

We hypothesized that the percentage of CVPL placed for sepsis has increased over time, whereas the frequency of lines placed for other conditions has not changed” Close et al (2018).

Abstract:

BACKGROUND: Early goal directed therapy for sepsis patients requires placement of central lines (CVPL) to measure central pressure.

OBJECTIVE: We hypothesized that the percentage of CVPL placed for sepsis has increased over time, whereas the frequency of lines placed for other conditions has not changed.

METHODS: This was a retrospective cohort study. Investigators analyzed records from consecutive ED patients in nine hospitals over a 10-year period. Patients >65 years identified with CVPL by CPT codes and diagnoses established by ICD-9 codes. We computed the annual number of patients that had a CVPL placed for sepsis and other conditions. We calculated the change from 2005 and 2014 in the normalized number of patients >65 with sepsis and other conditions and the 95% confidence intervals (CIs). We normalized the annual number of CVPLs by the average number of total annual visits for those >65 years as the annual visits in the >65 years cohort increased by > 25% over the course of the study. We then plotted the annual number of normalized CVPLs for sepsis and other conditions placed versus year and computed the linear regression coefficients (R²). Alpha was set at 0.05.

RESULTS: Of the 3,772,520 visits in the data base there were 711,435 visits by patients >65 years; 3184 (0.45%) had CVPL placed and 784 of those patients were treated for sepsis. The percent of patients with CVPL for sepsis increased 212% (95% CI: 115% to 356%) from 2005 to 2014, but there was no statistically significant annual change in percent of CVPL placed for other conditions (10% decrease, 95% CI: -26% to 9%). The linear regression coefficient for the plot of annual normalized number of CVPLs vs. year (See table and plot) was statistically significant for sepsis (R² = 0.94, p < 0.001) but not for other conditions (R² = 0.09, p = 0.80).

CONCLUSION: We found that CVPL placed for sepsis tripled from 2004 to 2011, whereas CVPL placed for other conditions did not change significantly.

Full Text

Reference:

Close, B., Richman, P., Eskin, B. and Allegra, J.R. (2018) Placement of central venous lines for sepsis in the elderly has markedly increased-Evidence from a cohort of New Jersey (USA) emergency departments. Turkish Journal of Emergency Medicine. 18(1), p.25-28.

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