



A retrospective evaluation was undertaken in intestinal failure (IF) patients with long term CVCs to evaluate differential time to positivity (DTP) against paired quantitative blood cultures (PP) for the diagnosis of CRBSI” Chadwick et al (2019).

Abstract:

BACKGROUND & AIMS: A retrospective evaluation was undertaken in intestinal failure (IF) patients with long term CVCs to evaluate differential time to positivity (DTP) against paired quantitative blood cultures (PP) for the diagnosis of CRBSI.

METHODS: A list of patients with a diagnosis of CRBSI was obtained from the intestinal failure unit database for a five year period, 2013 to 2017. Microbiology records were reviewed to obtain further information about blood culture and pour plate examinations. Organisms and times of collection, loading and positivity were recorded. Patients with a contemporaneous set of central and peripheral PP and blood cultures were included in an analysis of the sensitivity of DTP compared to PP.

RESULTS: There were 61 (45.5%) episodes in 56 patients where complete sets of central and peripheral blood cultures and PP were received. All 61 episodes had positive central blood cultures, 59 (96.7%) had positive central line PP and 17 (27.9%) had positive peripheral PP. Using PP as the gold standard, DTP sensitivity was 96.0% for 50 episodes where PP were consistent with CRBSI. Sensitivity increased to 100% for 17 episodes where there were no

delays in either collection or loading of blood cultures.

CONCLUSIONS: This is the first evaluation to support the use of DTP as a sensitive test in diagnosing CRBSI in patients with IF and provides confidence to IF centers where pour plate cultures are not available.

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Reference:

Chadwick, P.R., Ryan, K., Teubner, A., Bond, A., Abraham, A. and Lal, S. (2019) Sensitivity of differential time to positivity compared to pour plates for diagnosing catheter-related blood stream infection: An evaluation in patients with chronic intestinal failure. *Clinical Nutrition*. November 30th. doi: 10.1016/j.clnu.2019.11.034. .

