

Hemodialysis: 6 vs. 3 Times Weekly

Patients fared better with more frequent hemodialysis — at the expense of more vascular access complications.

Most in-center hemodialysis is performed three times weekly. To determine whether more frequent dialysis leads to better outcomes, North American researchers randomized 245 chronically hemodialyzed patients to undergo either three or six in-center sessions weekly for 1 year.

Because a study of this duration has limited power to detect differences in mortality, the researchers chose two "co-primary" endpoints: (1) death or increase in left ventricular mass (determined by magnetic resonance imaging) and (2) death or decline in self-reported overall health (determined by standardized questionnaires). At 1 year, both these outcomes were significantly better with frequent dialysis than with conventional dialysis. The benefit was driven mainly by the nonmortality components of the endpoints, because relatively few deaths occurred (5 and 9 in the frequent and conventional groups, respectively). For example, mean scores on the 100-point health scale improved by 3 points in the frequent-dialysis group and remained unchanged in the conventional group. Blood pressure control also was better in the frequent-dialysis group. However, patients in the frequent-dialysis group were significantly more likely than those in the conventional group to develop vascular access complications (47% vs. 29%).

Comment: In this relatively short-term trial with oddly defined primary endpoints, patients fared better with six-times-weekly than with thrice-weekly hemodialysis — at the expense of more vascular access complications. These results are interesting, but questions remain about cost-effectiveness and burdens of daily hemodialysis in patients' lives. In addition, alternatives to frequent in-center hemodialysis — peritoneal dialysis and home hemodialysis — are available.

— [Allan S. Brett, MD](#)

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