

DOES THE COMPLETION OF A RISK ASSESSMENT TEMPLATE IMPROVE THE RATE OF APPROPRIATE VENOUS THROMBOEMBOLISM RISK MANAGEMENT FOR HOSPITALISED MEDICAL PATIENTS?

PS 108

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B01 - Antithrombotic agents

Background

- VTE is associated with substantial morbidity and mortality ^(1,2)
- 34 VTE related deaths in Europe are linked to hospitalisation ⁽³⁾
- Patients with multiple risk factors for VTE are at greater risk ^(4,5)
- NICE (UK) recommends completing a risk assessment for all hospitalised patients ⁽⁶⁾
- Risk assessments are often not completed in a busy hospital environment

Objective(s)

- This study aimed to assess whether completion of a VTE risk management template (fig.1) could positively influence appropriate VTE risk management.

Method

- A risk management template (RMT) was created and attached to the medication administration record for medical patients admitted to the hospital from the acute medical assessment unit (AMAU). Medical patients from the Emergency Department (ED) were admitted without recourse to this assessment template. Details of the VTE risk management of patients admitted from both units were collected and compared.

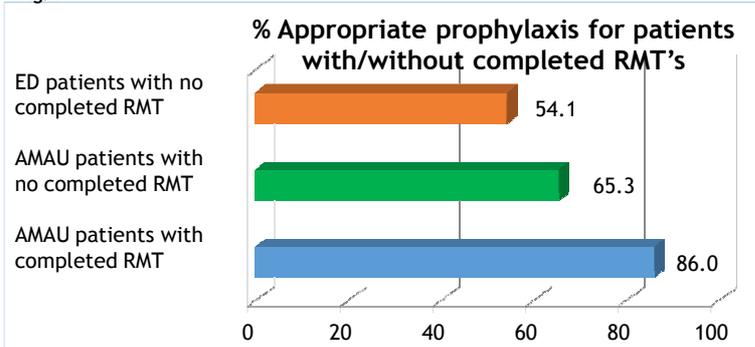
Fig. 1

VENOUS THROMBOEMBOLISM RISK ASSESSMENT		Addressograph
TO BE COMPLETED FOR ALL ADULT PATIENTS, EXCLUDING PREGNANT WOMEN		
Medical patients with normal mobility do NOT require prophylaxis - assessment complete, tick, sign and date		
STEP ONE - ASSESS PATIENT RISK FACTORS (tick)		
Surgical Risk Factors Age >60 Surgery involves pelvis or lower limb >60min Total anaesthetic and surgical time >90 mins Polytrauma Acute admission with inflammatory or intra-abdominal condition	General Risk Factors Age >60 Dehydration Critical care admission Obese with a BMI >30kg/m ² Active cancer or cancer treatments Significant co-morbidities e.g. Heart disease, metabolic, endocrine or respiratory pathologies Acute infection or inflammatory disease Personal/first degree relative history of VTE Known thrombophilia Varicose veins with phlebitis Post partum (up to six weeks post delivery) Hormone replacement or Oral contraceptive	
Medical Risk Factors Expected reduced mobility* for at least 3 days Ongoing reduced mobility* relative to normal <small>*Total hourly, unable to walk unaided, significant portion of day in chair</small>		
STEP TWO - IDENTIFY RISK FACTORS FOR BLEEDING (tick)		
Active bleeding Thrombocytopenia (platelets <50 x 10 ⁹ /l) Acquired bleeding disorders (e.g. acute liver failure/DIC) Acute stroke - consider risk versus benefit Uncontrolled systolic hypertension (>230/120mmHg)	Procedures with high bleeding risk History of bleeding post procedure Lumbar puncture/epidural/spinal anaesthesia or analgesia within previous 4 hours/next 12 hours Untreated inherited bleeding disorders Concurrent use of anticoagulants (such as warfarin with INR >2, Dabigatran, Rivaroxaban Apixaban)	
STEP THREE - RECOMMENDED PROPHYLAXIS (tick) Do not proceed to step three if any risk factor for bleeding		
Medical Reduced mobility + any general risk factor Enoxaparin 40mg o.d. or TEDS (if enoxaparin is contraindicated) Prescribed <input type="checkbox"/>	Low Risk Surgical No risks factors TEDS only Moderate Risk Surgical Any Surgical Risk Factor Enoxaparin 20mg o.d. + TEDS Prescribed <input type="checkbox"/>	Orthopaedic or High Risk Surgical Any surgical risk factor + any general risk factor Enoxaparin 40mg o.d. + TEDS Prescribed <input type="checkbox"/>
eGFR <20ml/min Weight Based Dose adjustments <50kg Enoxaparin 20mg o.d. 50-100kg Enoxaparin 40mg o.d. >100-150kg Enoxaparin 60mg o.d. >150kg Enoxaparin 60mg o.d.	Enoxaparin 20mg o.d. +/- TEDS Enoxaparin 40mg o.d. Enoxaparin 60mg o.d.	
• All Patients: Continue prophylaxis until mobility no longer significantly reduced, and/or patient no longer at increased risk of VTE • Surgical patients - Prophylactic Enoxaparin to begin on admission UNLESS surgery anticipated within 12 -16 hours. Restart after surgery when bleeding risk allows (usually 6-12 hours post-op) • Prophylaxis for hip replacement should continue for 28-35 days and 10-14 days for knee replacement • Extend pharmacological prophylaxis to 28 days for major cancer surgery in abdomen or pelvis • Contraindications to anti-thrombotic stockings (TEDS) - acute leg ischaemia, acute stroke, cardiac failure, fragile skin, major limb deformity, pressure sores, peripheral arterial disease, peripheral neuropathy, recent skin grafts or flaps		
Sign.....	Date	MCRN.....Bleep.....
NOTE: Reassess all patients within 24 hours and if clinical situation changes.		

