Transition of Anticoagulants 2014

hospital pharmacy

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| Brand | <u>Generic</u> | |
|--------------------------------|----------------|--|
| Arixtra | fondaparinux | |
| Coumadin | warfarin | |
| Eliquis | apixaban | |
| Fragmin | dalteparin | |
| Lovenox | enoxaparin | |
| Pradaxa | dabigatran | |
| Xarelto | rivaroxaban | |
| | | |
| Abbreviations: INR = | | |
| international normalized ratio | | |

| From | То | Action |
|------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Apixaban | Argatroban/ Enoxaparin/ Dalteparin/ Fondaparinux/ Heparin | Wait 12 hours after last dose of apixaban to initiate parenteral anticoagulant. |
| Apixaban | Warfarin | When going from apixaban to warfarin, consider the use of heparin or enoxaparin as a bridge (ie, start heparin infusion/enoxaparin and warfarin 12 hours after last dose of apixaban and discontinue parenteral anticoagulant when INR is therapeutic). |
| Apixaban | Rivaroxaban or Dabigatran | Wait 12 hours from last dose of apixaban to initiate rivaroxaban or dabigatran. |
| Argatroban | Apixaban, Dabigatran, or Rivaroxaban | Start apixaban, dabigatran, or rivaroxaban within 2 hours of stopping argatroban. |
| Argatroban | Enoxaparin/ Dalteparin/ Fondaparinux/ | If no hepatic insufficiency, start parenteral anticoagulant within 2 hours of stopping argatroban. If there is hepatic insufficiency, start parenteral anticoagulant after 2-4 hours of stopping argatroban. |
| | Heparin | *The use of enoxaparin/dalteparin/heparin assumes the patient does not have heparin allergy or heparin-induced thrombocytopenia. |
| Argatroban | Warfarin | Argatroban must overlap with warfarin for at least 5 days; once INR >4 (and assuming dose of argatroban is 2 mcg/kg/min or less), stop argatroban and check INR after 4 hours off argatroban. If INR 2-3, it is ok to discontinue argatroban therapy. If INR <2, restart argatroban. If INR >3.0, stop argatroban and consider warfarin dose adjustment. Individual cases may vary, please consult with a hematologist or an anticoagulation specialist. |
| Dabigatran | Argatroban/ Enoxaparin/ Dalteparin/ Fondaparinux/ Heparin | If CrCl >30 mL/min, wait 12 hours after last dose of dabigatran to initiate parenteral anticoagulant. If CrCl <30 mL/min, wait 24 hours after last dose of dabigatran to initiate parenteral anticoagulant. |
| Dabigatran | Apixaban, Rivaroxaban | If CrCl >30 mL/min, wait 12 hours after last dose of dabigatran to initiate apixaban or rivaroxaban. If CrCl <30 mL/min, wait 24 hours after last dose of dabigatran to initiate apixaban or rivaroxaban. |

