

COMPLICATION RATES AMONG PERIPHERALLY INSERTED CENTRAL VENOUS CATHETERS AND CENTRALLY INSERTED CENTRAL CATHETERS IN THE MEDICAL INTENSIVE CARE UNIT.

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Abstract

PURPOSE:

There are limited contemporary data describing the rates of catheter-related deep vein thrombosis (CRDVT) and central line-associated bloodstream infection for peripherally inserted central venous catheters (PICCs) and centrally inserted central venous catheters (CICCs) in the medical intensive care unit (ICU).

METHODS:

We performed a retrospective cohort study of 200 PICCs (dual/triple lumen) and 200 CICCs (triple/quadruple lumen) placed in medical ICU adults at Mayo Rochester between 2012 and 2013. Central lines were followed from insertion time until hospital dismissal (primary analysis) or ICU discharge (secondary analysis). Symptomatic CRDVT was determined by Doppler ultrasound. Central line-associated bloodstream infection was defined according to federal reporting criteria.

RESULTS:

During 1730 PICC days and 637 CICC days, the incidence of CRDVT when followed until hospital dismissal was 4% and 1% (4.6 and 3.1 per 1000 catheter-days), respectively, $P = .055$. When censored at the time of ICU dismissal, the rates were 2% and 1% (5.3 and 3.7 per 1000 catheter-days), $P = .685$. Only 1 central line-associated bloodstream infection occurred in a PICC following ICU dismissal, $P > .999$.

CONCLUSIONS:

Thrombotic and infectious complications were uncommon following PICC and CICC insertion, with no significant difference in complication rates observed. Half of PICC DVTs occurred on the general floor, and like all central catheters placed in the ICU, PICCs should be aggressively discontinued when no longer absolutely needed.

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