Post-operative planning and prescribing for VTE prophylaxis in surgical patients

Amelia Anderson[1]; Elizabeth McCourt[1]; Mika Varitimos[1]; Christopher Dyer[1]; Patricia Gleeson[1]; Abby Yu[1]

1. Royal Brisbane and Women's Hospital

Background

Venous thromboembolism (VTE) is major cause of morbidity and mortality for patients admitted to hospital.[1] Australian Clinical Care Standards[1] therefore require healthcare teams to develop and document a VTE prevention plan for each patient, in coordination with the patient and multidisciplinary team – as this has been found to improve patient outcomes and promote medication safety.

Surgical patients are at an increased risk of developing VTE, due to the nature of some surgical procedures and their following recovery. At RBWH, the current practice for surgical VTE prophylaxis planning is, operating teams will document post-operation plans in the 'Operating Room Management Information System' (ORMIS). This is then handed over to a different surgical team responsible for post-operative care (who will use a separate system to document care). This audit investigates the current quality of practice for surgical VTE prophylaxis.

Aims

To investigate the nature of pre-operative planning for post-operative Venous Thromboembolism (VTE) prophylaxis, and whether these plans were actualised post-operation, in surgical patients.

Methods

A retrospective audit of elective general surgery patients, over a three-month period was undertaken.

A report was generated from RBWH ORMIS for patients with VTE prophylaxis mentioned in the post-operation plan. 50 patients were then randomly selected for an in-depth chart review, which collected patient information including: demographics; anticoagulation use pre-admission; post-operation plan details (and inclusion of anticoagulation in plan, if taken regularly pre-admission); enaction of post-operation plan; details of any deviations from post-operation plan.

Results

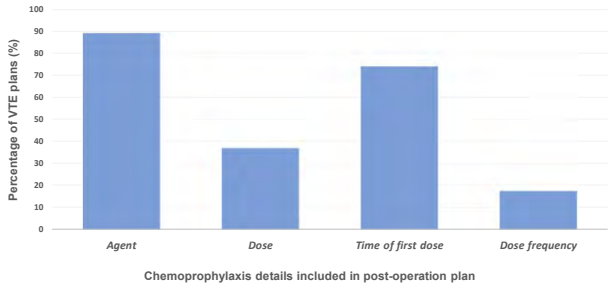
Nature of VTE prophylaxis planning

- A total of 50 post-operation VTE plans were investigated.
- The details of VTE prophylaxis included in the post-operation plan varied (Graph 1), with agent (89%) and time of first dose (74%) most commonly included.
- A total of 9 (18%) patients were taking regular anticoagulation pre-operation; 4 (44%) patients had a plan for anticoagulation recommencement specified in the post-operation plan.

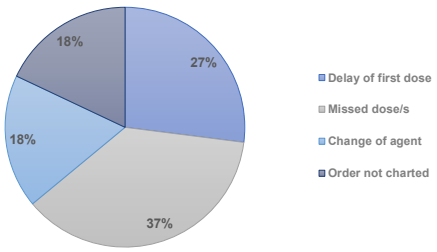
VTE prophylaxis plan actualisation post-operation

- The actualisation of a total of 50 VTE prophylaxis plans post-operation was investigated.
- In 76% (38) of patients, the post-operation VTE plan was initially enacted post-operation.
- Of the patients that had a plan documented for recommencement of regular anticoagulation, 100% of these plans were enacted post-operation.
- There was a deviation from the original post-operation plan in 30% (15) of patients during their admission.
  - 40% (6) were intentional deviations, where the deviation was documented in the patient's progress notes.
  - A summary of non-intentional deviations (60%, 9) are detailed in Graph 2.

Graph 1: Details specified for VTE prophylaxis plan in post-operation notes



Graph 2: Summary of non-intentional deviations from VTE plan



Conclusion

Overall, VTE prophylaxis generally appears to be well planned for, and is reasonably well enacted post-operation. However, the varied chemoprophylaxis details specified in VTE prophylaxis plans, little planning for anticoagulated patients and the slight inconsistencies in VTE plan enaction, indicate that clinical practice could still be further improved.

Further research that considers the views of stakeholders may aid in identifying areas where practice could be further improved. For example: gaining an understanding of roles within operative and post-operative teams for VTE prophylaxis and prescribing; standardising details to be specified in post-operation plan.

Reference

1. Australian Commission on Safety and Quality in Health Care. Venous Thromboembolism Prevention Clinical Care Standard. [Internet]. Sydney, NSW: ACSQHC; 2018 [2020; Nov 2022]. Available from: https://www.safetyandquality.gov.au/sites/default/files/2020-01/venous_thromboembolism_prevention_clinical_care_standard_-_jan_2020_2.pdf

Contact | Amelia Anderson, Intern Pharmacist, Amelia.Anderson2@health.qld.gov.au