

“We compared individual blood cultures from each catheter lumen versus a pooled-blood culture bottle containing blood samples from every catheter lumen for the diagnosis of CLABSI” Herrera-Guerra et al (2015).

Reference:

Herrera-Guerra, A.S., Garza-González, E., Martínez-Resendez, M.F., Llaca-Díaz, J.M. and Camacho-Ortiz, A. (2015) Individual versus pooled multiple-lumen blood cultures for the diagnosis of intravascular catheter-related infections. American Journal of Infection Control. April 10th. .

Abstract:

Background: The current gold standard method for diagnosis of central-line associated bloodstream infections (CLABSIs) requires central venous catheter removal and a positive culture of the CVC tip with a positive peripheral blood culture.

Study design: Comparative study.

Methods: We compared individual blood cultures from each catheter lumen versus a pooled-blood culture bottle containing blood samples from every catheter lumen for the diagnosis of CLABSI.

Results: The pooled blood culture had the same sensitivity as the individually cultured central venous catheter lumens (85%) to detect CLABSI. A high correlation was found when we compared the pooled culture with any positive lumen result ($\kappa = 0.98$) but not when compared with any single lumen.

Conclusions: Sampling multiple lumens from a central line and incubating them in the same blood culture bottle is as effective as individual blood cultures for the diagnosis of colonization or CLABSI and is a better choice than sampling only 1 lumen when sending 3 different blood culture bottles is not possible.

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