Incidence of phlebitis with the use of peripheral intravenous catheters during infusion is 31%. Severe phlebitis develops in 4% of all patients” Lv and Zhang (2019).

Abstract:

INTRODUCTION: Phlebitis is a common complication associated with the use of peripheral intravenous catheters. The aim of this study was to estimate the incidence of phlebitis with peripheral intravenous catheter use and to identify risk factors for phlebitis development.

METHOD: Literature survey was conducted in electronic databases (CINAHL, Embase, Google Scholar, Ovid, and PubMed), and studies were included if they used peripheral intravenous catheter for therapeutic or volumetric infusion and reported phlebitis incidence rates. Random effects meta-analyses were performed to obtain overall and subgroup phlebitis incidence rates and odds ratio between males and females in phlebitis incidence.

RESULTS: Thirty-five studies were included (20,697 catheters used for 15,791 patients; age 57.1 years (95% confidence interval: 55.0, 59.2); 53.9% males (95% confidence interval: 42.3, 65.5)). Incidence of phlebitis was 30.7 per 100 catheters (95% confidence interval: 27.2, 34.2). Incidence of severe phlebitis was 3.6% (95% confidence interval: 2.7%, 4.6%). Incidence of phlebitis was higher in non-intervened (30% (95% confidence interval: 27%, 33%)) than in intervened (21% (95% confidence interval: 15%, 27%)) groups, and with Teflon (33% (95% confidence interval: 25%, 41%)) than Vialon (27% (95% confidence interval: 21%,
32%) cannula use. Odds of developing phlebitis was significantly higher in females (odds ratio = 1.42 (95% confidence interval: 1.05, 1.93); p = 0.02). Longer dwelling time, antibiotics infusion, female gender, forearm insertion, infectious disease, and Teflon catheter are important risk factors for phlebitis development identified by the included studies.

CONCLUSION: Incidence of phlebitis with the use of peripheral intravenous catheters during infusion is 31%. Severe phlebitis develops in 4% of all patients. Risk of phlebitis development can be reduced by adapting appropriate interventions.

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