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To Filter or Not to Filter? (POSTER)

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To Filter or Not To Filter

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A PASSION FOR BETTER MEDICINE.™



Background/Significance

- At LVHN, there were 27 phlebitis incidences directly related to IV amiodarone infusions in a three year period on 3A/IPCU, PCU and CICU.
- Current practice at LVHN does not include the use of an in-line filter for IV amiodarone infusions.

PICO QUESTION

- In patients receiving intravenous amiodarone, does the use of in-line filters reduce the incidence of phlebitis?
- P: Patients receiving intravenous amiodarone
- I: Infusion through in-line filter
- C: Infusion through peripheral lines without an in-line filter
- O: Decreased incidence of phlebitis

Purpose

- To decrease IV phlebitis in patients receiving IV amiodarone.

TRIGGER?

- Knowledge v. Problem
 - Problem focused
 - The trigger for this project is problem focused. At LVHN there were 27 phlebitis incidences directly related to IV amiodarone infusions in a three year period on three cardiac units (3A/IPCU, PCU and CICU).

EVIDENCE

- EBSCO CINAHL and OVID Medline were the search engines primarily utilized to gain evidence for this project.
- Keywords utilized to obtain evidence were the following: amiodarone, phlebitis, in-line filters, and infusion.
- Data was reviewed and synthesized from eight current research articles on the topic of amiodarone infusions to gain knowledge on the subject.
- Current literature recommends an in-line filter be utilized for all peripheral IV infusions of amiodarone

EVIDENCE

- Risk factors of phlebitis can be related to the infusion of certain caustic medications. The nurse can have an impact on prevention.
- The incidence of phlebitis and infiltration is tracked through the utilization of scales/data.
- Alternative delivery methods such as in-line filters may decrease the incidence of phlebitis, therefore improving quality and decreasing costs.
- Nurses must be aware of the impact of caustic medications and their effects on patient safety.

EVIDENCE

- Studies have shown an increased incidence of phlebitis in patients receiving amiodarone peripherally.
- Researchers have found that in-line filters are a necessary component when administering amiodarone.
- A retrospective chart review was conducted at a large military hospital on 273 patients receiving amiodarone therapy and found that phlebitis is a significant complication associated with peripheral infusions at doses exceeding 2mg/ml.

Current Practice at LVHN

- Current practice at LVHN is to utilize tubing without an in-line filter to infuse IV amiodarone.

IMPLEMENTATION

1. Process Indicators and Outcomes

- In-line filters and phlebitis scores

2. Baseline Data

- Safety reports from 3A/IPCU, PCU and CICU for the last three years (1/1/11-12/31/13) were analyzed to determine the number (N=27) of IV infiltrates that were related to amiodarone.

IMPLEMENTATION

3. Design (EBP) Guideline(s)/Process

- Adding an in-line filter to the end of our current tubing to infuse IV amiodarone.
- Data will be collected and analyzed to see if the utilization of an in-line filter with IV amiodarone infusion decreases the incidence of phlebitis.

IMPLEMENTATION

4. Implemented EBP on Pilot Units

- A pilot study was initiated on March 31, 2014 for CICU and 3A/IPCU to include the use of an in-line filter for all peripheral IV amiodarone infusions.
- The nurses on 3A/IPCU and CICU were in-serviced on this pilot study by the 3A/IPCU PCS. Log books were created for both units for data collection purposes.

IMPLEMENTATION

5. Evaluation (Post data) of Process & Outcomes

- Data will be collected and analyzed to determine whether the use of an in-line filter with IV amiodarone infusions decreases the incidence of phlebitis.

6. Modifications to the Practice Guideline

- At this time, no practice guidelines at LVHN are being modified as a result of this study.

IMPLEMENTATION

7. Network Implementation

- Our plan is to continue the pilot study on the two units until September 30, 2014 to potentially enroll a larger number of patients into the study.
- Currently in-line filters have been utilized on 18 patients. So far, only one infiltration has occurred. This particular infiltrate occurred in a patient with a pre-hospital IV.

Practice Change

- This study hopes to change the practice at LVHN for IV amiodarone infusion with the utilization of an in-line filter.
- This practice change will benefit the patients by decreasing their risk of phlebitis.

RESULTS

- Key Findings: Results are pending in hope that utilization of in-line filters will significantly decrease the incidence of phlebitis with amiodarone infusions.
- Next steps: Continuing the pilot study, collecting, and analyzing the data.

Implications for LVHN

- This practice change could potentially:
 - Increase patient satisfaction
 - Decrease length of stay
 - Decrease cost of treatment

Strategic Dissemination of Results

■ PLAN for DISSEMINATION

- Sharing pilot study results with Pharmacy Safety Officer at LVHN.
- Present findings to LVHN Practice Council for network wide approval.
- Present pilot study process to Patient Care Specialists (PCSs) at monthly PCS meeting.
- Create TLC course and coordinate in-services to units that utilize IV amiodarone.
- Add information to LVHN's pharmacy infusion website

Lessons Learned

- One on one education significantly improved compliance.
- Nurses were receptive to this change in the hope to improve patient care.
- A filter that costs \$1.80 could potentially save the patient from discomfort, increased length of stay, and increased overall cost of treatment.

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- Questions/Comments:

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