

Reducing blockage fails to improve access to the bloodstream for kidney dialysis

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Reducing early blockages in bloodstream access for kidney failure treatment does not increase the likelihood that the access will function adequately for long-term treatments, according to a study funded by the National Institutes of Health. Results were published May 14, 2008, in the *Journal of the American Medical Association*.

"Since most of the 470,000 Americans with kidney failure depend on hemodialysis for survival, there is a clear and compelling need to evaluate therapies that reduce or prevent access failure," said NIH Director Elias A. Zerhouni, M.D. "These results tell us we need to keep looking for solutions."

Hemodialysis filters waste and extra fluid from the bloodstream and requires a vascular access — a site on the body where blood is removed and returned. Fistulas are the preferred type of access since they clot less often, experience fewer infections, and are less costly; patients with fistulas also have lower mortality.

A fistula is created by joining a section of an artery and a vein to make one large vessel capable of handling high volumes of blood during hemodialysis. But maintaining any access site is a major clinical challenge. Blood clotting in the fistula is the most frequent cause of early fistula failure. Clotting, infection and low blood-flow rates in the access site are common reasons for hospitalizations requiring multiple treatments or surgeries. Read about vascular access at <http://kidney.niddk.nih.gov/kudiseases/pubs/vascularaccess>.

The Dialysis Access Consortium (DAC) found that only 12 percent of patients developed blood clots in the fistula when treated with the clot-preventing drug clopidogrel, compared to nearly 20 percent of patients treated with placebo. Nevertheless, about 60 percent of new fistulas in each group could not be used for long-term dialysis treatments. Complications such as bleeding were similar across the study groups.

DAC studied nearly 900 patients at 9 U.S. medical centers in academic and community practices in urban and rural settings. Participants received a new fistula and took the anti-platelet drug clopidogrel (Plavix) or a placebo tablet daily for 6 weeks to determine if the drug would maintain blood flow in fistulas and increase the number suitable for dialysis.

"Because vascular access is critical for delivering lifesaving care, we are already organizing another multi-center study to look for other ways to improve fistulas," said co-author Catherine M. Meyers, M.D., a kidney specialist in charge of DAC at NIH's National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), which funded the study.

Source: NIH

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