A retrospective study was conducted to investigate the usefulness of systematic quantitative blood culture (QBC) in the diagnosis of catheter-related bloodstream infection (CRBSI) during two 1-year periods” Planes et al (2016).

Abstract:
INTRODUCTION: A retrospective study was conducted to investigate the usefulness of systematic quantitative blood culture (QBC) in the diagnosis of catheter-related bloodstream infection (CRBSI) during two 1-year periods (2002 and 2012).

METHODS: The study included all QBC requests sent to the microbiology laboratory for suspected CRBSI in adults (≥18 years) with any type of intravascular catheter (IVC). Based on a ratio of ≥4:1CFU/mL of the same microorganism between IVC blood culture from any lumen and peripheral blood culture, 5 diagnostic groups were defined: confirmed or probable CRBSI, primary BSI, other focus of infection, and colonization.

RESULTS: In total, 4521 QBCs were evaluated; 24% positive in 2002 and 16% in 2012 (P<0.0001). There were 243 episodes of suspected CRBSI (101 in 2002 and 142 in 2012). Confirmed CRBSI episodes were higher in 2002 than 2012 (56% vs 34%) (P<0.0001), whereas colonization episodes were lower (18% vs 38%) (P=0.0006). Gram-positive cocci decrease in 2012 relative to 2002 (56% vs 79.7%) (P=0.022). Almost one-third (32%) of confirmed CRBSI would have been missed if blood from all catheter lumens had not been cultured.

CONCLUSIONS: QBC is a useful method for diagnosing CRBSI. Blood samples from all catheter lumens must be cultured to avoid missing around one-third of CRBSI diagnoses.

Reference:

Thank you to our partners for supporting IVTEAM