In this study, we compared CRBSIs in both the pediatric and adult cancer population" Zakhour et al (2017).

Abstract:

OBJECTIVE: Central venous catheters (CVCs) are essential to treatment of children with cancer. There are no studies comparing catheter-related bloodstream infections (CRBSIs) in pediatric cancer patients to those in adults, although current guidelines for management of CRBSI do not give separate guidelines for the pediatric population. In this study, we compared CRBSIs in both the pediatric and adult cancer population.

METHODS: We retrospectively reviewed the electronic medical records of 92 pediatric and 156 adult patients with CRBSI cared for at MD Anderson Cancer Center between September 2005 and March 2014.

RESULTS: We evaluated 248 patients with CRBSI. There was a significant difference in etiology of CRBSI between pediatric and adult patients ($P = 0.002$), with the former having less Gram-negative organisms (27 vs. 46%) and more polymicrobial infections (10 vs. 1%, $P = 0.003$). Pediatric patients had less hematologic malignancies (58 vs. 74%) and less neutropenia at presentation (40 vs. 54%) when compared with adult patients. Peripheral blood cultures were available in only 43% of pediatric cases. CVC was removed in 64% of pediatric cases versus 88% of adult cases ($P < 0.0001$).

CONCLUSION: We found higher rates of Gram-negative organisms in adults and higher rates of polymicrobial in children. Because of the low rates of peripheral blood cultures and the low rates of CVC removal, CRBSI diagnosis could be challenging in pediatrics. A modified CRBSI definition relying more on clinical criteria may be warranted.

Reference:

Zakhour, R., Hachem, R., Alawami, H.M., Jiang, Y., Michael, M., Chaftari, A.M. and Raad, I.

(2017) Comparing catheter-related bloodstream infections in pediatric and adult cancer patients. Pediatric Blood & Cancer. April 14th. .

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