We studied the incidence, risk factors and microbiological spectrum of jugular NTHC-associated bloodstream infections (CABSIs) at a tertiary care center in South Asia” Agrawal et al (2019).

Abstract:

BACKGROUND: Nontunneled hemodialysis catheters (NTHCs) remain the preferred vascular access at hemodialysis (HD) initiation in developing countries. We studied the incidence, risk factors and microbiological spectrum of jugular NTHC-associated bloodstream infections (CABSIs) at a tertiary care center in South Asia.

METHODS: In this retrospective cohort study, all adult (≥18 years) incident patients who underwent jugular NTHC insertion for HD between January 2016 and June 2017, had no prior history of temporary vascular access insertion and were followed up for ≥14 days were included.

RESULTS: A total of 897 patients underwent NTHC insertion during the study period and 169 patients fulfilled the inclusion criteria and contributed 7079 patient days of follow-up. CABSi incidence was 7.34 episodes per 1000 catheter days and median infection-free survival and time to CABSi were 96 and 24.5 days, respectively. In multivariate Cox regression analysis, immunosuppressive medication {hazard ratio [HR] 2.87 [95% confidence interval (CI) 1.09-7.55]; P = 0.033} and intravenous cefazolin use [HR 0.51 (95% CI 0.28-0.94); P = 0.031] was independently associated with CABSi. The cumulative hazard of CABSi was 8.3, 13.3,
17.6 and 20.9% at Weeks 1, 2, 3 and 4, respectively. Gram-negative organisms were the most common etiological agents (54.7%) and 40.3% of CABSIs were caused by drug-resistant organisms. Gram-negative and Gram-positive CABSIs were associated with neutrophil left shift and higher procalcitonin compared with coagulase-negative staphylococcal CABSIs.

CONCLUSION: In South Asia, NTHC-associated CABSIs occur early and are predominantly Gram negative. We hypothesize that poor hygiene practices may play a role in this phenomenon.

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