DVT

Disclaimer:
Read the disclaimer at medimaps.co.uk/disclaimer

References:
1. Heart of England guidance 2018
2. Chronic conditions webinar, July 2019
3. GP Update 2020/21
4. DOACs_for_VTE_and_PE Nottingham NHS Jan 2021
5. Dr David Greenstein consultant vascular surgeon webinar 2022.

Two level Wells DVT score

- Active cancer i.e. treated in last 6/12 or palliative (1).
- Paralysis, paresis or recent plaster cast of legs. (1)
- Recently bedridden ≥ 3/7, or major surgery within 12/52 (1).
- Localised tenderness along distribution of the deep venous system (1).
- Entire leg swollen (1).
- Calf swelling ≥ 3 cm (1).
- Pitting oedema confined to the symptomatic leg (1).
- Collateral superficial veins (non-varicose) (1).
- PMH DVT (1).
- An alternative diagnosis is at least as likely as DVT (-2).

≤ 1 → DVT unlikely

- What to do if 5.59pm and you can't get a D-dimer result today?
- If delay of > 4 hrs then anticoagulate e.g. treatment dose NOAC.
- But you MUST do the D-dimer BEFORE you start anticoagulant.
- Because the anticoagulant will affect the D-dimer result.
- Also FBC, UEs, LFTs.
- You can keep D-dimer overnight in fridge.
- Can't do D-dimer?...send to medics/A&E.

D-dimer
- -ve → Not DVT
- +ve → Proximal leg vein USS
  - -ve → Not DVT
  - +ve → Anticoagulant

≥ 2 → DVT likely

- What to do if 5.59pm and you can't the USS result today?
- If delay of > 4 hrs then anticoagulate e.g. treatment dose NOAC.
- But you MUST do the D-dimer BEFORE you start anticoagulant.
- Because the anticoagulant will affect the D-dimer result.
- Also FBC, UEs, LFTs.
- You can keep D-dimer overnight in fridge.
- Can't do D-dimer?...then send to medics/A&E.

Proximal leg vein USS
- -ve → D-dimer
  - -ve → Not DVT
  - +ve → Stop interim anticoagulation and repeat USS 6-8/7 later.
    - -ve → Not DVT
    - +ve → Anticoagulant
- +ve → Anticoagulant

PE

< 50y → PERC score

- Age ≥50y (1)
- HR ≥100 (1).
- Sats <95% (1).
- Unilateral leg swelling (1).
- Haemoptysis (1).
- Recent surgery or trauma (<4w ago, requiring GA) (1).
- Exogenous estrogen (contraceptives, HRT) (1).
- PMH DVT/PE (1).

PERC score
- 0 → *Not PE
  *<2% chance of PE
- ≥ 1 → Possible PE → Two level Wells PE score

> 50 OR likely PE → Two level Wells PE score

- Symptoms of DVT (minimum of leg swelling and pain with palpation of the deep veins) (3).
- Alternative diagnosis less likely than PE (3).
- HR >100 (1.5).
- Immobilisation 3/7 or surgery in the past 4/52 (1.5).
- PMH DVT/PE (1.5).
- Haemoptysis (1).
- Active cancer i.e. treated in last 6/12 or palliative (1).

Two level Wells PE score
- ≤ 4 → D-dimer
  - -ve → Unlikely PE
  - +ve → CTPA
    - -ve → Not PE (*DVT)
      *If DVT suspected do a proximal leg vein USS
    - +ve → Anticoagulant
- ≥ 5 → CTPA

ANTICOAGULANTS

- The 3 options are LMWH, warfarin and NOAC.
- Nearly every pt should get a NOAC.
- Apixaban and Rivaroxaban are 1st line NOACs.

- Special cases below.

- Renal impairment:
- See if NOAC can be used with their CrCl.
- LMWH concurrently with warfarin for 5/7, or until INR ≥2 for 2 consecutive readings, followed by warfarin alone. If CrCl <15, can also use LMWH alone.

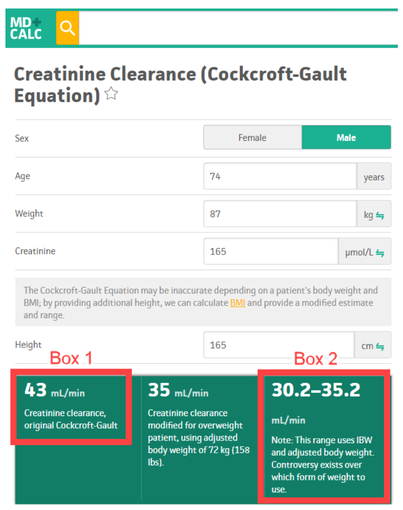
- Triple positive antiphospholipid syndrome:
- LMWH concurrently with warfarin for 5/7, or until INR ≥2 for 2 consecutive readings, followed by warfarin alone.

