

World

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Utilization of evidence-based practice in comparing the effectiveness of two opposing standards in intravenous therapy

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Aim: To compare the effectiveness of 72-hour routine peripheral venous catheter change and clinically-indicated replacement in reducing the incidence rate of catheter-related complications.

Background: A current guideline recommended by the Center of Disease Control and Prevention (CDC) and Infusion Nurse Society (INS) no longer braces the routine replacement of intravenous catheter as supported by various multi-centered and well-conducted studies. Hence, the Association of Nursing Service Administrator of the Philippines (ANSAP) still follows the old concept.

Method: Randomized controlled trial was conducted in the medical ward of Batangas Medical Center for one-month period. Fifty patients were selected and randomized into two groups, the control or routine replacement group and the intervention or clinically-indicated group. The entire procedure from the initiation of peripheral venous catheter, care, site assessment based on phlebitis and infiltration scale, removal and transport of catheter tip to the laboratory for semi-quantitative culture were handled by the nurse-on-duty. Outcome variables were phlebitis, infiltration and catheter related infections. Results were presented using frequency and percentage distribution and data were analyzed using chi-square of independence in order to answer the hypothesis of the study. All data were treated using SPSS version 16 with 0.05 alpha level.

Results: Both groups had a low rate of phlebitis (8% or two cases in intervention/clinically indicated group and 12% or three cases in control/routine replacement group). Infiltration was the common cause of catheter removal (36% or nine cases in intervention group and 40% or 10 cases in control group). No incidence of catheter related bloodstream infections was reported. A chi-square test of independence was performed to examine the difference in occurrence of infiltration and phlebitis between clinically indicated and routine replacement group. Statistics implies that occurrence of phlebitis and infiltration does not differ between clinically indicated and routine replacement group.

Conclusion: The study found no evidence to support changing catheter every 72 hours. Incidence rate of catheter-related complications such as phlebitis, infiltration and catheter related infections did not increase during prolonged catheterization. The results of the study substantiated with those in the international standards. This study is a scientific testament for the nursing administrators to revise the existing guideline since the clinically-indicated replacement of intravenous catheter is a more precisely logical and pragmatic option because it involves less pain to the patient, less staff procedural time, less equipment cost and less environmental waste.

Biography

Amor B Calayan, leader of Health Care Administration, Nursing Education and other related services which ensures Safety and Quality Care, Management, Learning and Development among Professional Nurses, undergraduates so as to other professions from various organizations and other clienteles requiring technical knowledge and skills in Organizational Management, Human Resources, Research, Safety Management and Quality Improvement and other Administrative Skills, a catalyst for the strong implementation of good governance and improvement of KSA of an individual in the profession in all aspects.

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