**WARFARIN (COUMADIN®)**

Order INR STAT

**Contraindications to Prothrombin Complex Concentrates (Kcentra®)**

- Disseminated intravascular coagulation, heparin induced thrombocytopenia (HIT), prior severe systemic reaction/hypersensitivity to any components including Factors II, VII, IX, X and protein C. Kcentra® also contains heparin, protein S, antithrombin and human albumin.

**Precautions:** Kcentra® increases risk of thromboembolism (TE) and should be used with caution in patients with active thrombosis. Caution if history of major surgery or TE in past 6 weeks, eg: myocardial infarction, cerebral vascular accident, transient ischemic attack, unstable angina, severe peripheral arterial disease, intravascular stent, DVT/PE.

**No Contraindications**

1. **Kcentra® (PCC)Pathway for WARFARIN**
   - administer IV (not to exceed 8.4 mL/min)

   **INR**
   - 1.5 - 3.9
   - 4.0 - 6.0
   - > 6.0

   **4-Factor PCC (Kcentra®) Dose**
   - 25 units factor IX/kg
   - 35 units factor IX/kg
   - 50 units factor IX/kg

   **Maximum Dose**
   - 2500 factor IX
   - 3500 factor IX
   - 5000 factor IX

2. Administer Vitamin K 10 mg IV (not to exceed 1 mg/min) after PCC infusion
3. Repeat INR 30 min after infusion of PCC, if INR > 1.5 consider FFP (2 units)
4. Administer vitamin K within 4 hours after achieving INR goal

**DABIGATRAN (PRADAXA®)**

Order STAT Thrombin time & PTT

**Contraindications to Prothrombin Complex Concentrates (Kcentra®)**

- **No Contraindications**

**Precautions for Idarucizumab (Praxbind®)**

- Risk of serious adverse reactions in patients with hereditary fructose intolerance due to sorbitol excipient: Idarucizumab contains 4 grams of sorbitol as an excipient.

**APIXABAN (ELIQUI®)**

Order PT STAT. Consider antiXa level.

**Contraindications to Prothrombin Complex Concentrates (Kcentra®)**

**No Contraindications**

**Dabigatran (Pradaxa®)**

- Chemically related to warfarin.
- Inhibits factor Xa.
- **Contraindications**
  - Disseminated intravascular coagulation, heparin induced thrombocytopenia (HIT), prior severe systemic reaction/hypersensitivity to any components including Factors II, VII, IX, X and protein C. Kcentra® also contains heparin, protein S, antithrombin and human albumin.
  - Use with caution in patients with active thrombosis.
  - Consider administration of Idarucizumab 5 g dose if thrombin time is > 6.0 minutes. Apixaban & rivaroxaban unlikely to be present if AntiXa level is normal.

**Warfarin (Coumadin®) or Direct Oral Anticoagulants (DOACs): Dabigatran (Pradaxa®), Rivaroxaban (Xarelto®), Apixaban (Eliquis®)**

These guidelines and recommendations are ONLY for patients who have been confirmed to be taking an oral anticoagulant.

San Francisco VA Health Care System – Anticoagulation and Thrombosis service (1/13/2016)

Urgent Reversal of Oral Anticoagulants Associated Acute Intracranial (ICH) or Life Threatening Hemorrhage

**Warfarin (Coumadin®) or Direct Oral Anticoagulants (DOACs): Dabigatran (Pradaxa®), Rivaroxaban (Xarelto®), Apixaban (Eliquis®)**

Please alert the Anticoagulation and Thrombosis service via a consult of any patients that have been reversed with Kcentra® or Idarucizumab.
**PRECAUTIONS:** The contents of these clinical practice guidelines are to be used as a guide, and not a substitute for medical judgment. Healthcare professionals should exercise sound clinical judgment and individualize patient care based upon the patient’s condition.

- If INR remains elevated following Kcentra® administration, repeat dosing of Kcentra® is not supported by clinical data and is not recommended.
- **Kcentra® increases risk of thromboembolism and should be used with great caution in patients with active thrombosis.**
- Kcentra® was not studied in subjects who had a thromboembolic event, myocardial infarction, disseminated intravascular coagulation, cerebral vascular accident, transient ischemic attack, unstable angina pectoris, or severe peripheral vascular disease within the prior 3 months. **May not be suitable in patients with thromboembolic events in the prior 3 months.**
- Use Kcentra® for reversal of apixiban and rivaroxaban is an OFF-LABEL indication, and potential benefits must be weighed carefully against lack of outcome data and potential risks.
- Kcentra® is derived from human plasma and possess the theoretical risk of transmitting infectious agents.
- Kcentra® contains heparin and should not be used in patients with a history of heparin induced thrombocytopenia (HIT)
- A limited number of patients taking idarucizumab experienced re-elevation of coagulation parameters (eg: aPTT)
- Idarucizumab is a humanized monoclonal antibody fragment and possess the risk of hypersensitivity reaction and immunogenicity
- Idarucizumab contains fructose and should be used with caution in patients with a history of hereditary fructose intolerance

**ARTERIAL AND VENOUS THROMBOEMBOLIC COMPLICATIONS OF PROTHROMBIN COMPLEX CONCENTRATES**

Patients being treated with anticoagulants have underlying disease states that predispose them to thromboembolic events. Potential benefits of reversing anticoagulants should be weighed against the potential risks of thromboembolic events, especially in patients with a history of a thromboembolic event. Resumption of anticoagulation should be carefully considered as soon as the risk of thromboembolic events outweighs the risk of acute bleeding.

Both fatal and non-fatal arterial and venous thromboembolic complications have been reported; monitor patients receiving PCC for signs and symptoms of thromboembolic events.

- The use of recombinant factor VIIa (NovoSeven®) has unknown efficacy in reversal of DOACs.
- Fresh frozen plasma (FFP) and cryoprecipitate administration **not recommended** due to the large volume required/unclear efficacy

**References:**