

“In patients with suspected CRI, immediate CVC removal may be not necessary in all patients” Lorente et al (2014).

Reference:

Lorente, L., Martín, M.M., Vidal, P., Rebollo, S., Ostabal, M.I. and Solé-Violán, J. (2014) Should central venous catheter be systematically removed in patients with suspected catheter related infection? *Critical Care*. 17;18(5), p.564.

Abstract:

**INTRODUCTION:** Best clinical practice for patients with suspected catheter-related infection (CRI) remains unclear according to the latest Infectious Diseases Society of America (IDSA) guidelines. Thus, the objective of this study was to analyze clinical practice concerning the central venous catheter (CVC) and its impact on prognosis in patients with suspected CRI.

**METHODS:** We performed a prospective, multicenter, observational study in 18 Spanish Intensive Care Units (ICUs). Inclusion criteria were patients with CVC and suspected CRI. The following exclusion criteria were used: age less than 18 years; pregnancy; lactation; human immunodeficiency virus; neutropenia; solid or haematological tumor; immunosuppressive or radiation therapy; transplanted organ; intravascular foreign body; haemodynamic instability; suppuration or frank erythema/induration at the insertion site of the CVC, and patients with bacteremia or fungemia. The end-point of the study was mortality at 30 days of CRI suspicion.

**RESULTS:** The study included 384 patients. In 214 (55.8%) patients, CVC was removed at the moment of CRI suspicion, in 114 (29.7%) CVC was removed later and in 56 (14.6%) CVC was not removed. We did not find significant differences between survivors (n =311) and non-survivors (n =73) at 30 days according to CVC decision (P =0.26). The rate of confirmed catheter-related bloodstream infection (CRBSI) was higher in survivors than in non-survivors (14.5% versus 4.1%; P =0.02). Mortality rate was lower in patients with CRBSI than in the group of patients whose clinical symptoms were due to other causes (3/48 (6.25%) versus 70/336 (20.8%); P =0.02). We did not find significant differences in mortality in patients with confirmed CRBSI according to CVC removal at the moment of CRI suspicion (n =38) or later (n =10) (7.9% versus 0; P =0.99).

**CONCLUSION:** In patients with suspected CRI, immediate CVC removal may be not



necessary in all patients. Other aspects should be taken into account in the decision-making, such as vascular accessibility, the risk of mechanical complications during new cannulation that may be life-threatening, and the possibility that the CVC may not be the origin of the suspected CRI.

Full Text

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