

Combination of aspirin and an anti-clotting drug reduces risk of dialysis access failure

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For the first time, a combination of aspirin and the anti-platelet drug dipyridamole has been shown to significantly reduce blockages and extend the useful life of new artery-vein access grafts used for hemodialysis, according to a study by the Dialysis Access Consortium (DAC). The study, supported by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), part of the National Institutes of Health, will be published in the May 21, 2009, *New England Journal of Medicine*.

Artery-vein access grafts, called arteriovenous (AV) grafts, fail most often due to narrowing of [blood vessels](#) (stenosis) at the graft site and subsequent clotting, which block the flow of blood. A blocked graft cannot be used for dialysis and is a major cause of worsening health in [dialysis patients](#).

The DAC trial found that the combination treatment decreased the rate of loss of primary unassisted graft patency - the useful life of a graft before it becomes blocked the first time - by 18 percent and the rate of developing significant stenosis by 28 percent, compared to placebo. Previous smaller clinical trials of anti-clotting therapies failed to show that these drugs improve AV graft patency or that they could be used safely in dialysis patients.

"This drug combination provides a modest but important new therapy to keep AV grafts in good working order so patients can get the dialysis they need," said NIDDK Director Griffin P. Rodgers, M.D. "But clearly

more research is needed to extend the useful life of AV grafts."

A total of 649 participants with new AV grafts were recruited for the trial at 13 clinical sites in the United States and were randomly assigned to treatment with dipyridamole plus aspirin or to a placebo. The trial took place over a period of five years.

"Our trial results show that we now have a drug therapy that significantly prolongs the viability of AV grafts," said Bradley S. Dixon, M.D., of the University of Iowa College of Medicine, Iowa City, and lead author of the study. "This is an important step forward as we proceed to develop therapies to improve dialysis patients' quality of life."

According to the 2008 U.S. Renal Data System Annual Data Report, more than half a million patients have kidney failure, 70 percent of whom are on dialysis. Costs for kidney failure are more than \$30 billion. Annual costs of vascular access-related procedures in the United States have been estimated to exceed \$1 billion. For more information on vascular access, visit:

<http://kidney.niddk.nih.gov/kudiseases/pubs/vascularaccess/index.htm>.

Source: NIH/National Institute of Diabetes and Digestive and Kidney Diseases

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