



Intensified line care efforts cannot eliminate all CLABSIs in the patients with AML. Exploring the role of mucosal barrier breakdown and/or the use of antibiotic prophylaxis may be effective strategies for further prevention of CLABSIs, supporting ongoing trials in this patient population” Rogers et al (2016).

Abstract:

Background: Central line-associated blood stream infections (CLABSIs) are a source of high morbidity and mortality in children with acute myelogenous leukemia (AML).

Procedure: To understand the epidemiology and risk factors associated with the development of CLABSI in children with AML.

ReTweet if useful... CLABSI rates in children with acute myelogenous leukaemia

<http://ctt.ec/mzjn0+> @ivteam #ivteam

Click To Tweet

Methods: We retrospectively reviewed all patients with AML over a 5-year period between 2007 and 2011 at the Children’s Hospital Colorado. Cases and controls were classified on the basis of the presence of a CLABSI as defined by the National Healthcare Safety Network.

Results: Of 40 patients in the study, 25 (62.5%) developed at least one CLABSI during therapy. The majority of CLABSIs were due to oral or gastrointestinal organisms (83.0%). Skin organisms accounted for 8.5%. In a multivariable analysis, the strongest risk factors associated with CLABSI were diarrhea (odds ratio [OR] 6.7, 95% confidence interval [CI] 1.6–28.7), receipt of blood products in the preceding 4–7 days (OR 10.0, 95%CI 3.2–31.0), not receiving antibiotics (OR 8.3, 95%CI 2.8–25.0), and chemotherapy cycle (OR 3.5, 95%CI 1.4–8.9). CLABSIs led to increased morbidity, with 13 cases (32.5%) versus two controls (1.9%) requiring transfer to the pediatric intensive care unit ( $P < 0.001$ ). Three (7.5%) of 40 CLABSI events resulted in or contributed to death.

Conclusions: Intensified line care efforts cannot eliminate all CLABSIs in the patients with AML. Exploring the role of mucosal barrier breakdown and/or the use of antibiotic prophylaxis may be effective strategies for further prevention of CLABSIs, supporting ongoing trials in this patient population.

#### Reference:

Rogers, A.E.J., Eisenman, K.M., Dolan, S.A., Belderson, K.M., Zauche, J.R., Tong, S., Gralla, J., Hilden, J.M., Wang, M., Maloney, K.W. and Dominguez, S.R. (2016) Risk factors for bacteremia and central line-associated blood stream infections in children with acute myelogenous leukemia: A single-institution report. *Paediatric Blood & Cancer*. September 12th. .

DOI: 10.1002/pbc.26254

**Thank you to our partners for supporting IVTEAM**

