Our objective was to assess the yield of the Maki technique followed by sonication in the detection of adult CT colonization and catheter-related bloodstream infection (C-RBSI)" Guembe et al (2016).

Abstract:

The Maki technique is the standard method for detecting catheter tip (CT) colonization. However, some “multi-lumen” catheters finish in a vaulted fornix and end at different distances from the CT. Therefore, we compared the traditional Maki technique with the sonication method using several cross-cut fragments of the CT.

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Our objective was to assess the yield of the Maki technique followed by sonication in the detection of adult CT colonization and catheter-related bloodstream infection (C-RBSI). For 3 months, we prospectively performed CT cultures of polyurethane catheters from adult patients admitted to our institution. First, we performed CT culture using the Maki technique on blood agar plates and then sonicated small fragments of CTs in 5 ml of BHI followed by culture of 100 μl of the sonicate. We included a total of 252 CVCs, with overall colonization and C-RBSI rates of 14.3% (36/252) and 5.9% (15/252). Of the 36 colonized CVCs, 21 (58.3%) were detected both by Maki and sonication, 6 (16.7%) were detected only by Maki technique,
and 9 (25.0%) only by sonication method. Among 15 episodes with concomitant bacteremia, both techniques were positive and concordant in 9 cases (60.0%), the result of the Maki was positive in only 1 (6.7%), and sonication in 5 (33.3%). Our study shows that both techniques are complementary. We recommend sonicating fragments of the CT from patients with bacteremia of unknown origin and a negative CT culture by the Maki technique.

Reference:


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