- Active cancer:
- i.e. receiving active antimitotic treatment; or Dx past 6/12, or recurrent or metastatic, or inoperable. Excludes SCC and BCC.
- Previously concerns about using NOAC in terms of them not being effective, but now fine to use. Alternatively LMWH or warfarin.
- Duration is 3-6/12 rather than the min 3/12 for other pt's.

- Monitor UEs to calculate CrCl:
- If CrCl > 60 annual UEs.
- If CrCl 30-60, measure UEs every 6/12.
- If latest CrCl < 30, measure UEs every 3/12.
- FBC, LFTs every yr. → Liver function:
  - Elevated liver enzymes (ALT/AST >2x ULN OR total bilirubin >1.5 ULN) consider switching to warfarin.

  Full blood count:
  - ↓ in Hb and/or haematocrit may suggest occult bleeding and may require further investigations.

- Be aware calculating CrCl if obese.
- Use MD Calc (online calculator).
- Use the following as a guide:
  a) BMI <18.5 - < 30 = calculate CrCl using actual body weight (box 1)
  b) BMI ≥ 30 = calculate CrCl using ideal and actual body weight, which will produce a lower and upper boundary (box 2).
- If the difference crosses over a NOAC dosing threshold, then assess bleeding and thrombosis risk to decide on suitable dose.



Apixaban

10mg BD for 7/7
THEN
5mg BD

After 6/12 if still needing, 2.5mg BD.

- CrCl < 15ml/min = contraindicated.

Dabigatran

After at least 5 days of parenteral anticoagulation
150mg BD for duration of treatment.

*Reduce dose to 110mg BD if any following:
- >80y
- Verapamil.
- CrCl 30-50ml/min.
- Gastritis/oesophagitis/GORD.

- CrCl < 30ml/min = contraindicated.

Edoxaban

After at least 5 days of parenteral anticoagulation
60mg OD for 3/52 for duration of treatment.

*Reduce dose to 30mg OD if any following:
- ≤ 60kg
- Erythromycin, ciclosporin, ketoconazole, dronedarone.
- CrCl 15-50ml/min.
- Gastritis/oesophagitis/GORD.

- CrCl < 15ml/min = contraindicated.

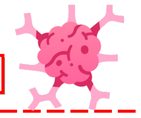
Rivaroxaban

15mg BD for 21/7.
THEN
20mg OD (*15mg OD if CrCl 30-50)

After 6/12 if still needing, 10mg OD, but if high risk of recurrence 20mg OD (*15mg OD if CrCl 30-50)

- CrCl < 15ml/min = contraindicated.

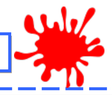
CANCER



- NICE no longer recommends looking for an occult Ca in unprovoked VTE.
- Ensure bloods (FBC, renal function, LFTs, PT, APPT).
- Hx and examination for obvious signs of Ca.
- Commonest Ca = urogenital, breast, colorectal and lung.

- Why the change?
- Need 91 CT abdo/pelvic to detect 1 extra cancer compared with simple tests alone.
- For every 460 500 CT's you do, you cause 1 cancer.

THROMBOPHILIA



- Thrombophilia screening if unprovoked VTE and 1o relative with VTE, but only if the plan is NOT to take lifelong prophylaxis.
- Why only them?
- Because screening is unnecessary if pt will remain on prophylaxis OR if it was obviously provoked e.g. tibia #.

DURATION

- Unprovoked VTE = treat for min 3/12, but then specialist to decide if needed lifelong due to risks of recurrence.
  - Cumulative risk after stopping treatment:

    1st yr = 10% recurrence rate, 0.4 deaths per 100 pt.
    2nd yr = 16%, 0.7
    5th yr = 25%, 1
    10th yr = 36%, 1.5
  - Provoked VTE = 3/12 then stop, providing the provoking factor gone.
- Haematology consultant advice 25/11/21:
  - Treat for 6/12, then d/w pt. If no risk factors and pt happy to take small risk of another blood clot, then stop NOAC.

POST THROMBOTIC SYNDROME

- NICE no longer recommends compression hosiery.
- Why the change? No difference cf placebo.
- But can still refer to vascular team for them to try to help e.g. unblock and stent blocked veins.
- So if swollen leg for > 1/12 then refer.

- Chronic pain.
- Leg swelling.
- Heaviness.
- Odemea.
- Skin changes.
- Lipodermatosclerosis.
- Ulceration.

TREATMENT FAILURE

- Check adherence.
- Any other sources of hypercoagulability?
- ↑ dose of anticoagulant or change to one with a different mode of action.

SUPERFICIAL THROMBOPHLEBITIS

- So the spperficial veins drain into the deep veins so you must think of DVT even if you are diagnosing superficial thrombo-phlebitis.
- Put black marker over redness.
- If the redness if moving significantly above the mark tell the pt to come back.
- And if they do, then refer for DVT.
- If the redness is shrinking then no concerns.