

Kidney disease imaging

23 March 2018

Obstructive nephropathy—a condition in which the flow of urine is blocked—is a primary source of kidney impairment in infants and children.

Animal models of kidney injury have been useful for exploring the cellular and molecular events involved in obstructive renal injury. Non-invasive imaging methods would be valuable for evaluating disease progression.

Feng Wang, Ph.D., and colleagues have applied advanced multi-parametric magnetic resonance imaging (MRI) in studying a mouse model with unilateral ureter obstruction (a block of urine flow in one kidney). They scanned mice 1, 3, and 6 days after kidney injury and compared imaging findings to microscopic analysis of tissue sections.

The investigators report in the April issue of *Magnetic Resonance in Medicine* that multiple MRI parameters provide comprehensive information about the molecular and cellular changes caused by [kidney injury](#). The changes in MRI measurements are related to tubular cell death, urine retention and [kidney fibrosis](#) (scarring), and will be useful for the biological investigation of [kidney disease](#).

More information: Feng Wang et al. Assessment of unilateral ureter obstruction with multi-parametric MRI, *Magnetic Resonance in Medicine* (2017). [DOI: 10.1002/mrm.26849](https://doi.org/10.1002/mrm.26849)

Provided by Vanderbilt University

APA citation: Kidney disease imaging (2018, March 23) retrieved 26 June 2019 from <https://medicalxpress.com/news/2018-03-kidney-disease-imaging.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.