



Blood culture (BC) contamination rate is an indicator of quality of care scarcely explored in intensive care units (ICUs). We analyzed the BC contamination rate in our ICU to assess the effectiveness of an education-based intervention” Ramirez et al (2015).

Reference:

Ramirez, P., Gordón, M., Cortes, C., Villarreal, E., Perez-Belles, C., Robles, C., de Hevia, L., Marti, J.V., Botella, J. and Bonastre, J. (2015) Blood culture contamination rate in an intensive care setting: Effectiveness of an education-based intervention. American Journal of Infection Control. May 28th. .

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Abstract:

BACKGROUND: Blood culture (BC) contamination rate is an indicator of quality of care scarcely explored in intensive care units (ICUs). We analyzed the BC contamination rate in our ICU to assess the effectiveness of an education-based intervention.

METHODS: We conducted an interventional study with concurrent controls. Consecutive BCs drawn during a 6-month period were included. An education-based intervention was presented to case nurses (optimal technique). The remaining nurses comprised the control

group (standard technique). Two independent observers assessed clinical significance of saprophytic skin bacteria isolated in BCs.

RESULTS: Six hundred fifty-six BCs were obtained: 308 (47%) via optimal technique and 348 (53%) via standard technique (47%). One hundred eighty-seven BCs were positive for saprophytic microorganisms; 127 (89%) were considered unrelated to infection. Coagulase-negative staphylococci isolation was lower in the optimal technique group (14% vs 26%; $P < .001$), as well as contamination due to coagulase-negative staphylococci (12% vs 21%; $P = .002$) or *Acinetobacter baumannii* (0.3% vs 2%; $P = .013$). BC contamination rate was 13% in the optimal technique group versus 23% in the standard group ($P < .005$). In the optimal technique group, BC contamination rate was higher in BCs drawn through the catheter (17% vs 7%; $P = .028$).

CONCLUSIONS: An education-based intervention significantly reduced the BC contamination rate in our ICU. It seems necessary to design a tool to extract BCs through the catheter to minimize the risk of contamination.

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