



“Replacing heparin 5000 IU with Taurolidine-citrate-heparin as catheter lock solution was associated with a statistically significant 56% reduction in staphylococcal bloodstream infection rates in our TCVC haemodialysis population.” Murray et al (2014).

Reference:

Murray, E.C., Deighan, C., Geddes, C. and Thomson, P.C. (2014) Taurolidine-Citrate-Heparin Catheter Lock Solution Reduces Staphylococcal Bacteraemia Rates in Haemodialysis Patients. QJM. June 16th. .

Taurolidine-citrate-heparin catheter lock solution reduces bacteraemia rates

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Abstract:

BACKGROUND: Infection is second only to cardiovascular disease as a cause of death in the haemodialysis population.

AIM: To assess the effect of introducing catheter lock solution taurolidine-citrate-heparin to all tunnelled central venous catheters (TCVCs) on staphylococcal bloodstream infection rates in patients on chronic haemodialysis.

DESIGN: Observational, prospective analysis of the incidence rates of staphylococcal bacteraemic events in NHS Greater Glasgow & Clyde and NHS Forth Valley between April 2011 to June 2013, with taurolidine-citrate-heparin catheter lock solution introduced July 2012.

METHODS: Data were collected each calendar quarter through a structured query language interrogation of the renal unit electronic patient record, with staphylococcal bacteraemic events expressed per 1000 vascular access exposed days. Comparison between pre- and post-intervention periods was made by student's t-testing.

RESULTS: 239 staphylococcal bacteraemic events occurred over a total of 424,835 HD days in 565 patients; 81 events in 289,389 AVF/AVG HD days, and 158 events in 135,446 TCVC HD days. Following the introduction of Taurolidine-citrate-heparin, bacteraemic events in patients dialysing via a TCVC fell from 1.59/1000 HD days to 0.69/1000 HD days, $p=0.004$. The staphylococcal bacteraemia rate in AVF/AVGs remained unchanged; 0.30 versus 0.26/1000 HD days, $p=0.52$.

CONCLUSIONS: Replacing heparin 5000 IU with Taurolidine-citrate-heparin as catheter lock solution was associated with a statistically significant 56% reduction in staphylococcal bloodstream infection rates in our TCVC haemodialysis population.

Other intravenous and vascular access resources that may be of interest (External links - IVTEAM has no responsibility for content).

Guide for intravenous chemotherapy and associated vascular access devices from Macmillan. CancerUK IV chemotherapy information.

