

Acne-Treating Antibiotic Cuts Catheter Infections in Dialysis Patients



Antibiotics can help ward off serious bacterial infections in kidney disease patients who use tubes called catheters for their dialysis treatments. But if antibiotics are used too often, "super bugs" may crop up that are resistant to the drugs.

A new randomised controlled clinical trial has shown that using an antibiotic that is not usually used to treat other serious infections may be a safe way to prevent bacterial infections in dialysis patients. The study, which included approximately 200 dialysis patients, was conducted by Rodrigo Peixoto Campos, MD (Pontifícia Universidade Católica do Paraná, in Curitiba, Brazil) and colleagues, and appears in an upcoming issue of the Journal of the American Society Nephrology (JASN), a publication of the American Society of Nephrology.

Between dialysis treatments, a catheter is "locked" to prevent blood clots from forming within the device. A lock is usually made by injecting the blood thinner heparin into the catheter. In this study, researchers compared heparin use with a solution made up of the antibiotic minocycline and the chemical EDTA. Minocycline is routinely used only to treat acne, and EDTA improves the action of antibiotics, fights fungal infections, and prevents blood clots. Half of patients in the study had catheter locks containing this combination while the other half had catheter locks containing only heparin.

Among the major findings:

Patients were less likely to get a bacterial infection with minocycline-EDTA locks compared to heparin locks.

During a 90 day period, bacterial infections developed in the catheters of 19 patients in the heparin group compared with only five patients in the minocycline-EDTA group.

The catheters in the two groups functioned similarly well.

"When a dialysis clinic cannot achieve lower rates of catheter-related bacterial infections with routine catheter care protocols, the use of a catheter lock solution of minocycline-EDTA may be the next step to reduce this major complication, without the apprehension of developing bacterial resistance to systemic antibiotics," said Dr. Campos.

Study co-authors include Marcelo Mazza do Nascimento, MD, PhD (Hospital Universitário Evangélico de Curitiba, in Curitiba, Brazil); Domingos Candiota Chula, MD (Clínica de Doenças Renais do Novo Mundo, in Curitiba, Brazil); and Miguel Carlos Riella, MD, PhD, FACP (Pontifícia Universidade Católica do Paraná and Hospital Universitário Evangélico de Curitiba, in Curitiba, Brazil).

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