The purpose of this study is to evaluate the association of common clinical variables with small-bore tunneled central venous catheter (CVC) infection” Black et al 92019).

Abstract:

OBJECTIVE: The purpose of this study is to evaluate the association of common clinical variables with small-bore tunneled central venous catheter (CVC) infection.

MATERIALS AND METHODS: Retrospective data were collected from all small-bore (6-French) tunneled CVCs placed by the interventional radiology service between 2012 and 2015. Only patients who had a documented reason for tunneled CVC removal were included in the analysis to capture all events. Transfemoral, transhepatic, and translumbar placements were excluded to reduce cohort heterogeneity. Multiple clinical variables were collected from a review of the medical record. The t test and Fisher exact test were used for two-group comparisons for continuous variables and categoric variables, respectively. Logistic regression analyses were further used to identify variables that were associated with catheter infection.

RESULTS: One hundred eighty-two patients (105 women [57.7%] and 77 men [42.3%]) with a mean (± SD) age of 49.7 ± 16 years were included. Thirty-two catheters (17.6%) were removed because of infection. Noninfected lines were removed at a mean of 39 (SD, 57.3) days, whereas infected lines were removed at a mean of 95.9 (SD, 113.4) days after
placement (p < 0.001). There was a statistically significant difference in the number of tunneled CVCs removed for infection when the indication for tunneled CVC placement was the administration of IV antibiotics (p = 0.04). By multivariate analysis, only time to removal (p = 0.002; odds ratio, 0.992; 95% CI, 0.986-0.998) and a history of tunneled CVC (p = 0.01; odds ratio, 0.306; 95% CI, 0.121-0.772) were associated with catheter removal for infection.

CONCLUSION: Time to catheter removal and history of tunneled CVC were associated with an increased risk of tunneled CVC removal because of infection.

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