**21 DVT**

**Introduction**

Risk factors= acronym THROMBOSIS

Trauma,hypercoag.,OCP,malignancy,birth control,obesity,surgery,immobility,sickness.

Most important sequale is venous insufficiency pulmonary embolism in 50%of proximal thrombosis

**Etiology=Virchow’s triad**

Endothelial injury, stasis&hypercoagulability

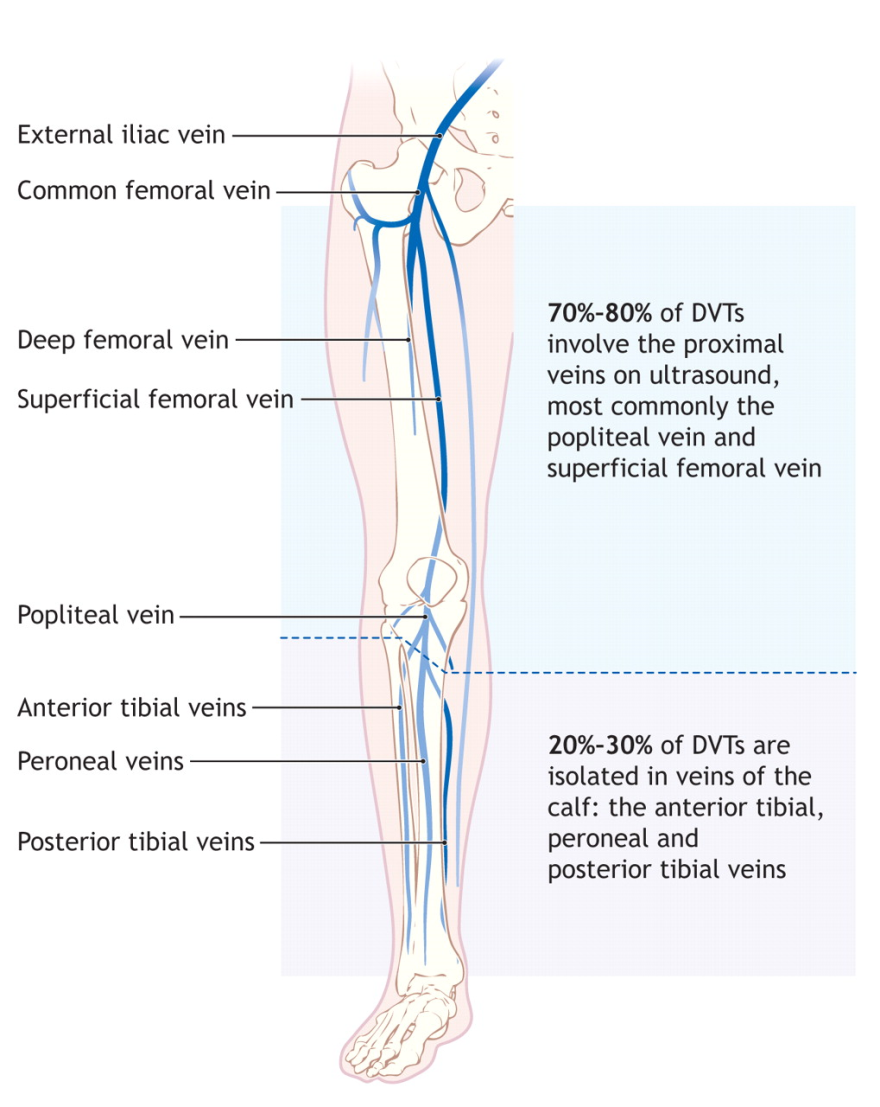
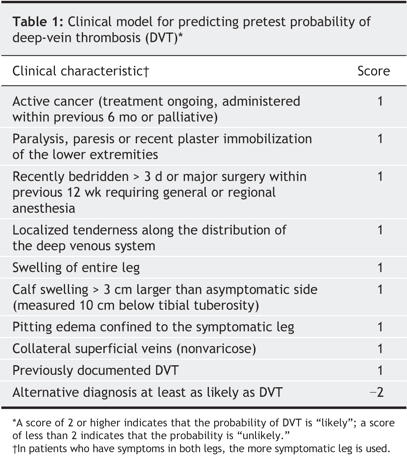
Hypercoag may be inherited or idiopathic & acquired like age(60),trauma,surgery,neoplasm ,hyperhomocystinemia(TT folic acid 5mg daily),antiphospholipid antibodies(APLA),blood dyscriasis,hormones&immobilization

Clinical picture :

Homan’s sign is calf pain on dorsifection of the foot (classic sign but not specific or sensitive)

Tenderness of affected leg and palpable cord like structure are also classic symptoms

