BC collection time and the start of the first IV antibiotic dose. We considered S. aureus, all Gram-negative rods, β-hemolytic Streptococci and Enterococci as significant pathogens and coagulase negative Staphylococci, S. viridans, Propionibacterium sp., Micrococcus sp. and Bacillus sp. as contaminants hospital ransfers.

Results. The percentage of BC with significant growth was unchanged during the first hour after starting IV antibiotics, but declined significantly in the period 1–12 hours after IV antibiotics were started. The overall positivity rate before starting IV antibiotics was 1,648/20,867 (7.9%) of patients and declined to 112/3,490 (3.2%), P < 0.0001, in the 1–12 hour period afterwards, but did not decline to 0. Septic patients averaged 1,143/9,293 (23.2%) positive and declined to 657/278 (23.8%), P < 0.0001, while nonseptic patients averaged 503/15,944 (3.15%) positive before antibiotics and declined to 47/2,762 (1.7%) P < 0.0001, 1–12 hours after. It should be pointed out that these are group averages from different patient groups at each hourly time, rather than individual patients with blood cultures drawn serially.

Conclusion. We conclude that IV antibiotics dramatically reduce the likelihood of getting a positive blood culture, but not during the first hour of administration; however, the residual positivity rate remains high enough that blood cultures are clinically worthwhile.

Disclosures. All authors: No reported disclosures.

1014. Microbiology and Outcome of Bloodstream Infections in Children With Intestinal Failure
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Session: 131. Bacteremia and Endocarditis
Friday, October 5, 2018: 12:30 PM

Background. Children with intestinal failure (IF) represent 20% of bloodstream infection (BSI) pediatric hospitalizations. We studied the microbiology and associated outcomes of this population.

Methods. Retrospective cohort study of children ≤18 years with IF dependent on parenteral nutrition (PN), with ≥1 BSI from January 2007 to December 2016. Organisms causing BSI were divided into skin or GI bacteria and fungi based on human habitat and kingdom. The impact of ethanol lock therapy (ELT) and clinical decision of small intestine bacterial overgrowth (SIBO) on the type of these organisms was evaluated. Antimicrobial utilization and outcome measures for BSIs were collected.

Results. There were 254 BSIs in 54 children resulting from GI bacteria (58%), skin bacteria (39%), and fungi (16%) with 11% containing >1 group. The proportion of skin bacteria was significantly higher on ELT (27% off vs. 45% on ELT; P = 0.003), while the proportion of GI bacteria was lower (67% off vs. 52% on ELT; P = 0.018). Significantly more fungal BSIs were seen in older children: mean age 4.2 years (95% CI: 2.9–5.5) vs. 2.7 years (95% CI: 2.3–3) with other organisms; P = 0.014. Fungal BSIs were more common in SIBO (18% vs. 5% with and without SIBO; P = 0.013). Twenty-eight organisms were resistant to cefazidime, and five to cefepime. Hospitalization days totaled 2,432 (median 8 days), with 21 pediatric critical care admissions totaling 156 days. There were six deaths, none related to BSI, 18/54 children were weaned off PN, and four had liver and intestinal transplants. Median course of antimicrobial therapy was 14 days.

Conclusion. The majority BSIs in children resulted from GI bacteria, suggesting intestinal translocation; these infections were not more common in older children despite increased intestinal mass, signifying continued translocation. BSI with GI organisms was not more common in children with SIBO despite increased intestinal bacterial load, possibly due to antibiotic suppressive therapy, which instead lead to more fungal BSIs. Prevention of BSI by ELT was less effective for skin bacteria which may require different regimens or strategies. BSI causes frequent and prolonged hospitlizations including need for intensive care, but deaths are rare.

Disclosures. All authors: No reported disclosures.

1015. Enhanced Detection of Bloodstream Pathogens From Positive Blood Culture Specimens With An Improved Multiplex PCR Molecular Diagnostic System
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Background. Timely bloodstream infection (BSI) pathogen identification requires robust sample purification and testing methods that can accommodate the wide variety of blood culture media used for growing positive blood culture (PBC) specimens. Sensitive molecular methods are needed for identification of all organisms present in PBC, especially polymicrobial cultures which can be difficult to identify with growth of BD and BioMerieux blood culture media commonly used in hospital laboratories were used to evaluate the performance of a prototype BioFire FilmArray® Blood Culture Identification 2 (BCID2) Panel with PBCs.

Methods. Fungi (seven) and bacteria (19) were independently seeded in blood samples, inoculated into as many as different eight types of blood culture bottles, and incubated on the recommended instrument. Time to positivity (TTP) was recorded for all PBCs. Subsets of PBCs were enumerated and tested on the BioFire BCID2 Panel and BioFire FilmArray® Blood Culture Identification (BCID) panel. Polymicrobial testing was performed by seeding fast growing and slow-growing organisms.

Results. Over 750 PBCs were enumerated; ~500 PBCs were tested on the BioFire BCID2, and over 200 were also tested on the BioFire BCID. 100% of seeded PBCs on the BioFire Panels resulted in correct pathogen identification. Across all bottle types, fungi grew to levels ranging from 8E+05 to 5E+07 CFU/ml; Gram-positive bacteria titers ranged from 9E+07 to 3E+09; Polymicrobial PBCs (30) had reduced titers of slow growing organisms when seeded with fast growing organisms but were detected by both BioFire BCIID2 and BioFire BCID Panels, respectively.

Conclusion. This study demonstrates that a prototype BioFire BCID2 Panel, and the BioFire BCID Panel, robustly detect and identify (100%) BSI pathogens over a multitude of common blood culture media and systems. Results confirm PBC (single and polymicrobial) titers are above the levels of sensitivity for both BioFire panels. An expanded menu of targets (organism and resistance) and faster run time with the BioFire BCID2 Panel will offer a flexible and comprehensive aid in the diagnosis of BSIs. The BioFire® BCID2 Panel has not yet been evaluated by the FDA or other regulatory agencies for in vitro diagnostic use.

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