

*5th Congress of Hemostasis and
Thrombosis*

Diagnostic approach to thrombosis

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Hemostasis abnormalities

- ▶ Bleeding
- ▶ Thrombosis
- ▶ Mixed bleeding and thrombosis

Thrombosis types

- ▶ Deep vein thrombosis (DVT)
- ▶ Pulmonary thromboembolism (PTE)
- ▶ Superficial thrombosis
- ▶ Arterial thrombosis
- ▶ Cerebral vein thrombosis
- ▶ Recurrent superficial vein thrombosis
- ▶ Visceral vein thrombosis (ex: Portal V.T. , Hepatic V.T., etc)
- ▶ Retinal vein thrombosis

Deep Vein Thrombosis Diagnosis

- ▶ **Clinical :** Pain, Erythema, oedema, Tenderness, Warmness.
- ▶ **Laboratory evaluation:**
 - ✓ Usual Lab Tests: *NOT* very useful (CBC, LFTs, Renal function, PT, PTT)
 - ✓ **D_Dimer Assay :**
 - ▶ *High in DVT and PE*
 - ▶ *Highly sensitive, low specificity (Cancer, Infection, Trauma and surgery, Normal Pregnancy, Renal failure, DIC, COVID-19, Liver disease)*
- ▶ **Radiologic Evaluation:**
 - ✓ Compression US > Whole leg US> Duplex US
 - ✓ Venography > Not used anymore

Thrombosis predisposing factors

1. Old age
2. Immobility
3. Obesity
4. Venous stasis
5. Surgery and trauma
6. Cancer (esp. AdenoCa)
7. Chemotherapy
8. Oral contraceptive pills (OCPs)
9. Sepsis
10. Drugs (Thalidomide, Lenalidomide, Asparaginase, Tamoxifen, PCCs, etc.)
11. Pregnancy and postpartum
12. MPDs
13. PNH
14. Anti-Phospholipid syndrome
15. Sickle cell disease
16. Nephrotic syndrome
17. IBD
18. Congenital Heart Disease
19. Central Venous lines

Evaluate More If there is:

1. Absent or no predisposing factors for thrombosis(Unprovoked thrombosis)
2. Past history of VTE
3. Family history of VTE
4. Thrombosis in unusual sites
5. Wafarin-induced skin necrosis
6. Abnormal APTT
7. Thrombosis in age <45 years
8. Recurrent fetal loss(unexplained)

What to Evaluate?

► Hypercoagulable State (Hereditary)

1. Protein C deficiency
2. Protein S Deficiency
3. Anti thrombin deficiency
4. Factor V Leiden(FVL)
5. Prothrombin mutations (PTMs)
6. Elevated Factor VIII (*usually not evaluated*)
7. Others

❖ *Thrombophilia panel : Only in research setting, **not** recommended for routine practice*

What To Evaluate? (cont.)

➤ Hypercoagulable State (Acquired)

- ▶ Anti-Phospholipid syndrome(APS)
- ▶ Overt and Occult Malignancies
- ▶ Vasculitides

How Much Should We Look For Cancers?

▶ Limited Strategy:

History and PH/E

Basic Laboratory testing

CXR

Routine Age-adjusted Cancer screenings

- ▶ *PSA*
- ▶ *Cervical Ca Screening*
- ▶ *GI screening*
- ▶ *Abdominopelvic US*

How Much Should We Look For Cancers?

► Extensive Strategy (Frequently symptom-directed)

All components of limited strategy +

A chest and Abdominopelvic CT

Tumor markers

Mammography and Pap Smear

GI evaluation

- PET, PET CT and Radioisotope Scans (Controversial and **Not** recommended)

Thank you for your
attention!