Transitioning Between Anticoagulants

Continuous Infusion Unfractionated Heparin (UFH)

IV UFH infusion → SC UFH BID

- Calculate the total 24-hour IV UFH requirements to maintain therapeutic heparin assay
- Increase the total 24-hour IV UFH requirement by 10% to 20% (SC dosage requirements are higher than IV based on bioavailability)
- Divide the total dose calculated by 2 to determine q12 hours SC dose
- Discontinue IV UFH infusion and initiate the 1st SC UFH dose within 1 hour
- See Heparin SC for Treatment handout on UHS clinical pathways/guidelines page for more information

IV UFH infusion → SC LMWH (or SC fondaparinux)

- Calculate the appropriate LMWH (or fondaparinux) dose based on indication and patient weight
- Discontinue IV UFH and initiate the 1st SC LMWH (or fondaparinux) dose within 1 hour

SC LMWH or Fondaparinux

SC LMWH or SC fondaparinux → IV UFH infusion

- Calculate the appropriate IV UFH infusion rate based on indication (see Heparin Infusion Protocol on UHS clinical pathways/guidelines page for more info)
- Discontinue SC LMWH or SC fondaparinux and initiate IV UFH infusion (no bolus) 1–2 hours before the next SC LMWH or fondaparinux dose would have been administered
- Check heparin assay 6 hours after initiating the IV UFH infusion and make adjustments according to Heparin Infusion Protocol on UHS clinical pathways/ guidelines page

SC LMWH or SC fondaparinux →SC UFH BID

- Calculate the SC UFH dose: the recommended initial dose is 250 units/kg SC given q12 hours
- Discontinue SC LMWH or SC fondaparinux and initiate SC UFH at the time the next SC LMWH or fondaparinux dose is scheduled to be administered
- See Heparin SC for Treatment handout on UHS clinical pathways/guidelines page for more information

Rivaroxaban (Xarelto®)

Rivaroxaban → warfarin

- Discontinue rivaroxaban and begin both a parenteral anticoagulant and warfarin at the time the next dose of rivaroxaban would have been taken
- **Note**: Rivaroxaban can contribute to INR elevation

Rivaroxaban → anticoagulant other than warfarin

- Discontinue rivaroxaban and give the first dose of the other anticoagulant at the time the next dose of rivaroxaban would have been taken

Warfarin → rivaroxaban

- Discontinue warfarin and start rivaroxaban when INR < 3 to avoid periods of inadequate anticoagulation

IV UFH infusion → rivaroxaban

- Initiate rivaroxaban at the time of heparin discontinuation

From anticoagulant (other than warfarin and heparin drip) → rivaroxaban

- Start rivaroxaban 0-2 hours before the next dose would have been taken

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Dabigatran (Pradaxa®)

Dabigatran → warfarin

- Start time must be adjusted based on creatinine clearance (CrCl)
  - CrCl > 50 mL/minute: Initiate warfarin 3 days before discontinuation of dabigatran
  - CrCl 31-50 mL/minute: Initiate warfarin 2 days before discontinuation of dabigatran
  - CrCl 15-30 mL/minute: Initiate warfarin 1 day before discontinuation of dabigatran
  - CrCl < 15 mL/minute: Dabigatran is contraindicated. No recommendations provided.
- **Note**: Dabigatran can contribute to INR elevation. Warfarin effect on the INR is better reflected ≥ 2 days after dabigatran has been stopped

Dabigatran → parenteral anticoagulant

- Start time dependent on patient's creatinine clearance (CrCl)
  - CrCl >30 mL/minute: Start parenteral anticoagulant 12 hours after last dabigatran dose
  - CrCl <30 mL/minute: Start parenteral anticoagulant 24 hours after last dabigatran dose

Dabigatran→ anticoagulant (other than warfarin or parenteral anticoagulant)

- Discontinue dabigatran and give the first dose of the other anticoagulant at the time the next dose of dabigatran would have been taken

Warfarin → dabigatran

- Discontinue warfarin and initiate dabigatran when INR < 2.0

From parenteral anticoagulation → dabigatran

- Initiate dabigatran ≤2 hours prior to the time of the next scheduled dose of the parenteral anticoagulant (eg, enoxaparin) or at the time of discontinuation for a continuously administered parenteral drug (eg, I.V. heparin);
- Discontinue parenteral anticoagulant at the time of dabigatran imitation

From other anticoagulant (other than warfarin or parenteral) → dabigatran

- Discontinue anticoagulant and give the first dose of dabigatran at the time the next dose of the other anticoagulant would have been taken

Apixaban (Eliquis®)

Apixaban → warfarin

- Discontinue apixaban and start a parenteral anticoagulant plus warfarin at the time the next dose of apixaban would have been taken. Discontinue parenteral anticoagulant when INR reaches therapeutic range.
  Note: Apixaban can contribute to INR elevation

Apixaban → anticoagulant other than warfarin

- Discontinue apixaban and give the first dose of the other anticoagulant at the time the next dose of apixaban would have been taken

Warfarin → apixaban

- Discontinue warfarin and initiate apixaban when INR is < 2.0

From anticoagulant (other than warfarin) → apixaban

- Discontinue anticoagulant and give the first dose of apixaban at the time the next dose of anticoagulant would have been taken

References:

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