Heparin

Pharmaceutical class: antithrombotics - Therapeutic class: anticoagulants

Common drug names

Lovenox, generic enoxaparin
Fragmin, generic dalteparin
Innohep, generic tinzaparin
Orgaran, generic danaparoid

Action

Potentiates the inhibitory effect of antithrombin on factor Xa and thrombin
In low doses prevents the conversion of prothrombin to thrombin by it's effect of factor Xa
Higher doses neutralize thrombin, preventing the conversion of fibrinogen to fibrin

Drug- drug interaction

Increased risk of bleeding with Aspirin, NSAID's, clopidogrel, dipyridamole, some penecillins, eptifibatide, tirofiban and dextran; drugs that affect platelet function
Digoxin, tetracyclines, nicotine and antihistamines reduce anticoagulant effect of heparin

Indications

Prophylaxis and treatment of various thromboembolic disorders

Venous thromboembolism
Pulmonary emboli
Atrial fibrillation with embolization
Peripheral arterial thromboembolism
*used in very low doses (10-100units) to maintain IV patency

High alert medication !!!
This anticoagulant medication bears a heightened risk of causing significant patient harm if used in error. Risk of severe thrombocytopenia, which causes bleeding into tissues, abnormal bruising and slowed blood clotting

Therapeutic effects

Prevention of thrombus formation
Prevention of extension of existing thrombi (at full dose)

Nursing interventions

Assess for signs of bleeding
Bleeding gums, nosebleed, unusual bruising, black tarry stools, hematuria, fall in hematocrit or BP
Monitor patient for chills, fever or urticaria, observe injection sites for ecchymosis or hematomas
Monitor aPPT and hematocrit every 2-3 days, risk of hyperkalemia