Venous thromboembolism risk assessment Audit (Medicine)

Dr Laura Camburn
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• In 2005, a UK Health Committee report estimated that approximately 25,000 deaths from VTE occur each year in hospitalised patients in England alone.
• VTE is the immediate cause of 10% of hospital deaths. In 2004, the cost to the NHS nationally was estimated at £640 million annually.
• Evidence of asymptomatic clot has been found in more than 50% of hospitalised patients but this becomes clinically evident in less than 5% of patients.
• Reducing avoidable death from venous thromboembolism (VTE) in hospitals and wider health settings is a priority for the Department of Health in England. A national VTE prevention strategy is currently in place led by the Chief Medical Officer.

• It is the Department of Health policy that all adult patients (18 years and older), including medical patients, receive a risk assessment for VTE on admission to hospital.

The NICE Quality Standards clarify what high quality care looks like with regard to VTE prevention:
• All patients, on admission, receive an assessment of VTE and bleeding risk using the clinical risk assessment criteria described in the national tool.
• Patients/carers are offered verbal and written information on VTE prevention as part of the admission process.
• Patients provided with anti-embolism stockings have them fitted and monitored in accordance with NICE guidance.
• Patients are re-assessed within 24 hours of admission for risk of VTE and bleeding.
• Patients assessed to be at risk of VTE are offered VTE prophylaxis in accordance with NICE guidance.
• Patients/carers are offered verbal and written information on VTE prevention as part of the discharge process.
• Patients are offered extended (post hospital) VTE prophylaxis in accordance with NICE guidance.
To determine an individual’s risk of VTE, the healthcare practitioner must consider both the procedure-related risk factors and the patient-related risk factors. The risk of bleeding must also be taken into consideration.

Risk factors for VTE:
- Age over 60 years
- Critical care admission
- Dehydration
- Known thrombophilias
- Obesity (body mass index [BMI] over 30 kg/m²)
- One or more significant medical co-morbidities. For example, heart disease; metabolic, endocrine or respiratory pathologies; acute infectious diseases; inflammatory conditions
- Personal history or first-degree relative with a history of VTE
- Use of hormone replacement therapy
- Use of oestrogen-containing contraceptive therapy
- Varicose veins with phlebitis
- Pregnant or have given birth within the previous 6 weeks

Interest in VTE in medical patients was rekindled by the Sheffield PM study published by Sandler & Martin in 1989.

Only 24% of patients who developed VTE were surgical. Approximately 15% of the patients were <60 years of age; 68% of the patients did not have cancer; 24% were postoperative and only 3% had been investigated for VTE.

Risk assessment for VTE:
- Step 1 Assess all patients admitted to hospital for level of mobility (tick one box). All surgical patients, and all medical patients with significantly reduced mobility, should be considered for further risk assessment.
- Step 2 Review the patient-related and admission related factors shown on the assessment sheet against thrombosis risk, ticking each box that applies (more than one box can be ticked).
- Any tick for thrombosis risk should prompt thromboprophylaxis according to NICE guidance
- Step 3
  - Review the patient-related and admission related factors shown against bleeding risk and tick each box that applies (more than one box can be ticked).
  - Any tick should prompt clinical staff to consider if bleeding risk is sufficient to preclude pharmacological intervention
Aim

• To audit VTE risk assessment and VTE prophylaxis on medical wards in Salisbury hospital
• Patients assessed to be at risk of VTE are offered VTE prophylaxis in accordance with NICE guidance

Method

• Reviewed the drug chart and nursing handover sheet for each patient in two medical wards.

Documented

• Age
• Date of admission
• Risk assessment as per the hospital guidelines
• Risk actually assigned to patient on VTE assessment
• Date of assessment
• Date of VTE prophylaxis prescribed
• Type of VTE prophylaxis prescribed
• Contraindications documented on assessment
• Contraindications as per nursing handover information
• Current mobility score – obtained from asking the nursing staff

Age Distribution

Age

0 10 20 30 40

0 1 2 3 4

Mobility

Patient Mobility

- Yes: 20%
- Low: 19%
- Moderate: 15%
- No: 56%

Patients VTE risk

VTE Risk Assessment

- High: 85%
- Low: 2%
- Incorrect: 2%
- Not Done: 11%

Delays in VTE assessment

Days from Admission to VTE Assessment

Delays in VTE prophylaxis

Time from Admission for Pres. Of AntiCoag

- No Reason for Delay

Percentage of Patients

No. Of Days

Days from Admission to VTE Assessment

- 0
- 1
- 2
- 3
- ≥4

Percentage of Patients

No. Of Days

Time from Admission for Pres. Of AntiCoag

- 0
- 1
- 2
- 3
- ≥4
87% of patients had a VTE risk assessment with the correct risk on their drug chart
57% completed on day of admission
94% prescribed VTE prophylaxis at time of audit.
• 20% did not have a VTE assessment or it took longer than 4 days
• 2% assessed but not prescribed
• 4% prescribed before assessed
• 6% prescribed but not assessed

Suggestions for improvement
• Continue to educate junior doctors about the importance of VTE – assessment and prophylaxis
• Multi-disciplinary team approach – doctors, nurses and pharmacists to get involved in auditing the wards performance
• VTE assessment and prescription on the same place in the drug chart
• Guidelines for risk assessment to be more easily available
• Clear guidelines on half dose dalteparin in renal impairment
• Part of the PTWR documentation proforma on medical admissions
• Dalteparin already prescribed in drug charts but doctor to prescribe dose and sign once assessment completed

Limitations
• Only looked at two medical wards
• Audit performed in the first couple of months of the new junior doctors starting whether it has improved through the year
• High delays in prescribing prophylaxis as one of the medical wards was the stroke ward so many patients awaiting CT head prior to dalteparin.

Conclusions
• VTE has been identified as a major cause of death and morbidity.
• Department of Health policy that all adult patients receive a risk assessment for VTE on admission to hospital and prescription of prophylaxis as per NICE guidelines.
• Data from this audit shows that we are quite good at prescribing prophylaxis on the medical wards but less good at documenting the assessment
• Need to reduce the delays in prescription and assessment.