Prevention of Venous Thromboembolism in the At-Risk Patient

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Prevention of Venous Thromboembolism in the At-Risk Patient

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PATIENT CARE ISSUE

- Venous thromboembolism affects between 200,000 and 600,000 Americans each year (1).
- VTE has become the third most common cause of death in the United States.
- VTE accounts for 15% of maternal related deaths in developed countries worldwide (2).
- Those who are most at risk are ones who have experienced trauma, surgery, upcoming or recent childbirth, CHF, cancer, paralysis, are elderly, and those who are immobile (1).

Question: What is the most effective prevention method of VTE in the at-risk patient?

P- Patients at-risk for developing a VTE
I- Heparin vs. Sequential Compression Devices
C- 10 current evidence-based practice articles
O- Prevention of VTE

REGISTERED NURSE INTERVIEWS

- Grandview Medical Center- Jenna, RN:
  - Follows the Chest Physicians Evidence Based Practice Guide 8th ed.
  - LMWH in conjunction with SCD in patients with mobile impairment
  - Ultimately physicians discretion
- Springfield Regional Medical Center- MaryBeth, RN:
  - Heparin is contraindicated for postpartum and C-section mothers
  - SCD ordered until mom is ambulatory on her own

SYNTHESIS OF EVIDENCE

SCD
- Most effective when used in conjunction with LMWH
- Proven effective in cases where the use of LMWH is contraindicated

LMWH
- Prophylactic use for 1 week reduced proximal DVT, symptomatic VTE, and all cause mortality more than graduated compression stockings (3)
- 7-day prophylactic regimen lowers the incidence of VTE events in patients by 2.3% (3)

RESULTS

Search resulted in 15 articles; and 10 relevant articles were included in final draft
- Prevention most effective with compression devices and LMWH (4)
- SCD when LMWH contraindicated
  - Ex: postpartum mothers, C-section patients, bleeding disorders, etc. (6)
- Ultimately left to physician discretion (5)

METHODS

- Databases/Search Engines: PUBMED; CINAHL; Google Scholar
- Key Words: Prevention of VTE/DVT/PE, LMWH, Sequential Compression Devices, Heparin, Postoperative Patients
- Inclusion Criteria:
  - Articles published within the last five years
  - Articles pertain to patients who are more at risk for the development of DVT over the general population
  - Researchers/publishers must be of credible standing
- Exclusion Criteria:
  - Published later than the past five years
  - Articles focused on patients not at an increased risk for the development of VTE
  - Whose researchers/publishers were not of credible standing

EVIDENCE-BASED PRACTICE RECOMMENDATIONS

- Continue current practice and standards
- Agree with protocol and current practices of Grandview and Springfield Medical Centers
- Combination heparin and SCD is the most effective method in preventing DVT unless otherwise contraindicated. (4)

REFERENCES