

VENTURA COUNTY MEDICAL CENTER/SANTA PAULA HOSPITAL
CLINICAL PRACTICE GUIDELINES / PROTOCOLS

Use of Kcentra (4-factor Prothrombin Complex Concentrate)

The contents of this clinical practice guideline are to be used as a guide. Healthcare professionals should use sound clinical judgment and individualize patient care. This CPG is not meant to be a replacement for training, experience, CME or studying the latest literature and drug information.

Procedure: Kcentra (4-factor PCC)

Guidelines for Use: To control and prevent bleeding of patients who are in warfarin-induced coagulopathy, particularly for patients who cannot tolerate large fluid volumes.

Barriers/Limitations:

- Made from human pool blood
- Greater risk of developing thrombosis (Black Box Warning)
- It should not be infused at a rate exceeding 8.4 mL/minute.

Dose:

- Dosing is based on Factor IX component
- Kcentra 25 units/kg (not to exceed 2500 units) for INR 2-3.9
- Kcentra 35 units/kg (not to exceed 3500 units) for INR 4-6
- Kcentra 50 units/kg (not to exceed 5000 units) for INR >6
- Note: Vitamin K 10 mg IV over 20-60 minutes should be given with Kcentra.

Drug Properties:

- Prothrombin Complex Concentrates (PCC) are hemostatic blood products that contain vitamin K-dependent clotting factors. They are as follows: Factors II, VII, IX and X. Kcentra also contains antithrombotic proteins Protein C and S. They are very reliable and a fast alternative to fresh frozen plasma for the reversal of the effects of oral anticoagulation treatments, usually in the form of vitamin K agonist. The PCC available at VCMC and SPH is Kcentra.
- Kcentra is a purified, heat-treated, nanofiltered and lyophilized non-activated four-factor PCC prepared from pooled human plasma. Kcentra is sterile, pyrogen-free, and does not contain any preservatives.
- Factor composition varies between lots. The following table lists the ranges for the blood coagulation factors for each vial of Kcentra 500 units:

Ingredient	Kcentra 500 units vial
Factor II	380-800 units
Factor VII	200-500 units
Factor IX	400-620 units
Factor X	500-1020 units

- Prothrombin Complex Concentrate is a useful alternative to fresh frozen plasma when volume is an issue; particularly in the elderly with coronary artery disease or congestive heart failure. Its half-life is much longer than Factor VII and could be used as an adjunct with FFP for quicker reversal; particularly if an emergent operation is to be done on a

patient who is on warfarin or has a mounting dilutional coagulopathy secondary to hemorrhage.

Other Areas of Use/Study:

- Pediatric Cardiac Surgeries
- Ob/GYN surgeries
- Transplant Surgery
- Jehovah Witness patients who do not want blood transfusions
- Trauma patients

Approvals: P&T Cmte: 6/2014; Medicine Cmte: 7/2014; Surgery Cmte: 8/2014; Executive Cmte: 9/2014