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|--|---|--|--|
| <input type="checkbox"/> 1 st Assessment | <input type="checkbox"/> Preoperative | <input type="checkbox"/> Transfer to ICU | <input type="checkbox"/> Change in patient condition |
| <input type="checkbox"/> 2 nd Assessment | <input type="checkbox"/> Complications of Thrombo-prophylaxis | | <input type="checkbox"/> Others |
| Attending Physician | Diagnosis | | |
| Assessment Date/Time | Assessed By | | ID |
| 1. What is the patient's Risk Score for VTE? | | | |
| 3 Risk Points | | 2 Risk Points | |
| <input type="checkbox"/> Past history of VTE <input type="checkbox"/> Ischemic stroke with paralysis <input type="checkbox"/> Acute respiratory failure with mechanical ventilation <input type="checkbox"/> Thrombophilia# <input type="checkbox"/> Acute spinal cord injury* <input type="checkbox"/> Multiple trauma* <input type="checkbox"/> Hip, Pelvis or leg fracture* <input type="checkbox"/> High risk surgery <i>Major Joint Replacement</i> <i>Hip fracture surgery</i> <i>Major Cancer Surgery</i> | <input type="checkbox"/> Age > 65y with restricted mobility <input type="checkbox"/> Myocardial infarction <input type="checkbox"/> CHF (NYHA III OR IV) <input type="checkbox"/> Severe respiratory disease without mechanical ventilation <input type="checkbox"/> Infection/acute inflammatory disease with bed rest <input type="checkbox"/> Sepsis <input type="checkbox"/> Active malignancy / cancer treatment <input type="checkbox"/> Nephrotic syndrome <input type="checkbox"/> Myeloproliferative disorder <input type="checkbox"/> Immobilizing Plaster Cast <input type="checkbox"/> Major surgery: <i>Lasting more than 45 mins</i> <i>Open abdominal, Gynecologic or Urologic surgery, Cranial and spinal neurologic surgery*</i> | <input type="checkbox"/> Age 40 - 65y with restricted mobility <input type="checkbox"/> Infections/acute inflammatory disease without bed rest <input type="checkbox"/> Central venous access <input type="checkbox"/> Dehydration <input type="checkbox"/> Polycythemia or thrombocytosis <input type="checkbox"/> Hormone therapy / Oral contraception <input type="checkbox"/> Pregnancy/postpartum 1 month <input type="checkbox"/> Obesity <input type="checkbox"/> Burns <input type="checkbox"/> Varicose veins <input type="checkbox"/> Malignancy within 5y <input type="checkbox"/> History of major surgery in 6 m <input type="checkbox"/> Non-major surgery <input type="checkbox"/> Paroxysmal Nocturnal Hemoglobinuria | |
| Total | | Total | |
| Grand Total | | | |
| <i>* Risk of bleeding should be thoroughly assessed</i> | | | |
| 2. According to your assessment, check the Protocol you recommend: | | | |
| <input type="checkbox"/> Low Risk Patient (1 Point): Patient education + Early ambulation <input type="checkbox"/> Optimal GCS <input type="checkbox"/> Moderate Risk Patient (2 Points): Patient education + Early ambulation + Pharmacologic Prophylaxis <input type="checkbox"/> Optimal Mechanical Prophylaxis (SCD or AVI or GCS) <input type="checkbox"/> High Risk Patient (3 Points or more): Patient education + Early ambulation + Pharmacologic Prophylaxis + Optimal Mechanical Prophylaxis (SCD or AVI or GCS) <input type="checkbox"/> Contraindications to pharmacologic prophylaxis ^{table 2} with Risk Score ≥ 2: Patient education + Early ambulation + Optimal Mechanical Prophylaxis (SCD or AVI or GCS) | | | |
| 3. Ambulation Protocol: (Start time, frequency, with oxygen?) | | | |
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| 4. Pharmacologic prophylaxis ^{table 3} (Start time, dose, frequency, laboratory tests, end time and post discharge prophylaxis) | | | |
| R/..... | | | |
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| 5. Reasons if thrombo-prophylaxis was not implemented: | | | |
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| Table (1) : Contraindications to Mechanical Devices | Table (2): Contraindications and Precautions to Pharmacologic Prophylaxis |
|---|--|
| <input type="checkbox"/> Suspect DVT <input type="checkbox"/> Delayed Application (r/o DVT first by Doppler U/S) <input type="checkbox"/> Peripheral ischemic vascular disease <input type="checkbox"/> Recent skin graft <input type="checkbox"/> Gross edema of legs in CHF <input type="checkbox"/> Pressures sores to heels/insensitive extremities <input type="checkbox"/> Cellulitis/ Dermatitis/ phlebitis <input type="checkbox"/> Extreme deformity of lower limbs/ fragile skin <input type="checkbox"/> Others (specify): | <input type="checkbox"/> Active bleeding <input type="checkbox"/> Hemorrhagic stroke <input type="checkbox"/> Bleeding tendency <input type="checkbox"/> PLT count $<50,000/mm^3$ <input type="checkbox"/> Uncontrolled hypertension ($>200/120$) <input type="checkbox"/> Dissecting aneurysm of the aorta <input type="checkbox"/> Bacterial endocarditis <input type="checkbox"/> Active hepatitis or hepatic insufficiency <input type="checkbox"/> Hypersensitivity to drugs <input type="checkbox"/> History of HIT (contraindication to heparins)# <input type="checkbox"/> Surgical procedures with high risk of bleeding* <input type="checkbox"/> Spinal tap or epidural anesthesia* <input type="checkbox"/> Severe renal insufficiency <input type="checkbox"/> Others (specify): |

