KAISER PERMANENTE OHIO

DEEP VEIN THROMBOSIS
Methodology: Evidence-Based Issue Date: 8-99
Champion: Chief of IM Most Recent Update: 10-11, 4-12
Key Stakeholders: IM, EM Next Update: 10-13

For additional information, please see the ACCP Executive Summary.

Kaiser Permanente Guideline
The Outpatient Treatment of DVT Using Low Molecular Weight Heparins and Coumadin

I. DVT INCLUSION CRITERIA:
Diagnosis of DVT in upper or lower extremity established by a duplex ultrasound

II. EXCLUSION CRITERIA:
1) Concurrent pulmonary embolism.
2) Concurrent pregnancy - Coumadin is teratogenic. (Lovenox, Arixtra or Heparin are all safe to use, Pregnancy Class B.)
3) Allergy to Heparin or a LMWH like Lovenox or Arixtra
4) Heparin or LMWH induced thrombocytopenia.
5) Chronic Renal Failure with a creatinine clearance < 30 ml/min
6) Renal Insufficiency with serum Creatinine > 2.5.
7) Any home, family or patient barriers that would impede effective outpatient treatment.
8) Active risks for hemorrhage such as previous intracerebral hemorrhage, peptic ulcer disease, severe liver disease, thrombocytopenia, or other coagulopathies.
9) Presence of a central line associated with the DVT where the line must not be removed. Discuss with Vascular Surgery.
11) Significant risk of falls.
12) Age less than 16 years.
13) Anticipated noncompliance with home treatment.
14) Admission to hospital necessary due to concurrent illness.

III. Intervention in KP Emergency Department once the diagnosis is made of DVT, or Intervention by the ECM Hub doctor for a patient in a non-KP ER:
The note, labs, referrals, follow up blood work, home medication orders etc are in Health Connect by opening the SmartSet for DVT. (Found under the PCP’s name at the top of the Visit Navigator.)

1) STAT baseline labs: CBC with platelet count, Basic Metabolic Profile, PT/INR
2) Weigh patient on scale and convert to kilograms. Record pulse ox on room air.
3) Show Lovenox or Arixtra video & provide bedside teaching to patient to self perform SQ injection.
4) Observe the patient’s self injection of the first dose of Lovenox or Arixtra SQ in abdominal wall skin.
5) Give Coumadin 5 mg P.O. now. (Starting dose may be lower/higher based on patient age, concurrent Interacting medications, etc.)
6) Enter the order for a referral to Home Health in Health Connect (if not using the SmartSet) for DVT follow up. Notify Hub if after 5 pm or on the weekend to set up home health care.
7) Enter into Health Connect standing INR orders and cancel any other outstanding INR orders to ensure INR results are sent to MMC.
8) Order home going Coumadin in Health Connect. Coumadin 2.5 mg tabs, #60. (if not using SmartSet) Sig: 2 tablets PO QPM (5 mg total in the evening) until instructed in Anticoagulation Clinic

Then pick one of the two following SQ LMWH drugs, either Lovenox or Arixtra
9a) Order in Health Connect **Lovenox** (enoxaparin) 1 mg/kg SQ for nine more doses, to be self-administered at home q12H for four more days. Include 1 refill on rx. (The maximum syringe supplied is 150mg. CHEST guidelines recommend weight-based dosing)

Or

9b) Order **Arixtra** in Health Connect (fondaparinux) 7.5 mg Sub Q in abdominal wall QD. Dispense 5 doses. Refill X 1. Use for patient weights between 50 – 100 kg. Include 1 refill on rx.

If weight is < 50 kg use 5 mg Arixtra SQ in abdominal wall QD. Dispense 5 doses. Refill X 1.
If weight is >100 kg use 10 mg Arixtra SQ in abdominal wall QD. Dispense 5 doses. Refill X 1.

If the patient is physically able, they or the family can go to main KP Pharmacy to pick up the Coumadin and the Lovenox or Arixtra.

If the member is home bound, Home Infusion Pharmacy can arrange to deliver.

10) If the KP Pharmacy is closed, send the member home with two 2.5 mg Coumadin tablets (5 mg total) for the next evening’s use and one dose of either Lovenox or Arixtra for home SQ injection. If the patient is non-home bound, they or the family can go the next day to Pharmacy to pick up their meds.

11) Refer the patient to the Anticoagulation Clinic. (In Health Connect place an order for REF Anti or REF Coumadin if not using the SmartSet.) In the Letters section of Health Connect print “Anticoagulation Clinic Consent Form CP OH” (or use the attached version). Fax the signed copy to the Anticoagulation Clinic 216-265-4422.

