



Taurolidone-citrate solution (TCS) is a catheter-lock solution with broad-spectrum antimicrobial action. This study's aim was to evaluate the efficacy of TCS in reducing CLABSI rates in paediatric haematology-oncology (H/O) and gastrointestinal (GI) patients with long-term CVC" Chong et al (2019).

Abstract:

AIM: Central line-associated bloodstream infection associated bloodstream infection (CLABSI) is a serious complication of patients on central venous catheters (CVC). Taurolidone-citrate solution (TCS) is a catheter-lock solution with broad-spectrum antimicrobial action. This study's aim was to evaluate the efficacy of TCS in reducing CLABSI rates in paediatric haematology-oncology (H/O) and gastrointestinal (GI) patients with long-term CVC.

METHODS: This was an open-label trial of H/O and GI inpatients with the following inclusion criteria: <17 years old, more than or equal to one previous CLABSI and a minimum TCS dwell time of ≥ 8 h. CLABSI per 1000 catheter-days was calculated from each patient's first CVC insertion till 14 December 2017 or until TCS discontinuation. **RESULTS:** Thirty-three patients were recruited with a median age of 3.5 years; H/O and GI constituted 60.6 and 39.4% respectively. CVC types were Hickman line (45.5%), implantable port (24.2%) and peripherally inserted central catheter (30.3%). Mean pre- and post-TCS CLABSI rates per 1000 catheter-days were 14.44 and 2.45 ($P < 0.001$) for all patients; 16.55 and 2.81 for H/O

patients; and 11.21 and 1.90 for GI patients, respectively. Pre- and post-TCS rate ratio was 0.20, 0.10 and 0.30 for all, H/O and GI patients, respectively ($P < 0.001$). TCS also led to a reduction in CVC removal from 66.7 to 9.09% ($P < 0.001$). CONCLUSIONS: TCS usage was highly successful in CLABSI reduction by 80% in all patients, 90% in H/O and 70% in GI patients. In patients with high baseline CLABSI rates, TCS is an effective catheter-lock therapy to reduce CLABSI rates in paediatric patients.

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Reference:

Chong, C.Y., Ong, R.Y., Seah, V.X., Tan, N.W., Chan, M.Y., Soh, S.Y., Ong, C., Lim, A.S. and Thoon, K.C. (2019) Taurolidine-citrate lock solution for the prevention of central line-associated bloodstream infection in paediatric haematology-oncology and gastrointestinal failure patients with high baseline central-line associated bloodstream infection rates. *Journal of Paediatrics and Child Health*. May 30th. doi: 10.1111/jpc.14506. .