Unilateral leg edema is the most sensitive indicator of DVT

**Wells Criteria**

**Differential Diagnosis**

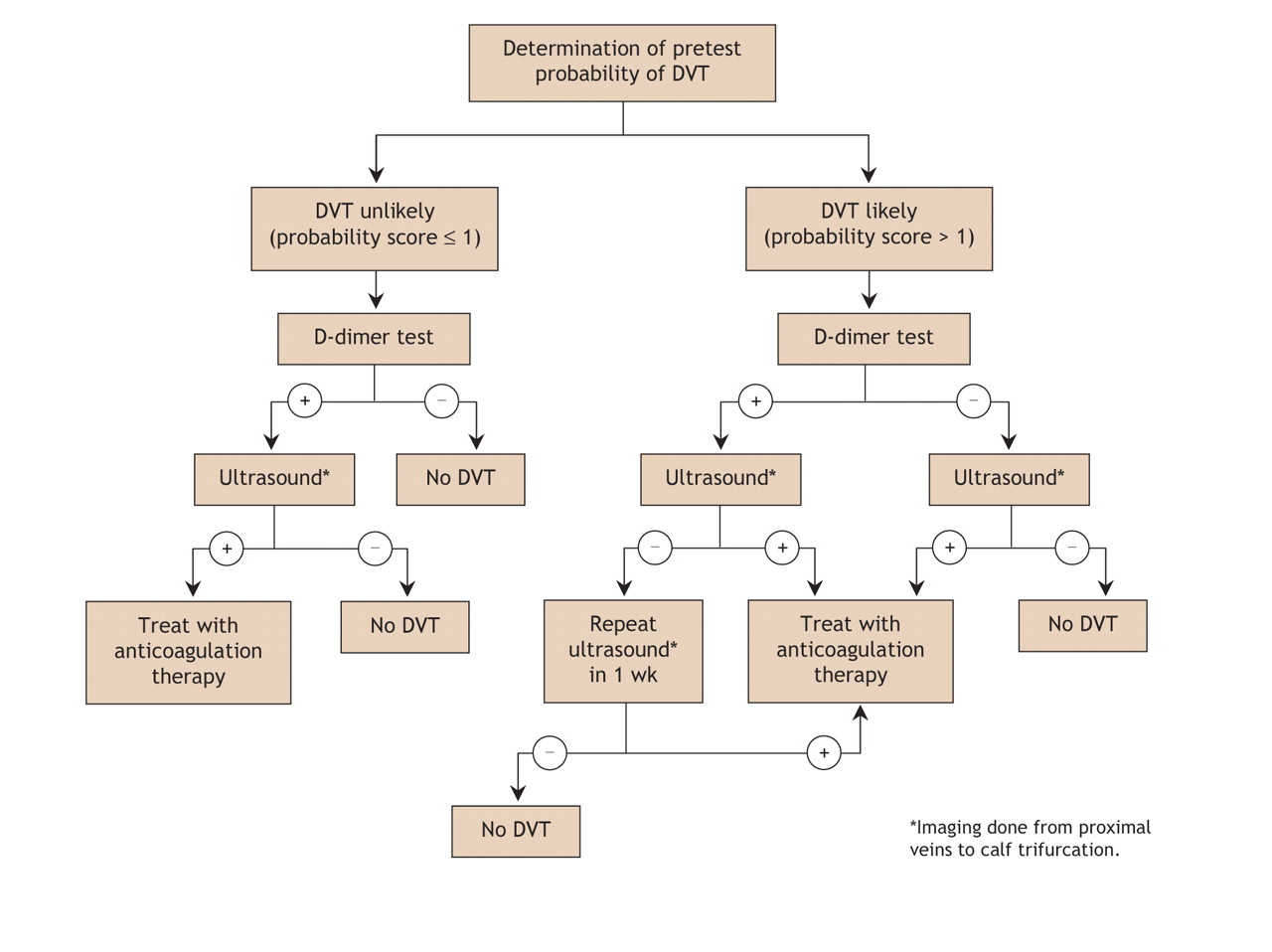
Ruptured Backer’s cyst

Cellulitis

Ruptured Achilles tendon

Lymphedema

Superficial phlebitis



**Algorithm for the Initial Work-up of Suspected DVT**

D-dimer (fibrin degradation product) is usually increased in thromboembolic disease

Sensitivity of about 80% for DVT but Specificity of 30% [i.e. not the greatest test]

Real utility is its negative predicative value of over 90% [useful only if the test is negative]

Many studies show that low pre-test probability by Wells criteria and negative d-dimer rules out DVT

There is about 1% false negative rate with negative US and negative D-dimer

Doppler (95% sensitive for proximal DVT, 75% for distal calf DVT)

Distinction between proximal and distal DVT is important because calf only DVT rarely leads to PE

Prevention of pulmonary embolism is the reason for treating patients with DVT

**1-Initial treatment;**

A-Unfractionated heparin =bolus 7500-10.000 IU followed by infusion of 1000-1500 IU\H

Or weight based monogram .reversible by protamine .need to monitor aPT(level=2xnormal)

B-LMWH;subcutaous.as effective as heparin ,no monitor ,lower risk of HIT,renal clearance& need adjustment,

**HIT patients**=need hirudin, fondaparinux

If life threatening thrombosis we can use thrombolytic drugs like TPA, streptokinase

**Long term treatment.**

Warfarin with target INR

LMWH in cancer patients

\* DVT1st episode=duration 3 months

**\*1st episode with ongoing risk** like cancer, APLA consider indefinite period of treatment.

**\*1st episode with single inherit risk** 6-9 months or indefinite

**\*Recurrent DVT**=indefinite period.

**\*IVC filters** if anticoagulant contraindications, with recurrent PE, pulmonary HTN, or pt require urgent surgery.

**\*Pregnancy**=use LMWH then warfarin 4-6 weeks postpartum. Total duration 3-6 M.

**Initiation of warfarin**

-10 mg dose= shorter time to get target INR than start with 5mg without increase of side effects.

**Overlap 4-5 days** of heparin &warfarin required

**Heparin antagonist vitamin K** should be discontinued once harm stopped otherwise increase VTE.

**Prophylaxis=BID 5000 IU if low risk, TID if high risk**

\*Risk of bleeding from heparin 7%

\*Absolute contraindications of heparin

Include blood dyscriasis, recent ocular, intracranial surg., recent ICH, active bleeding

\*DVT initial u\s should be followed by another u\s in a week to for extension to proximal veins