GUIDE TO THE MANAGEMENT OF BLEEDING AND URGENT SURGERY IN PATIENTS TAKING DABIGATRAN (A DIRECT THROMBIN INHIBITOR)

Major bleed

Dabigatran

Consider time since last oral dose + dosing regimen, concomitant medications

Measure FBC, U+E, eGFR, PT/aPTT/fibrinogen, thrombin time (TT)

Dabigatran assay* if TT is abnormal

- **Consider oral activated charcoal (<2 hours since ingestion)**
- **Local haemostatic measures (**mechanical compression, surgical/ endoscopic/radiological intervention)
- **Blood product replacement therapy and optimisation of pH and body temperature as per major haemorrhage protocol**
- **Tranexamic acid (1g IV)**
- **<u>If reversal is necessary, administer Idarucizumab (Praxbind®)</u>****

Limb / Life-threatening bleed

<u>Administer Idarucizumab (Praxbind®)</u>**

(Dialysis is an alternative means of removing dabigatran from the circulation if Idarucizumab is not available)

*__Measurement of dabigatran level__ may be appropriate, particularly if there is concern about impaired renal function as dabigatran is 80% renally excreted. **This is not necessary if the thrombin time is normal as the thrombin time is very sensitive to dabigatran.**

- Dabigatran assay: test available in the RVI laboratory

A level of 0-184 ng/mL at 2-4 hours post-dose reflects therapeutic anticoagulation. A level of 0-90 ng/mL is considered a trough level. A level of <30 ng/mL should reflect negligible anticoagulant effect

Please discuss with a haematologist prior to requesting measurement of drug levels

**A standard dose of 5g IV idarucizumab is administered. This is given as two boluses of 2.5g not more than 15 minutes apart. It is obtained from the RVI EAU antidote cupboard or RVI/FRH emergency drug cupboard.

Please discuss with a haematologist prior to using Idarucizumab (Praxbind®)

Send a coagulation sample 15 mins after administration and continue to monitor any other factors that are contributing to bleeding

Author- T Biss; Approved by- K Talks; Operative date- Sept 2017; Review date- Sept 2020

GUIDE TO THE MANAGEMENT OF BLEEDING AND URGENT SURGERY IN PATIENTS TAKING DABIGATRAN (A DIRECT THROMBIN INHIBITOR)

Non-major bleed

Dabigatran

Consider time since last oral dose + dosing regimen, concomitant medications

Measure FBC, U+E, eGFR, PT/aPTT/fibrinogen, thrombin time (TT)

- **Local haemostatic measures**
- **Oral/IV tranexamic acid**
- **Omit/delay next dose of anticoagulant**

*Guidance for duration of optimal interruption of dabigatran prior to surgery is published in the SPC and may provide a useful guide to the preferred timing of surgery/epidural anaesthesia, etc.

Emergency surgery*

Discuss with surgeon feasibility of delaying surgery

(Measurement of drug levels may be appropriate)

Delay by > 8 hours: Omit dose

Delay by <8 hours or immediate surgery: <u>Administer Idarucizumab (Praxbind®)</u>**

(Dialysis is an alternative means of removing dabigatran from the circulation if Idarucizumab is not available)

**A standard dose of 5g IV idarucizumab is administered. This is given as two boluses of 2.5g not more than 15 minutes apart. It is obtained from the RVI EAU antidote cupboard or RVI/FRH emergency drug cupboard.

Please discuss with a haematologist prior to using Idarucizumab (Praxbind®)

Send a coagulation sample 15 mins after administration and continue to monitor any other factors that are contributing to bleeding

Author- T Biss; Approved by- K Talks; Operative date- Sept 2017; Review date- Sept 2020

GUIDE TO THE MANAGEMENT OF BLEEDING AND URGENT SURGERY IN PATIENTS TAKING A FACTOR Xa ANTAGONIST

Major bleed

FXa inhibitor
(rivaroxaban, apixaban, edoxaban, betrixaban)

Consider time since last oral dose + dosing regimen, concomitant medications

Measure FBC, U+E, eGFR, PT/aPTT/fibrinogen

Drug-specific assay*

- **Consider oral activated charcoal (<2 hours since ingestion)**
- **Local haemostatic measures (**mechanical compression, surgical/ endoscopic/radiological intervention)
- **Blood product replacement therapy and optimisation of pH and body temperature as per major haemorrhage protocol**
- **Tranexamic acid (1g IV)**

Limb / Life-threatening bleed

Consider: Prothrombin complex concentrate (PCC)
Activated PCC (FEIBA) rFVIIa (NovoSeven)**

No specific reversal agent exists for this class of anticoagulant. Treatment is largely supportive while waiting for the drug to be cleared

*__Measurement of drug level__ may be appropriate, particularly if there is concern about impaired renal function as the FXa inhibitors are 25-35% renally excreted

- FXa inhibitor assay: test available in the RVI laboratory

Typical peak and trough levels vary according to the agent and dosing regime. A level of <30 ng/mL should reflect negligible anticoagulant effect.

Please discuss with a haematologist prior to requesting measurement of drug levels

There is no published evidence to support the **use of haemostatic agents (PCC/aPCC/rFVIIa) in the setting of haemorrhage or urgent surgery in patients taking a factor Xa antagonist

Please discuss with a haematologist prior to use

Author- T Biss; Approved by- K Talks; Operative date- Sept 2017; Review date- Sept 2020

GUIDE TO THE MANAGEMENT OF BLEEDING AND URGENT SURGERY IN PATIENTS TAKING A FACTOR Xa ANTAGONIST

Non-major bleed

FXa inhibitor
(rivaroxaban, apixaban, edoxaban, betrixaban)

Consider time since last oral dose + dosing regimen, concomitant medications

Measure FBC, U+E, eGFR, PT/aPTT/fibrinogen

- **Local haemostatic measures**
- **Oral/IV tranexamic acid**
- **Omit/delay next dose of anticoagulant**

Emergency surgery*

Discuss with surgeon feasibility of delaying surgery
(Measurement of drug levels may be appropriate)

Delay by >8 hours: Omit dose

Delay by <8 hours or immediate surgery: Consider PCC/ rFVIIa/aPCC**

*Guidance for duration of optimal interruption of factor Xa antagonists prior to surgery are published in the SPCs and may provide a useful guide to the preferred timing of surgery/ epidural anaesthesia, etc.

Author- T Biss; Approved by- K Talks; Operative date- Sept 2017; Review date- Sept 2020