
Abstract:

PURPOSE: To evaluate incidence and risk factors of peripherally inserted central catheter (PICC)-related complications in cancer patients.

METHODS: A prospective, multicenter, cohort study of cancer patients with PICC insertion was performed from February 1, 2013 to April 24, 2014. All patients were monitored in clinic until PICCs were removed. The primary endpoint was PICC removal due to complications. Patient-, catheter- and insertion-related factors were analyzed in univariable and multivariable logistic regression analysis to identify significant independent risk factors for PICC-related complications.

RESULTS: There were 477 cancer patients included, for a total of 50,841 catheter-days. Eighty-one patients (17.0%) developed PICC-related complications, with an incidence of 1.59 per 1000 catheter days. Thirty-six (7.5%) PICCs were removed because of complications. The most common complications were skin allergy (4.6%), catheter occlusion (3.4%) and accidental withdrawal (2.3%). Nine (1.9%) patients developed symptomatic upper extremity deep venous thrombosis (UEDVT) and central line associated bloodstream infection (CLABSI) was shown in six (1.3%) PICCs with an infection rate 0.12 per 1000 catheter days. In multivariable analysis, body mass index (BMI) >25 (odds ratio, 2.09; 95% confidence interval, 1.26-3.47, p = 0.004) was shown to be a significant risk factor for PICC complications.

CONCLUSIONS: Cancer patients with BMI greater than 25 were more likely to have PICC complications.

Reference:


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