DOAC reversal in Traumatic Brain Injury

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Case overview:

An elderly man fell from standing sustaining a head injury. He had a history of atrial fibrillation and took Edoxaban for stroke prevention. He was trauma-called in the ED with an initial GCS of 15. An urgent CT scan revealed a subdural haematoma.

What happened next?

Haematology advised prothrombin complex concentrate (PCC), however, the treatment was not given until 90 minutes had passed. 30 minutes later, the patient's GCS dropped. A code-black trauma call was put out and repeat CT scan confirmed extension of the SDH which required surgical treatment.

Key insights:

- There are no time-critical point-of-care blood tests to establish the degree of anticoagulant activity from a DOAC (coagulation profiles and ROTEMs are unreliable in this context).
- Early administration of PCC for patients on Xa inhibitors with confirmed ICH, should be considered (off-license indication).
- Dabigatran has its own 'antidote'- idarucizumab.
- Discussion with haematology is warranted in these scenarios.
- When indicated, PCC administration should be initiated as soon as possible to limit the risk of pathology progression.
- **Octaplex (PCC) is kept in the ED resus cupboard**

Trust Guideline on DOAC-associated bleeding

TRAUMATIC INTRA-CRANIAL HAEMORRHAGE (ICH) IN THE ED

Initial assessment includes the following important steps:

Obtain DOAC history including timing and dose.
Risk assessment of bleeding severity vs thrombosis risk- ICH is considered life-threatening
Urgent discussion with ED cons & heam
Send baseline DOAC assay, FBC, U&E, LFT, clotting screen.

Octaplex

A four-factor prothrombin complex concentrate (PCC) containing factors II, VII, IX, X and proteins C & S.

Consent:

- All reversal agents carry a thrombotic risk; the patient/ advocate should be made aware of this.

Dosing and administration:

- 50 units/kg (MAX dose 3000 units).
- Each 500 IU vial is reconstituted in 20 ml water for injection - may require up to SIX vials.
- IntraVENOUS infusion; use a SEPARATE IV line and do not allow blood to enter the line.
- May cause a rate-dependent tachycardia.

**remember to consider relative contra-indications, cautions and side effects*

Contact us with your feedback

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