

The primary objective of the study was to estimate the effectiveness of 70% ethanol locks for decontaminating CVLs exposed to tacrolimus” Copacia et al (2017).

Abstract:

BACKGROUND: Tacrolimus, commonly used for graft versus host disease prophylaxis is usually administered via a dedicated central venous line (CVL) and trough levels drawn from the unexposed lumen. Being an oil-based medication, it may be adsorbed to the inner lumen of the CVL and result in falsely high levels drawn from an inadvertently exposed lumen. There is no treatment for decontamination of such CVLs, and natural decay occurs over months before the CVL can be used to draw reliable trough levels.

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OBJECTIVE: The primary objective of the study was to estimate the effectiveness of 70% ethanol locks for decontaminating CVLs exposed to tacrolimus.

METHODS: We studied the efficacy of 70% ethanol lock in decontaminating CVLs exposed to tacrolimus in patients during transplant. Trough tacrolimus levels were drawn from the exposed and unexposed (control) lumens at 8:00 am, followed by a 2-mL 70% ethanol lock instilled for a 2-hour dwell into the exposed (intervention) lumen. Trough tacrolimus levels were again drawn from both lumens at 8:00 pm and levels compared for efficacy.

RESULTS: All 20 sets showed a high 8 am trough level in the exposed intervention arm (median = 30 ng/mL), significantly greater ($P < 0.0001$) than that in the control arm (median = 9.05 ng/mL), and were contaminated. After the 2-hour ethanol lock, 65% of the lumens were decontaminated. The difference between the control and intervention arms was no longer found to be statistically significant ($P = 0.0826$).

CONCLUSION: A 2-hour 70% ethanol lock is effective for decontamination of CVLs exposed to tacrolimus.

Reference:

Copacia, J.A., Taylor, K., Laudick, M., Rangarajan, H.G., Abu-Arja, R., Auletta, J.J., Pyle-Eilola, A., Stanek, J., Pai, V.B. and Bajwa, R. (2017) 70% Ethanol for Decontamination of Central Venous Lines Exposed to Calcineurin Inhibitors. *The Annals of Pharmacotherapy*. May 1st. .

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