

Oral Anticoagulant Emergent Reversal Management

UnityPoint Health St. Luke's-Sioux City

General measures:

- Control bleeding with local hemostatic measures
- Initiate appropriate resuscitation measures, including blood products
- Ensure adequate urine output
- STOP any anticoagulant/antiplatelet agent if not already done and record date and time of last dose
- Laboratory orders STAT: CBC, CMP, fibrinogen, Thrombin Time, a PTT, PT/INR

Reversal Strategies:

Table 1: *Anticoagulant Reversal Strategies*

Medication	Laboratory Results	Treatment
Vitamin K Antagonist Warfarin (Coumadin)	INR > 1.5	1. Give 2 units thawed plasma 2. Give vitamin K 10mg IV over 30 minutes 3. Check INR every 4 hours for the first 24 hours (or more frequently based on clinical condition) 4. Consider 4-factor PCC (KCentra). Fixed KCentra dosing for warfarin reversal: 1. Weight < 100 kg AND baseline INR unknown or <7.5-Give 1500 units 2. Weight ≥100kg OR baseline INR ≥7.5-Give 2000 units 3. May give 500 units if post-treatment INR >2 or patient has not had a positive clinical response



	INR < 1.5	No treatment indicated, monitor INR as clinical condition indicates.
Direct Thrombin Inhibitor Dabigatran (Pradaxa)	Thrombin Time >24 seconds	Idarucizumab (Praxbind) 5 grams IV x 1 supplied as two 2.5 gram vials (50ml each). Administer the dose via IV infusion=the two vials should be given within 15 minutes of one another
	Thrombin Time <24 seconds	No treatment indicated, monitor clinical condition
Factor Xa Inhibitors Rivaroxaban (Xarelto) Apixaban (Eliquis)	Treat if medication taken within previous 48 hours Test Anti-Xa levels	4-factor PCC (KCentra) 25-50 units/kg via slow IV infusion x 1 (Maximum 2500 units) *Per ACS-TXA, PCC(KCentra)
Edoxaban (Savaysa) Betrixaban (Bevyxxa)	Unreliable PT/INR levels	4-factor PCC(KCentra) 25-50 units/kg via slow IV infusion x 1 (Maximum 2500 units)
Antiplatelet Agents Clopidogrel (Plavix) Ticagrelor (Brilinta) Prasugrel (Effient) Ticlopidine (Ticlid) Eptifibatide (Integrilin)		*Per ACS-No direct reversal agents currently exist. 1-deamino-(8-D-arginine) vasopressin(DDAVP) may be useful. (DDAVP dosing 0.3 mcg/kg IV) Platelet transfusion cannot be recommended for routine use.
Aspirin		*Per ACS-No direct reversal agents currently exist. 1-deamino-(8-D-arginine) vasopressin(DDAVP) may be useful. (DDAVP dosing 0.3 mcg/kg IV) Platelet transfusion cannot be recommended for routine use.

Order sets that are available in EPIC:

- Non-Surgical Reversal of Oral Anticoagulation Focused
- Surgical Reversal of Oral Anticoagulation Focused



References:

1. Frontera J et al. Guideline for Reversal of Antithrombotics in Intracranial Hemorrhage: A Statement for Healthcare Professionals from the Neurocritical Care Society and Society of Critical Care Medicine. *Neurocrit Care*. 016 Feb;24(1):6-46. Doi: 10.1007/s12028-015-0222-x. Review. PubMed PMID: 26714677
2. Connolly SJ, Crowther M, Eikelboom JW, et al. Full study report of andexanet alfa for bleeding associated with factor Xa inhibitors. *N Engl J Med*. 2019;380(14):1326–1335. doi:10.1056/NEJMoa1814051.
3. ACS Trauma Programs/American College of Surgeons (2023, November). *Best Practice Guidelines, Geriatric Trauma Management*. <https://www.facs.org/media/ubvj2ubl/best-practices-guidelines-geriatric-trauma.pdf>