Table: 3

| High Risk (no adjustment)* | Moderate Risk (no adjustment)* |
|--|---|
| <input type="checkbox"/> Enoxaparin 40 mg every 24 hours. <input type="checkbox"/> Enoxaparin 30 mg subcutaneously every 12 hours (e.g. In Trauma and SCI). <input type="checkbox"/> LDUFH 5000 unit subcutaneously every 8 hours | <input type="checkbox"/> Enoxaparin 30 mg subcutaneously every 24 hours. <input type="checkbox"/> Enoxaparin 40 mg subcutaneously every 24 hours. <input type="checkbox"/> LDUFH 5000 unit subcutaneously every 12 hours |

Fondaparinux (Arixtra) 2.5 mg subcutaneously every 24 hours* is indicated for thrombo-prophylaxis in HIP Fracture Surgery, Knee Replacement Surgery and Hip Replacement Surgery.

* Regimens are for guidance only: The caring physician should weigh risk and benefit for each patient.

* Refer to Clinical Pharmacist for Dose Adjustment in severe renal impairment (Creatinine clearance ≤ 30 ml/min) and pediatric cases (i.e. For Enoxaparin **no dose** adjustment is needed in mild & moderate renal impairment. However, in severe renal impairment dose reduction to 30 mg or 20 mg every 24 hours is recommended).

Doctor's Name

Dr. No.

Signature

Date/Time

References:

1. Prevention of Venous Thromboembolism. The Seventh ACCP Conference on Antithrombotic and Thrombolytic Therapy. Chest, 2004;126:338S - 400S.
2. Geerts, W.H., et al., Prevention of venous thromboembolism: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines (8th Edition). Chest, 2008. **133**(6 Suppl): p. 381S-453S.
3. Venous Thromboembolism Prophylaxis. Institute for Clinical Systems improvement. 3rd edition/2006 www.icsi.org.
4. Capri et al: Effective Risk Stratification or Surgical and Nonsurgical Patients for VTE. Seminar in Hematology Vol.38 No.2,Suppl 5, April 2001.
5. Motte et al: Prevention of Postoperative Venous Thromboembolism Risk Assessment and Methods of Prophylaxis. CAN J. ANESTH 2006 / 53:6/ pp S68-S79.
6. Rashid et al: Venous Thromboprophylaxis in UK Medical Inpatients. J R. Soc. Med. 2005 98: 507-512.

- **VTE:** Venous Thrombo-Embolism
- **LMWH:** Low Molecular Weight Heparin
- **AVI:** Arterio-Venous Impulse
- **HIT:** Heparin Induced Thrombocytopenia

- **VTEP:** Venous Thrombo-Embolism Prophylaxis
- **LDUFH:** Low Dose Unfractionated Heparin
- **SCD:** Sequential Compression Device. CGS: Graduated Compression Stockings
- **CHF:** Congestive Heart Failure.