

PEER

Professionals Evolving Through Education and Research

How You Can Help Prevent Venous Thromboembolism (VTE)

Did you know that VTE occurs fairly often in hospitalized patients that don't receive timely preventive measures? In fact VTE is such a common occurrence that both HFAP and JCAHO have launched standards and initiatives to assure that patients receive timely prevention. The numbers are dramatic. VTE occurrence rates among hospitalized patients that **do not** receive prevention are:

- 10 to 40% among medical and general surgical patients
- 40 to 60% after major orthopedic surgery
- 10 to 20% among oncology patients

Not only are occurrence rates high, but mortality rates due to VTE are also high. For example the mortality rate for VTEs occurring in the lower extremity is 13% to 21%. Even higher is the mortality rate for VTEs that occur in the upper extremity, with up to 48% at risk for mortality. Significantly, pulmonary embolism accounts for 10% of all hospital mortalities. Therefore, the stakes are high and it is imperative that hospitals institute measures to decrease the incidence of VTE. In fact many hospitals have done just that and are trying to become VTE-Free Hospitals.

There is good evidence available that tells us who is primarily at risk for developing VTE. Examples of risk factors are: immobility greater than 72 hours, central venous catheter, malignancy, MI/CHF, ICU admission, obesity, pneumonia or respiratory failure, severe

sepsis/infections, stroke, major surgery involving the pelvis, abdomen or lower extremity, surgery lasting over 30 minutes, varicose veins, age greater than 70 years, history of DVT or PE, paralysis, total hip, knee or hip fracture, and multiple trauma.

The evidence also tells us what we can do to prevent VTE in our hospitalized patients. Practices that have demonstrated effectiveness in preventing VTE include early ambulation, TED hose, sequential compression devices, Heparin, Lovenox, and Coumadin.

There are some contraindications to medical prevention that you should be aware of. These include: active bleeding, thrombocytopenia, uncontrolled hypertension, hypersensitivity to low molecular weight heparin, incomplete spinal cord injury, recent intraocular or intracranial surgery, and spinal tap/epidural anesthesia/analgesia.



Virginia Madrinan, Clinical Nurse Specialist and member of the Nursing Research Committee, has been working with Dr. H. Shah, Dr. Safadi, Dr. Obaid, Cindy Conley, PharmD, and members of the Research Committee to develop the VTE prevention protocol. The protocol was approved at the January Medical Staff committees and will go into effect in March, 2006.

The protocol contains several components: Risk assessment, identification of contraindications, and MD orders for labs and prophylaxis. Following is a more detailed description of each component.

Risk Assessment

The nursing admission data base will list risk factors for DVT (see example below). If 1 or more of these risk factors are present, patients will be considered to be at risk. For at risk patients, a VTE order set will need to be placed in the chart.

Identification of Contraindications

If patients have any of the contraindications listed on the VTE order set, that complication will need to be checked and the physician consulted.

Obtaining VTE Orders

After pulling the order set and indicating any contraindications, call the doctor, and ask if he or she wants to initiate VTE orders. If the doctor refuses, place order set on the chart for the doctor to sign the next day.

Nursing Care

Nursing care is an important component of the VTE order set. TED hose and early ambulation continue to be extremely important interventions for preventing VTE. In fact, if possible, all at-risk patients should participate in early ambulation. In addition to early ambulation and TED hose, sequential compression devices may be ordered for prophylaxis. Sequential compression devices should be used until your patient has returned to prior functional status.

Summary

It is possible to prevent VTE using a team approach. Please help make Methodist Hospital VTE-free.

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| VENOUS THROMBOEMBOLISM (VTE) RISK ASSESSMENT | |
| <input type="checkbox"/> Obesity (greater than 30 body mass index) | <input type="checkbox"/> Malignancy |
| <input type="checkbox"/> Age greater than 70 years | <input type="checkbox"/> Intensive Care Patient |
| <input type="checkbox"/> Indwelling Central Venous Catheter | <input type="checkbox"/> Trauma Patient |
| <input type="checkbox"/> Immobility greater than 72 hours | <input type="checkbox"/> Non-hemorrhagic Stroke |
| <input type="checkbox"/> Paralysis | <input type="checkbox"/> Surgery (Planned) lasting over 30 minutes |
| <input type="checkbox"/> Pneumonia, COPD, Respiratory failure | <input type="checkbox"/> Surgery (major surgery involving the pelvis, abdomen or lower extremity) |
| <input type="checkbox"/> Severe Sepsis/Infections | <input type="checkbox"/> Total Knee, Total Hip or Hip Fracture |
| <input type="checkbox"/> Clotting Disorder | <input type="checkbox"/> Post-partum, Pregnancy, Oral contraceptives use |
| <input type="checkbox"/> Varicose Veins | |
| <input type="checkbox"/> History of Deep Vein thrombosis | |
| <input type="checkbox"/> History of Pulmonary Emboli | |
| <input type="checkbox"/> History of a Heart Attack | |
| <input type="checkbox"/> History of Congestive Heart Failure | |
| PRESENCE OF 1 OR MORE RISK FACTORS USE PREVENTIVE VTE ORDER SET | |
| PLAN OF CARE | |

VTE Risk Assessment from the nursing admission database