Introducing a ward poster to reduce anticoagulation and antiplatelet medication administration errors in patients with epidural analgesia

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Acknowledgements: Dos and Don'ts poster design: K. Williams, Lead Acute Pain Clinical Nurse Specialist; R. Hammond, Anticoagulation Pharmacist; adapted from poster designed by J. Jennings, Critical Care Pharmacist; P. Murch, Nurse Educator Critical Care.

Background

Epidural infusions are a safe and effective form of post-operative analgesia when managed correctly and protocols are followed, but the Acute Pain Team (APT) was concerned with incidents relating to anticoagulation and antiplatelet medication administration errors whilst the epidural was in place. These incidences of administering anticoagulant and antiplatelet medications with epidurals in place have delayed some patients' discharge and could potentially lead to more serious life-changing complications for the patient through potential epidural haematoma. Although epidural haematomas are rare, estimated to be <1 in 150,000[1], the risks increase in patients with altered coagulopathy resulting from anticoagulant or antiplatelet medications[2].

Aims and Objectives

To identify incidents of anticoagulation and antiplatelet medications being administered in error whilst an epidural is in place for post-operative analgesia, and detect risk factors and how these can be reduced.

Methods

The APT collected data from incident forms over a 12-month period to gather evidence of the number of episodes where anticoagulation and antiplatelet medications have been administered incorrectly whilst an epidural is being used for post-operative analgesia.

Results

1204 epidurals have been inserted over 12 months for post-operative analgesia, of these 5 resulted in anticoagulation and antiplatelet medication administration errors being reported. Each of these errors was associated with a different medication and occurred on different types of ward environment such as critical care, surgical wards and theatre admissions.

The APT has prevented some errors by being vigilant when assessing patients, but other errors may not have been identified or reported.

Conclusion

Despite the small number of anticoagulation and antiplatelet medication administration errors being identified, the APT still felt action needed to be taken to prevent any mistakes in future. The three main issues identified were:

. patients being admitted to ward areas which were unfamiliar with epidurals;

. new, inexperienced, or agency staff caring for these patients;

. the amount of different anticoagulation and antiplatelet medications used, and new medications with which staff were unfamiliar.

From these results and identified issues, the APT has designed a poster for display on the wards, which was adapted from one designed by one of the critical care pharmacists. It was decided not to specify different anticoagulation and antiplatelet medications on the poster, as these will change over time, but to have clear "Dos" and "Don'ts", and have links for staff to access more detailed guidance.

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Dos and Don'ts of epidurals and anticoagulation / antiplatelet therapy

Aspirin and prophylactic dalteparin are the only antiplatelet & anticoagulant to be given with an epidural in situ unless this plan is clearly documented and agreed by an anaesthetist

✓ Do be aware of the different types of anticoagulants and antiplatelets: they may be given SC / PO / IV
✗ Don't give an anticoagulant or antiplatelet if you are not sure

✓ Do document on the drug chart and in the patient's notes if an anticoagulant has been omitted and the reason why
✗ Don't omit the anticoagulant / antiplatelet without checking — ask for documentation in the notes

✓ Do contact the anaesthetist on call if your patient is on warfarin, or other anticoagulants, and you are unsure
✗ Don't remove an epidural when a patient is receiving any anticoagulant other than prophylactic dalteparin or any antiplatelet except aspirin

✓ Do hand over your patients' anticoagulant / antiplatelet plan to colleagues
✗ Don't assume that another healthcare professional is aware the patient has an epidural in situ where an anticoagulant / antiplatelet is prescribed. Always question.

✓ Do ask for advice regarding epidurals and anticoagulation / antiplatelets from senior staff, acute pain service, anaesthetist on call
✗ Don't remove an epidural within 12 hours after prophylactic dalteparin or give another dose within 4 hours after removal

✓ Do familiarise yourself with the Epidural Protocol http://www.sth.nhs.uk/STHcontDocs/STH_CGP/Anaesthesia/EpiduralProtocol.doc
✗ Don't delay removal of an epidural if it is clinically indicated and safe to do so. Unnecessary delays may impact on further anticoagulant / antiplatelet administration

If you are not sure what drugs are anticoagulants or antiplatelets then please check the **BNF** (paper copy - Chapter: Cardiovascular; section "Blood clots")
Also see "**Epidurals and Spinals in Anticoagulated Patients**" guideline:
http://www.sth.nhs.uk/STHcontDocs/STH_CGP/Anaesthesia/EpiduralsAndSpinalsInAnticoagulatedPatients.pdf

Adapted from Critical Care VTE Prevention Flow Chart (J Jennings & P Murch, October 2015) K Williams, Acute Pain Clinical Nurse Specialist & R Hammond, Anticoagulation Pharmacist. Approved by STH Thrombosis Committee June 2016

Future Plans

In 12 months' time, re-audit incidents related to anticoagulation and antiplatelet medication errors in patients with epidural analgesia.

References

1) T. T. Horlocker. Regional anaesthesia in the patient receiving antithrombotic and antiplatelet therapy. British Journal of Anaesthesia (2011);107:96-106.

2) P. Gulur, B. Tsui, R. Pathak, K. M. Koury, H. Lee. Retrospective analysis of the incidence of epidural haematoma in patients with epidural catheters and abnormal coagulation parameters. British Journal of Anaesthesia (2015);114:808-811.