

## Frequent Dialysis Poses Risks for Kidney Disease Patients



Compared with standard dialysis, frequent dialysis can cause complications related to repeated access to the blood, requiring patients to undergo more repair procedures to the site through which blood is removed and returned, according to a study appearing in an upcoming issue of the *Journal of the American Society of Nephrology* (JASN). The study provides important information for physicians and patients as they weigh different dialysis options.

Frequent hemodialysis requires accessing the blood more often than conventional hemodialysis. This is usually done via a long-lasting site through which blood can be removed and returned. While daily or nightly dialysis seems to improve patients' health and quality of life, it's not known whether it increases their risk of experiencing complications. For example, more frequent access use could theoretically cause increased trauma, more inflammation, and greater exposure to bacteria.

To investigate, Rita Suri, MD (Western University and Lawson Health Research Institute, in London, Canada) and her colleagues conducted two separate 12-month clinical trials in which they randomly assigned 245 patients to receive either in-center daily hemodialysis (6 days/week) or conventional hemodialysis (3 days/week) and 87 patients to receive either home nocturnal hemodialysis (6 nights/week) or conventional hemodialysis. Three access events were recorded: repair, loss, and access-related hospitalizations.

### Among the major findings:

- In the Daily Trial, 77 (31%) of 245 patients experienced one of these events, with the daily group having 33 repairs and 15 losses and the conventional group having 17 repairs, 11 losses, and 1 hospitalization.
- Overall, the risk for an access event was 76% higher with daily hemodialysis compared with conventional hemodialysis.
- Similar trends were seen in the Nocturnal Trial, although the results were not statistically significant.

"Our study is the first randomized trial to show that dialyzing more frequently may have potential harmful effects on the hemodialysis vascular access. This has important implications for patients and physicians considering or performing frequent hemodialysis," said Dr. Suri.

Study co-authors include Brett Larive, Susan Sherer, Paul Eggers, PhD, Jennifer Gassman PhD, Sam James, Robert Lindsay, MD, Robert Lockridge, MD, Daniel Ornt, MD, Michael Rocco, MD, George Ting, MD, Ala Kliger, MD, and the Frequent Hemodialysis Network Trial Group.

To read the article, entitled "Increased Risk of Vascular Access Complications with Frequent Hemodialysis," please go to <http://jasn.asnjournals.org/content/early/2013/01/30/ASN.2012060595.abstract>

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