

Deep Vein Thrombosis & Pulmonary Embolism: Presentation, Diagnosis & Management.

Robert Thomson: Advanced Nurse Practitioner, Ambulatory Emergency Care Unit,
Queen Elizabeth University Hospital, Glasgow

Karen Bleach: Advanced Nurse Practitioner, Ambulatory Emergency Care Unit,
Royal Alexandra Hospital, Paisley.



Overview

- Facts and figures
- Presenting to hospital
- Clinical examination
- Tests & investigations
- Diagnosis
- Management
- Questions



Venous Thromboembolism



DVT + PE
= VTE

The Problem



Every 6 seconds
someone with VTE dies
globally!

DVT: The warning signs

Symptoms of DVT include



Pain



Redness of
the area



Swelling



Dilation
of the
surface veins



Skin warm
to touch

PE: Signs & Symptoms



wouldn't know what a PE felt like if they experienced one, underlying the importance of knowing the signs and symptoms.

The Symptoms

Symptoms of Pulmonary Embolism (PE)



Shortness
of breath



Chest
pain



Lightheadedness

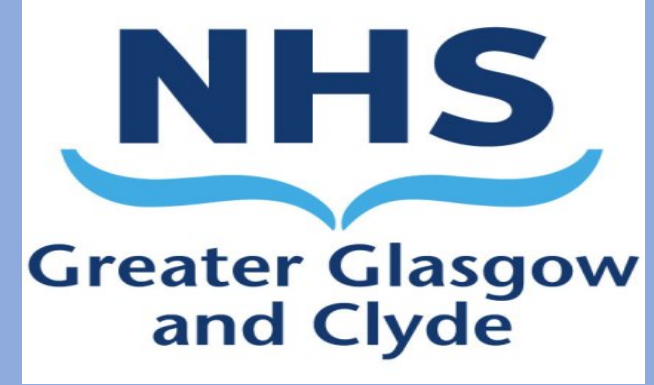


Rapid
heart rate



Coughing
blood

Are you at risk of VTE?



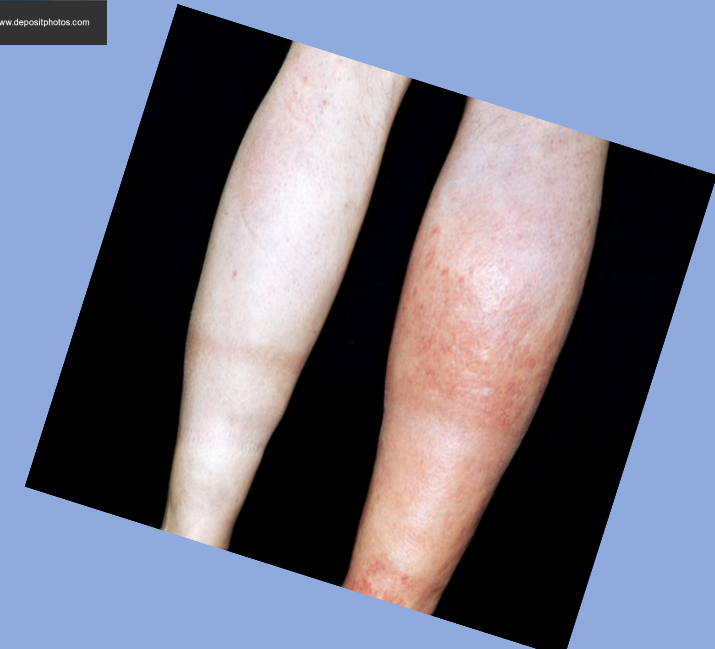
<https://www.nhs.uk/Tools/Pages/VTE-self-assessment.aspx>

Presenting to hospital



What should you expect?

- Detailed history
- Clinical examination
- Risk Assessment



Risk assessment tool: Wells score

Wells Probability score for DVT

<2 DVT unlikely, >2 DVT likely

Clinical features	points
Active cancer	1
Paralysis,paresis,recent immobilisation of lower extremities	1
Localised tenderness along deep venous system	1
Entire leg swollen	1
Calf swelling>3cm larger than asymptomatic side	1
u/l pitting edema	1
Collateral superficial veins(non varicose)	1
Previously documented DVT	1
Alternative diagnosis as likely or more likely than DVT	-2

Tests and Investigations

Deep Vein Thrombosis	Pulmonary Embolism
Bloods (including D Dimer)	Bloods (including D Dimer and Troponin)
Doppler Ultrasound	ECG (heart trace)
	Chest X-RAY
	CT Pulmonary Angiogram

No DVT - so now what?

- **Alternative Diagnosis:**
 - Muscular
 - Baker's Cyst
 - Superficial Thrombophlebitis (inflammation of the veins)
- ***Based on the D Dimer level, we would repeat the ultrasound in 1 week.***

No PE – what now?

- **Alternative diagnosis:**
 - Muscular chest pain
 - Chest infection
 - Cardiac chest pain
-
- ***Treat the likely cause, and refer back to GP***



Management of DVT and PE

DVT	PE
Counselled on Anticoagulants “blood thinners” (Apixaban, Rivaroxaban, Warfarin)	Counselled on Anticoagulants “blood thinners” Apixaban, Rivaroxaban, Warfarin)
CXR	Discussion at weekly MDT re further tests and investigations
Measured for anti-embolic stockings	Refer to Respiratory (Chest) Clinic
Referral to Orthotics department	Communication with GP re management and duration of anticoagulation
Discussion at weekly MDT re further follow up (Thrombosis Clinic) and imaging if appropriate.	
Communication with GP re management and duration of anticoagulation	

Future risk of DVT: DASH Score

D-dimer abnormal Measured ~1 month after stopping anticoagulation	No	0
	Yes	+2
Age ≤50 years	No	0
	Yes	+1
Male patient	No	0
	Yes	+1
Hormone use at VTE onset (if female) If male patient, select "No"	No	0
	Yes	-2

FACTS & FIGURES

DASH Score	Annual Recurrence Rate
-2	1.8%*
-1	1.0%
0	2.4%
1	3.9%
2	6.3%
3	10.8%
4	19.9%

Questions

