1 Venous thromboembolism (VTE) risk assessment

Quick info:

Scope:
• venous thromboembolism (VTE) risk assessment for adult inpatients in secondary care

VTE risk assessment:
• all patients should be assessed on admission and periodically during inpatient stay, as risk may change
• reassessment is recommended 48-72 hours after admission
• risk factors identified are not exhaustive – clinicians may consider additional risk factors in individual patients and appropriately offer thromboprophylaxis

References:

2 VTE e-learning for Healthcare

Quick info:
e-VTE is a free and easy-to-use, interactive e-learning resource for healthcare professionals that helps to raise awareness and improve understanding of VTE within the medical community.
The course consists of a pre-learning questionnaire and a post-learning assessment together with four sessions of e-learning:
1. Demographics, Epidemiology and Risk of VTE
2. Methods of Thromboprophylaxis
3. Implementation of Thromboprophylaxis in Hospitals
4. Implementation of Thromboprophylaxis Challenges in Primary Care

View e-VTE course

e-VTE is delivered by the VTE Implementation Working Group (IWG) in partnership with e-Learning for Healthcare (e-LfH). For more information visit www.e-lfh.org.uk/projects/vte

Also, see the Department of Health’s report on the prevention of VTE in hospitalised patients.

3 Thrombosis risk?

Quick info:
• any thrombosis risk factor should prompt thromboprophylaxis
• a high risk factor will override a moderate risk factor
• patient related high risk factors including any of the following:
  • age over 60 years
  • previous pulmonary embolus or deep vein thrombosis
  • active cancer
  • acute on chronic lung disease
  • chronic heart failure
  • lower limb paralysis (excluding acute stroke)
  • acute infectious disease, eg. pneumonia
  • body mass index more than 30kg/m2
• procedure related high risk factors include any of the following:
  • hip or knee replacement
  • hip fracture
  • other major orthopaedic surgery
• procedure related moderate risks include any of the following:
  • surgical procedure lasting more than 30 minutes
  • plaster cast immobilisation of lower limb

4 Bleeding risk

Locally reviewed: 17-Jul-2009 Due for review: 30-Apr-2010 Printed on: 24-Sep-2009 © Map of Medicine Ltd

IMPORTANT NOTE
Locally reviewed refers to the date of completion of the most recent review process for a pathway. All pathways are reviewed regularly every twelve months, and on an ad hoc basis if required.
Venous thromboembolism (VTE) risk assessment
Surgery > Vascular surgery > Venous thromboembolism (VTE) risk assessment

Quick info:
Patient related bleeding risks include any of the following:
- haemophilia or any other known bleeding disorder
- known platelet count of less than 100 x10^9/L
- acute stroke in previous month (haemorrhagic or ischaemic)
- blood pressure more than 200mmHg systolic or more than 120mmHg diastolic
- severe liver disease (prothrombin time above normal or known varices)
- severe renal disease
- active bleeding
- major bleeding risk, existing anticoagulant therapy or antiplatelet therapy

Procedure related bleeding risks include any of the following:
- neurosurgery, spinal surgery, eye surgery
- other procedure with high bleeding risk
- lumbar puncture, spinal and/or epidural in past 4 hours

10 Mechanical prophylaxis, eg. graduated compression stockings

Quick info:
- use graduated compression stockings or alternative method of mechanical prophylaxis

12 Orthopaedic surgery (high risk)

Quick info:
- thromboprophylaxis should include both a pharmacological method and a mechanical method
- pharmacological interventional options include:
  - dabigatran 220mg once daily:
    - age 18-75 years, 100mg 1-4 hours after surgery, then 220mg once daily
    - over age 75 years, 75mg 1-4 hours after surgery then 150mg once daily
  - rivaroxaban 10mg oral daily
  - fondaparinux 2.5mg once daily (not recommended in those under age 17 years)
  - bemiparin 3500 units once daily
  - dalteparin 5000 units once daily
  - enoxaparin 40mg once daily
  - tinzaparin 4500 units once daily
- mechanical interventional options include:
  - graduated compression stockings
  - intermittent pneumatic compression
- duration for both interventions:
  - 28 days for hip and knee replacement
  - 28 days for hip fracture
  - for other procedures, continue intervention until patient is mobile and risk of venous thromboembolism (VTE) is considered to be low

For further information, see the Department of Health's report on the prevention of VTE in hospitalised patients.

References:

13 Non-orthopaedic surgery (high risk)

Quick info:
- thromboprophylaxis should include both a pharmacological method and a mechanical method
- pharmacological interventional options include:
  - fondaparinux 2.5mg once daily (not recommended in those under age 17 years)
  - bemiparin 3500 units once daily

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• dalteparin 5000 units once daily
• enoxaparin 40mg once daily
• tinzaparin 4500 units once daily
• mechanical interventional options include:
  • graduated compression stockings
  • intermittent pneumatic compression
• duration for both interventions:
  • continue intervention until patient is mobile and risk of venous thromboembolism (VTE) is considered to be low

For further information, see the Department of Health's report on the prevention of VTE in hospitalised patients.

References:

14 Non-orthopaedic surgery (moderate risk)

Quick info:
• a mechanical method of prophylaxis is usually sufficient:
  • graduated compression stockings
  • intermittent pneumatic compression
• an alternative pharmacological intervention may include:
  • fondaparinux 2.5mg once daily (not recommended in those under age 17 years)
  • bemiparin 2500 units once daily
  • dalteparin 2500 units once daily
  • enoxaparin 20mg once daily
  • tinzaparin 3500 units once daily
• duration of intervention:
  • continue intervention until patient is mobile and risk of venous thromboembolism (VTE) is considered to be low

For further information, see the Department of Health's report on the prevention of VTE in hospitalised patients.

References:

15 Non-surgical patient

Quick info:
• thromboprophylaxis should include a pharmacological method only
• pharmacological interventional options include:
  • fondaparinux 2.5mg once daily (not recommended in those under age 17 years)
  • bemiparin 3500 units once daily if high risk (2500 units if moderate risk)
  • dalteparin 5000 units once daily
  • enoxaparin 40mg once daily
• duration of intervention:
  • continue intervention until patient is mobile and risk of venous thromboembolism (VTE) is considered to be low

For further information, see the Department of Health's report on the prevention of VTE in hospitalised patients.

References:
Venous thromboembolism (VTE) risk assessment

Key Dates

Due for review: 30-Apr-2010
Locally reviewed: 17-Jul-2009, by England & Wales
Updated: 17-Jul-2009

Evidence summary for Venous thromboembolism (VTE) risk assessment

The pathway is based on an interpretation of the following references (1. 2).
Search date: Sep-2008

Evidence grades:

1. Intervention node supported by level 1 guidelines or systematic reviews
2. Intervention node supported by level 2 guidelines
3. Intervention node based on expert clinical opinion
4. Non-intervention node, not graded

Evidence grading:

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References

This is a list of all the references that have passed critical appraisal for use in the pathway Venous thromboembolism (VTE) risk assessment
