Abstract

• As research emerges implicating central venous catheters and peripherally inserted central catheters for life-threatening complications, vascular access nurses must look to other alternatives for short-term (3 to 29 days) intravenous therapy that are less invasive and associated with fewer risks to the patient.

• Midline catheters are emerging as an alternative for patients to receive intravenous therapy in acute care and outpatient settings, and research supports the use of less-invasive vascular access devices.

“Despite the recommendations for infusing irritants and vesicant into central circulation only, in practice this isn’t always possible or in some patients’ best interests.” —Dumont et al

Objectives

• Decrease PIV attempts and insertions on patients hospitalized from 3 to 29 days.
• Decrease venous sticks by lab personnel with blood drawing ability of line in place.
• Identify patients with PIV infiltrations/multiple PIV’s that aren’t lasting expected 72 hours.
• Increase dwell time of peripheral venous access.
• Prevent unnecessary PICC placements/other invasive vascular access procedures.
Methods

• Midline catheters were placed in upper extremities of 142 inpatients by vascular access team
• Research project approved by facility’s Nurse scientist and administration to meet requirements for HIPPA and privacy guidelines
• Retrospective chart reviews of EMR completed to gather required data and descriptive statistics
• Dwell times, blood-drawing ability, complications, completion of therapy rates, and use of Vancomycin in the patient group were documented to determine if used of midline increased patient comfort by decreasing venous access attempts/cannulations by lab and nursing personnel
Improving Patient Comfort by Increasing Completion of Therapy Rates with Fewer Risks for Patients through the Use of Midline Catheters

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Results

• Patients who received a midline catheter exhibited a completion of therapy rate of 82%
• Dwell time average for midline catheter was 5.7 days (longest dwell time was 26 days)
• Midline catheters retained blood-drawing ability for up to 20 days
• Patients had significantly fewer intravenous cannulations post-midline placement
• Vancomycin was administered to 43% of the patients who received midline catheters during hospitalization
• No CLABSI or DVT documented in patient group

Conclusions

• When used appropriately, midline catheters are a safe, cost-effective alternative for vascular access.
• Blood-drawing ability reduces number of needle sticks increasing patient comfort and satisfaction.
• Midline catheters exhibit a low risk of complication when compared to other vascular access devices.
• Patients with challenging vasculature should be identified sooner as midline candidates to reduce unnecessary intravenous attempts/cannulations.

References

Completed Therapy: 82%

- Leaking: 1%
- Painful: 10%
- Accidental: 1%
- Infiltrated: 4%
- Per Order: 1%
- Occluded: 1%

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