“Clinical studies of ethanol lock to prevent catheter-related infections (CRIs) suggest preventive efficacy” Souweine et al (2015).

Reference:

Souweine, B., Lautrette, A., Gruson, D., Canet, E., Klouche, K., Argaud, L., Bohe, J., Garrouste-Orgeas, M., Mariat, C., Vincent, F., Cayot, S., Cointault, O., Lepape, A., Guelon, D., Darmon, M., Vesin, A., Caillot, N., Schwebel, C., Boyer, A., Azoulay, E., Bouadma, L. and Timsit, J.F. (2015) Ethanol Lock and Risk of Hemodialysis Catheter Infection in Critically Ill Patients: A Randomized Controlled Trial. American Journal of Respiratory and Critical Care Medicine. February 10th. .

Abstract:

Rationale: Ethanol rapidly eradicated experimental biofilm. Clinical studies of ethanol lock to prevent catheter-related infections (CRIs) suggest preventive efficacy. No such studies have been done in intensive care units (ICU).

Ethanol lock randomized controlled trial examines risk of hemodialysis catheter infection http://ctt.ec/lhn0P+ @ivteam #ivteam

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Objectives: To determine whether ethanol lock decreases the risk of major CRI in patients with short-term dialysis catheters (DCs)

Methods: A randomized, double-blind, placebo-controlled trial was performed in 16 ICUs in 7 university hospitals and 1 general hospital in France between June 2009 and December 2011. Adults with insertion of a nontunneled, nonantimicrobial-impregnated double-lumen DC for an expected duration greater than 48 hours, to perform renal replacement therapy (RRT) or plasma exchange (PE), were randomly allocated (1:1) to receive a 2-minute catheter lock with either 60% w/w ethanol solution (ethanol group) or 0.9% saline solution (control group), at the end of DC insertion and after each RRT or PE session. The main outcome was major CRI defined as either catheter-related clinical sepsis without bloodstream infection or catheter-related bloodstream infection (CRBSI), during the ICU stay.

Measurements and Main Results: The intent-to-treat analysis included 1460 patients (2172 catheters, 12,944 catheter-days, and 8442 study locks). Median DC duration was 4 days

(interquartile range , 2-8) and was similar in both groups. Major CRI incidence did not differ between the ethanol and control groups (3.83 vs 2.64/1000 catheter-days, respectively; HR, 1.55; 95% CI, 0.83-2.87; P=0.17). No significant differences occurred for catheter colonization (P=0.57) or CRBSI (P=0.99).

Conclusions: A 2-minute ethanol lock does not decrease the frequency of infection of DCs in ICU patients.

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