| Dabigatran | Warfarin | For CrCl \geq 50 mL/min, start warfarin 3 days before discontinuing dabigatran. |
|--------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | For CrCl 30-50 mL/min, start warfarin 2 days before discontinuing dabigatran. |
| | | For CrCl 15-30 mL/min, start warfarin 1 day before discontinuing dabigatran. |
| | | For CrCl <15 mL/min, no recommendations can be made. |
| | | Because dabigatran can increase INR, the INR will better reflect warfarin's effect only after dabigatran has been stopped for at least 2 days. |
| Dalteparin | Argatroban/ Enoxaparin/ | <u>From therapeutic dalteparin doses:</u> Initiate parenteral anticoagulant when next enoxaparin dose is expected to be given. |
| | Fondaparinux/ Heparin | From prophylaxis dalteparin doses: Initiate parenteral anticoagulant as clinically needed irrespective of time of enoxaparin dose. |
| Dalteparin | Apixaban, Dabigatran, or | <u>From therapeutic dalteparin doses</u> : Initiate apixaban, dabigatran, or rivaroxaban when next enoxaparin dose is expected to be given. |
| | Rivaroxaban | <u>From prophylaxis dalteparin doses:</u> Initiate apixaban, dabigatran, or rivaroxaban as clinically needed irrespective of time of enoxaparin dose. |
| Dalteparin V | Warfarin | If immediate therapeutic anticoagulation is desired: Overlap therapeutic enoxaparin dose with warfarin for at least 5 days and until INR is in therapeutic range for 24 hours. |
| | | If immediate therapeutic anticoagulation is not desired: Initiate warfarin as clinically needed irrespective of time of last enoxaparin dose. |
| Enoxaparin | Argatroban/ Dalteparin/ | From therapeutic enoxaparin doses: Initiate parenteral anticoagulant when next enoxaparin dose is expected to be given. |
| | Fondaparinux/ Heparin | From prophylaxis enoxaparin doses: Initiate parenteral anticoagulant as clinically needed irrespective of time of enoxaparin dose. |
| Enoxaparin | Apixaban, Dabigatran, or | From therapeutic enoxaparin doses: Initiate apixaban, dabigatran or rivaroxaban when next enoxaparin dose expected to be given. |
| | Rivaroxaban | From prophylaxis enoxaparin doses: Initiate apixaban, dabigatran, or rivaroxaban as clinically indicated irrespective of time of last enoxaparin dose. |
| Enoxaparin | Warfarin | If immediate therapeutic anticoagulation is desired: Overlap therapeutic enoxaparin dose with warfarin for at least 5 days and until INR is in therapeutic range for 24 hours. |
| | | If immediate therapeutic anticoagulation is not desired: Initiate warfarin as clinically needed irrespective of time of last enoxaparin dose. |
| Fondaparinux | Argatroban/ Dalteparin/ | From therapeutic fondaparinux doses: Initiate parenteral anticoagulant when next fondaparinux dose is expected to be given. |
| | Enoxaparin/ Heparin | From prophylaxis fondaparinux doses: Initiate argatroban or heparin infusion as clinically needed irrespective of time of last fondaparinux dose. |
| Fondaparinux | Apixaban, Dabigatran, or | From therapeutic fondaparinux doses: Initiate apixaban, dabigatran, or rivaroxaban when next fondaparinux dose is expected to be given. |
| | Rivaroxaban | From prophylaxis fondaparinux doses: Initiate apixaban, dabigatran, or rivaroxaban as clinically indicated irrespective of time of fondapariunux dose. |

| Fondaparinux | Warfarin | Overlap fondaparinux with warfarin for at least 5 days and until INR is in therapeutic range for 24 hours. |
|------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Heparin infusion | Argatroban/ Enoxaparin/ Dalteparin/ Fondaparinux | Initiate parenteral anticoagulant within 2 hours after discontinuation of heparin infusion. |
| Heparin infusion | Apixaban, Dabigatran, or Rivaroxaban | Initiate apixaban, dabigatran, or rivaroxaban within 2 hours after discontinuation of heparin infusion. |
| Heparin infusion | Warfarin | Overlap heparin infusion with warfarin for at least 5 days and until INR is in therapeutic range for 24 hours. |
| Rivaroxaban | Argatroban/ Enoxaparin/ Fondaparinux/ Heparin | Wait 24 hours after rivaroxaban discontinuation to initiate parenteral anticoagulant. <u>From rivaroxaban 10 mg dose:</u> Initiate parenteral anticoagulant as clinically needed irrespective of time of last rivaroxaban dose. |
| Rivaroxaban | Warfarin | When going from rivaroxaban to warfarin, consider the use of heparin or enoxaparin as a bridge (ie, start heparin infusion/enoxaparin and warfarin when next dose of rivaroxaban is due. Discontinue the parenteral anticoagulant when INR is therapeutic). |
| Rivaroxaban | Apixaban or Dabigatran | Wait 24 hours after rivaroxaban discontinuation to initiate apixaban or dabigatran. |
| Warfarin | Apixaban | Wait until INR <2, then initiate dabigatran. |
| Warfarin | Dabigatran | Wait until INR <2, then initiate dabigatran. |
| Warfarin | Rivaroxaban | Wait until INR <3, then initiate rivaroxaban. |

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