

Abstract:

Objective: Early replacement of a new central venous catheter (CVC) may pose a risk of persistent or recurrent infection in patients with a catheter-related bloodstream infection (CRBSI). We evaluated the clinical impact of early CVC reinsertion after catheter removal in patients with CRBSIs.

Methods: We conducted a retrospective chart review of adult patients with confirmed CRBSIs in 2 tertiary-care hospitals over a 7-year period.

Results: To treat their infections, 316 patients with CRBSIs underwent CVC removal. Among them, 130 (41.1%) underwent early CVC reinsertion (≤ 3 days after CVC removal), 39 (12.4%) underwent delayed reinsertion (> 3 days), and 147 (46.5%) did not undergo CVC reinsertion. There were no differences in baseline characteristics among the 3 groups, except for nontunneled CVC, presence of septic shock, and reason for CVC reinsertion. The rate of persistent CRBSI in the early CVC reinsertion group (22.3%) was higher than that in the no CVC reinsertion group (7.5%; $P = .002$) but was similar to that in the delayed CVC reinsertion group (17.9%; $P > .99$). The other clinical outcomes did not differ among the 3 groups, including rates of 30-day mortality, complicated infection, and recurrence. After controlling for several confounding factors, early CVC reinsertion was not significantly associated with persistent CRBSI (OR, 1.59; $P = .35$) or 30-day mortality compared with delayed CVC reinsertion (OR, 0.81; $P = .68$).

Conclusions: Early CVC reinsertion in the setting of CRBSI may be safe. Replacement of a new CVC should not be delayed in patients who still require a CVC for ongoing management.

Reference:

Lee YM, Ryu BH, Hong SI, et al. Clinical impact of early reinsertion of a central venous catheter after catheter removal in patients with catheter-related bloodstream infections. *Infect Control Hosp Epidemiol.* 2020;1-7. doi:10.1017/ice.2020.405