

Maintenance of CLABSI protocols by nursing staff and appropriate education of other care providers is essential to lower incidence of BBSI in this high-risk population, and further strategies to decrease infection burden should be studied” Chang et al (2016).

Abstract:

INTRODUCTION: There are only few reports describing the influence of central line-associated bloodstream infection (CLABSI) prevention strategies on the incidence of bacterial bloodstream infections (BBSIs).

METHODS: We performed a retrospective cohort study among pediatric recipients of allogeneic hematopoietic stem cell transplantation (allo-HCT) to assess potential changes in BBSI rates during 3 time periods: pre-CLABSI prevention era (era 1, 2004-2005), CLABSI prevention implementation era (era 2, 2006-2009), and maintenance of CLABSI prevention era (era 3, 2010-2012). BBSI from day 0-365 following allo-HCT were studied. The comparison of person-years incidence rates among different periods was carried out by Poisson regression analysis.

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RESULTS: The mean age of patients was 10.0 years. During the study period, 126 (65%) of 190 patients had at least a single BBSI. From day 0-30, day 31-100, day 101-180, and day 181-365, 20%, 28%, 30%, and 17% of patients, respectively, experienced BBSIs. The rate of *Staphylococcus epidermidis* and gram-negative pathogens significantly declined from 3.16-0.93 and 6.32-2.21 per 100 person-months during era 1 and era 3, respectively (P = .001).

CONCLUSIONS: Patients undergoing allo-HCT during era 3 were associated with decreased risk of BBSI (P = .012). Maintenance of CLABSI protocols by nursing staff and appropriate education of other care providers is essential to lower incidence of BBSI in this high-risk population, and further strategies to decrease infection burden should be studied.



Reference:

Chang, A.K., Foca, M.D., Jin, Z., Vasudev, R., Laird, M., Schwartz, S., Qureshi, M., Kolb, M., Levinson, A., Bhatia, M., Kung, A., Garvin, J., George, D., Della-Latta, P., Whittier, S., Saiman, L. and Satwani, P. (2016) Bacterial bloodstream infections in pediatric allogeneic hematopoietic stem cell recipients before and after implementation of a central line-associated bloodstream infection protocol: A single-center experience. American Journal of Infection Control. July 1st. .

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