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New Way to Prevent Infections in Dialysis Patients

Researchers have discovered that a drug used to treat dialysis catheter malfunction in kidney dialysis patients may now also help prevent both malfunction as well as infections.

Dr. Brenda Hemmelgarn from the University of Calgary Faculty of Medicine and her colleague Dr. Nairne Scott-Douglas, both members of the Libin Cardiovascular Institute of Alberta, undertook a randomized trial at 11 sites across Canada. 115 hemodialysis patients were administered the usual catheter locking solution of heparin after every dialysis session, while 110 patients received rt-PA once a week. Researchers found that those receiving only heparin were twice as likely to suffer a catheter malfunction and were at an almost three-fold increased risk of blood stream infection.

"We now have evidence that we can prevent these complications using rt-PA, with a goal to ultimately improve outcomes for patients with kidney failure," says Hemmelgarn.

Didja Nawolsky knows the importance of avoiding infection. In 2003 her kidney failed and she has been on dialysis ever since. She has had 15 permanent and temporary catheters and her constant concern is avoiding infections.

"An infection can easily get into my blood stream and cause serious problems. The line also has to be removed and replaced when there is an infection, which is a rather

unpleasant experience I prefer to avoid. This research will benefit myself and others using catheters because it reduces infections, which is hugely important," she says.

Patients with kidney failure undergo hemodialysis, a treatment used to clean their blood. A catheter placed into the blood system is often required to undertake the hemodialysis procedure. However, there are often complications with the dialysis catheter known as 'catheter malfunction' that involve blood clots forming at the catheter tip, as well as infections in the blood stream. Heparin is used as a locking solution in the catheter after dialysis to help prevent malfunction, and keep the dialysis catheter working for a longer period of time.

"Given the considerable cost of blood infections and catheter malfunction physicians should consider using r-TPA prophylactically to prevent these complications in higher risk patients," says Scott-Douglas.

These research findings are published in the January 26th edition of the New England Journal of Medicine.

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