

Although management algorithms for fever and central venous catheters (CVCs) have been implemented for pediatric oncology (PO) patients, management of pediatric outpatients with noncancer diagnoses and CVCs lacks clear protocols" Alexander et al (2016).

Abstract:

OBJECTIVE: Although management algorithms for fever and central venous catheters (CVCs) have been implemented for pediatric oncology (PO) patients, management of pediatric outpatients with noncancer diagnoses and CVCs lacks clear protocols. The aim of the study was to assess outcomes for pediatric outpatients with gastrointestinal disorders presenting with fever and CVC.

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METHODS: Using a microbiology database and emergency department records, we created a database of pediatric gastroenterology (PGI) and PO outpatients with fever and a CVC who presented to our emergency department or clinics from January 2010 through December 2012. We excluded patients who had severe neutropenia (absolute neutrophil count, <500/mm). We performed chart reviews to assess demographic and clinical characteristics. **RESULTS:** A total of 334 episodes in 144 patients were evaluated. Fifty-three percent (95% confidence interval, 38%-68%) of PGI patients had a bloodstream infection, whereas only 9% (95% confidence interval, 5%-14%) of PO patients had a bloodstream infection ($P < 0.001$). Among patients with a bloodstream infection, the PGI patients were more likely than the PO patients to have polymicrobial infections (46% vs 15%), gram-negative infections (57% vs 27%), and/or infection with enteric organisms (61% vs 23%). The PGI patients had higher rates of CVC removal (19% vs 4%) but no statistical difference in intensive care unit needs (11% vs 4%).

CONCLUSIONS: Pediatric gastroenterology outpatients with fever and a CVC have a high prevalence of bloodstream infection. Algorithms for management need to be subspecialty specific. Pediatric gastroenterology patients presenting to emergency departments or clinics with fever and CVC require admission for monitoring and management.

Reference:

Alexander, T., Blatt, J., Skinner, A.C., Jhaveri, R., Jobson, M. and Freeman, K. (2016) Outcome of Pediatric Gastroenterology Outpatients With Fever and Central Line. *Pediatric Emergency Care*. 32(11), p.746-750.

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