Results

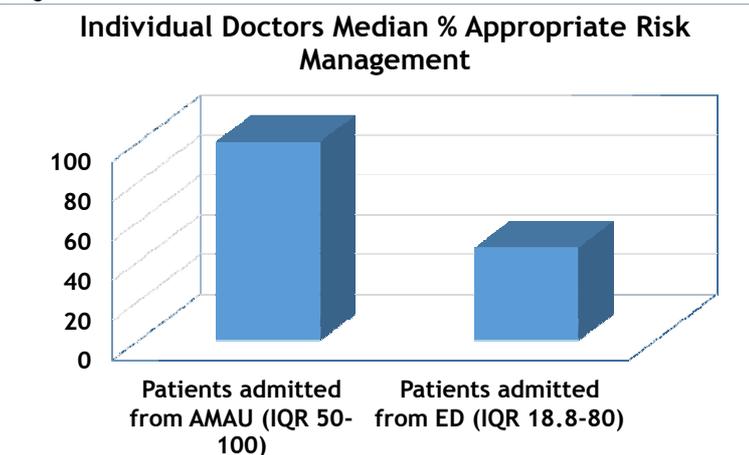
- 207 patients were included for analysis - AMAU (n=122) ED (n=85).
- 73.8% of AMAU patients were offered appropriate prophylaxis compared to 54.1% of ED patients (p=0.0074)
- Patients in AMAU with a completed RMT were significantly more likely to be offered appropriate prophylaxis than patients without a completed template (p=0.0153) and patients in ED (p=0.0001).

Fig.2



- 86% of patients with completed risk assessment templates were given appropriate prophylaxis compared to 65.3% of AMAU patients without a completed assessment (p=0.0153) (Fig. 2)

Fig. 3



Conclusions

- Patients with a completed RMT were significantly more likely to be offered appropriate prophylaxis than patients without a completed template.
- Individual doctors were significantly more likely to manage a patients risk of VTE appropriately when they completed a RMT.
- This work demonstrates the value of completing VTE risk management templates on admission for all patients to ensure appropriate prophylaxis is offered to patients at risk.

Discussion/Limitations

- Reliably estimating mobility status was not possible - all patients were considered to have reduced mobility.
- Indicators of reduced mobility were included on the RMT to assist prescribers in this assessment.
- The number of doctors included in the study was small - a larger study would be necessary to confirm these initial findings.

References

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