Note: The ECM Hub physician talking to an out of plan ER may repatriate the member for DVT treatment, or place the necessary orders in Health Connect while physically present at the MSC, from home by secure computer link or by calling the MSC RN with verbal treatment orders.

**IV. Home Health Interventions For Home Bound Patients**

1. Obtain PT/INR on two dates of treatment – from visit Days 3, 4, 5 or 6. Also obtain CBC with platelets on first home draw. Label and deliver to lab. The report results will be managed by Anticoagulation Clinic.
2. Confirm that patient or family member is able to properly administer Lovenox or Arixtra injections until INR is within the therapeutic range of 2.0-3.0.
3. Provide patient education.
4. Help instruct patient when Anticoagulation Clinic deems continuation of Lovenox or Arixtra is necessary beyond the usual 6 total days of treatment. A refill order for additional doses is already in Health Connect if the SmartSet was used. The patient or family can pick it up from any KP Pharmacy.
5. Contact home IV pharmacy, (216) 265 6855 option 1 or Pager (216) 568-2895, to send additional doses of Lovenox or Arixtra to a home bound patient when necessary.
6. Provide a sharps container for proper disposal of sharps used at home.
7. Anticoagulation Clinic will arrange follow up of PT/INR when Lovenox or Arixtra is discontinued.
8. Schedule primary physician MOB follow-up in 1-2 weeks

**V. Anticoagulation Clinic Interventions**

1. Anticoagulation Clinic, under the direction of a physician, assumes responsibility for warfarin management and INR follow-up to achieve and maintain the INR between 2 – 3
2. A Health Connect referral in Health Connect with history of warfarin dosing for DVT will activate the Anticoagulation Clinic management of the patient. Print “Anticoagulation Clinic Consent Form CP OH” letter from Health Connect (or use the attached letter) and have doctor and patient sign the letter. Fax to Anticoagulation Clinic 216-265-4422.
3. Anticoagulation Clinic will send message to PCP to confirm indication, duration, INR range and enrollment in clinic.
Anticoagulation Clinic Consent Form

Dr. Grieser (hereinafter “supervising physician”), as a physician currently and duly licensed to prescribe medicine and perform surgery in the State of Ohio and as Anticoagulation Clinic Physician Partner, have received a referral from:

Dr. ______________________________ (“referring emergency physician”) for the outpatient anticoagulation management of Coumadin for the treatment of a Deep Venous Thrombosis in the following patient:

______________________________________________ (“patient name and MRN”).

As a result of such diagnosis, the referring physician has prescribed warfarin therapy with the goal of therapy being an INR between 2.0 - 3.0.

I hereby authorize the KP Clinical Pharmacists Matt Schneiderman (hereinafter “pharmacist”) employed by Kaiser Permanente, Ohio Region, to manage above stated warfarin therapy as follows:

Pharmacist shall manage above mentioned individual’s anticoagulant therapy, including ordering INR laboratory tests pursuant to the Standard Operating Procedures Manual, to effectively monitor and modify the anticoagulant prescription that has been issued for the individual. Pharmacist shall not commence management of the foregoing drug therapy without making reasonable attempts to contact and confer with supervising physician as defined in section 4729-29-01 of the Ohio Administrative Code (OAC). This consent form complies with section 4729.39 of the Ohio Revised Code (ORC) and all rules of the Ohio State Board of Pharmacy promulgated pursuant to such section. This authority is non-transferable unless agreed to by the supervising physician and stipulated in writing within this agreement.

This consent form is valid only for the specific diagnosis set forth above so long as the patient remains under the care of supervising physician or alternate supervising physician and unless terminated in writing. If the supervising physician or pharmacist terminates this agreement, such termination must be in writing and hand-delivered as soon as possible. If patient terminates this agreement, such termination may be communicated to either supervising physician or pharmacist, who shall promptly give written notification of such termination to the other.

Pharmacist shall send supervising physician a written report of all actions taken to manage patient’s drug therapy after each encounter for review. If supervising physician decides further action or a different approach is deemed necessary, he/she notifies pharmacist who shall then take appropriate actions to satisfy request, then submit written report again to supervising physician after patient encounter for subsequent review. All records relating to the patient's drug therapy management shall be treated as and considered to be confidential medical records and shall be retained according to Kaiser Permanente, Ohio Region guidelines, but in no event shall these records be retained for less than three (3) years after the last action is taken pursuant to this Anticoagulation Clinic Consent Form.

Signatures

Patient _______________________________ Date _______________________

Dr. Grieser _______________________________ Date _______________________

Alternate Physician __________________________ Date _______________________

Pharmacist _______________________________ Date _______________________

Alternate ________________________________ Date _______________________

