Peripheral Venous Cannulation in the Acute Care Setting

Dr Lisa Hutchinson, Dr Stephan Birkner, Dr Izak Heys

Aim
Peripheral venous cannulae (PVC) are commonly inserted on patients’ admission to hospital. Some are inserted inappropriately, exposing patients to complications such as thrombophlebitis and cannula-related bacteraemia [1-4]. Reducing the incidence of catheter related bloodstream infections was a high impact intervention described in the Saving Lives campaign [5]. Our aim was to investigate the appropriateness of PVC insertions for patients admitted to Acute Medical Units and assess whether implementation of a new PVC Insertion and Maintenance Bundle could decrease levels of inappropriate PVC.

Method
Data was randomly collected in real time from 148 patients admitted to our District General Hospital Acute Medical Wards between January 2014 and February 2016 (80 pre. and 68 post-intervention). A proforma was completed for each patient recording their age, gender, primary diagnosis, cannula site and size, reason for cannulation, whether a clinical reason for cannulation was documented and if the cannula was appropriate. A PVC Insertion and Maintenance Bundle was developed, trialled, then rolled out through the trust. The same data was re-collected post-intervention in addition to assessing bundle usage. The chi-square was used to analyse for statistical significance.

Peripheral Vascular Catheter Insertion and Maintenance Bundle

Outcomes / Results
- The proportion of patients with inappropriately inserted PVC significantly reduced, p=0.015, 16.3% pre and 1.5% post-intervention.
- Mode PVC insertion site changed (forearm pre-intervention, antecubital fossa post).
- Mode PVC size inserted remained at 20 gauge.
- Documentation of reasons for PVC insertion improved from 79% pre to 89% post-intervention.
- Usage of the PVC Insertion and Maintenance Bundle for patients with cannula in situ was variable with 78% fully or partially completed at one hospital and 57% fully or partially completed at the other.

Conclusion
Introduction of a PVC Insertion and Maintenance Bundle can significantly help to reduce the number of inappropriate PVC insertions and act as a prompt for nursing staff and doctors to review PVC, both aiding prevention of catheter related complications.

References