Antibiotic lock therapy (ALT), in conjunction with systemic antibiotics, is recommended by scientific societies as a treatment of uncomplicated catheter-related bloodstream infections” Labriola (2019).

Abstract:

Antibiotic lock therapy (ALT), in conjunction with systemic antibiotics, is recommended by scientific societies as a treatment of uncomplicated catheter-related bloodstream infections (CRBSI) in hemodynamically stable hemodialysis patients for whom catheter salvage is the goal. The rationale for this strategy is the eradication of intraluminal biofilms by the highly concentrated antibiotic used in the lock. However, the available evidence supporting this recommendation is scanty, and only includes small, short-term, observational studies (most of them single-arm), with different definitions of CRBSI cure and variable follow-up periods. Furthermore, the ability of an antibiotic to eradicate a biofilm is not predicted by its inherent spectrum of antibacterial activity, since sessile microorganisms in their biofilm display other mechanisms of resistance to antibiotics than their planktonic counter-parts. Additionally, penetration of some antibiotics frequently used into biofilms produced by common microorganisms appears to be low. In this editorial we provide a critical view on the available evidence regarding the efficacy of ALT on the treatment of CRBSI in hemodialysis patients, as well as the microbiological issues and technical challenges of this strategy.

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