Washington in Seattle, and colleagues developed a [model](#) to identify AKI sub-phenotypes and assess whether these sub-phenotypes have prognostic and therapeutic implications. The model was then applied to 271 patients with AKI in the Vasopressin in Septic Shock clinical trial.

The researchers found that a two-sub-phenotype latent class analysis model had the best fit in both the discovery ($P = 0.004$) and replication ($P = 0.004$) cohorts. With AKI sub-phenotype 2 (AKI-SP2), the risk for seven-day renal nonrecovery and 28-day mortality was greater versus AKI sub-phenotype 1 (AKI-SP1). Compared with the Kidney Disease Improving Global Outcomes Stages of AKI, the AKI sub-phenotypes better discriminated risk for poor clinical outcomes. Including markers of endothelial dysfunction and inflammation in a three-variable model accurately determined sub-phenotype classification. Compared with norepinephrine, [vasopressin](#) was associated with improved 90-day mortality in AKI-SP1 (27 versus 46 percent; $P = 0.02$), but not in AKI-SP2 (45 versus 49 percent; $P = 0.99$).

"Identification of AKI sub-phenotypes could improve risk prognostication and may be useful for predictive enrichment in clinical trial," the authors write.

More information: [Abstract/Full Text \(subscription or payment may be required\)](#)

Copyright © 2018 [HealthDay](#). All rights reserved.

Citation: Molecular subtypes linked to outcomes in acute kidney injury (2018, November 15)
retrieved 3 May 2024 from

<https://medicalxpress.com/news/2018-11-molecular-subtypes-linked-outcomes-acute.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.