ED OBSERVATION UNIT:
DEEP VEIN THROMBOSIS PROTOCOL
NYC H+H KINGS COUNTY HOSPITAL CENTER

General Observation Guidelines apply for all ED observation patients.

INCLUSION CRITERIA

- Confirmed lower or upper extremity DVT
- No procedural intervention necessary

EXCLUSION CRITERIA

- Extensive thrombosis (e.g. extending to IVC or above iliofemoral bifurcation)
- Planned thrombolysis or embolectomy
- Planned placement of IVC filter
- Limb threatening (e.g. evidence of limb ischemia, arterial insufficiency, compartment syndrome, phlegmasia cerulea dolens, etc)
- Overlying or superimposed infection or gangrene
- Active bleeding or high risk for bleeding (HASBLED >3 or clinician judgment using attached table)
- Change in baseline ambulatory status
- Psychosocial barriers to home anticoagulation treatment (i.e. inability to self-administer anticoagulant or lack of necessary social support)
- New or recurrent DVT while already compliant on anticoagulation (e.g. prior DVT/PE, atrial fibrillation, prosthetic heart valve)
- Anticipate initiating bridging therapy to warfarin (because it takes 5 days to bridge)
- Known or suspected thrombophilia (e.g. factor V Leiden, antithrombin III deficiency, protein C/S deficiency, prothrombin mutation)

INTERVENTIONS

- Initiate full-dose anticoagulation with LMWH.
- Initiate or transition to DOAC therapy if feasible.
- Monitor for bleeding complications (ie. bleeding gums, hematuria, GI bleed)
- Rx for LMWH/DOAC (confirm pharmacy availability and insurance coverage of selected agent)

Last updated 9/10/2020
Authored by K. Christophe MD
Updated by C. Lim MD
Reviewed by R. Allen MD, E. Madden MD, R. Balakrishnan MD, S. Brewster MD

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- Patient education (lovenox self-administration teaching if needed, bleeding risks and complications, signs/symptoms of pulmonary embolism)
- Care management and/or social work consult

DISPOSITION

Home:

- Resolution of initial barriers to discharge
- Patient education complete
- Rx confirmed received and covered by insurance at patient's pharmacy
- Appropriate outpatient follow-up

Admission:

- Clinical deterioration
- Bleeding complication
- Need for initiation of coumadin

Table 3—*Independent Risk Factors for Bleeding in 10,866 Hospitalized Medical Patient*[10]

Risk Factor[a]	Total Patients, No. (%) (N = 10,866)	OR (95% CI)
Active gastroduodenal ulcer	236 (2.2)	4.15 (2.21-7.77)
Bleeding in 3 mo before admission	231 (2.2)	3.64 (2.21-5.99)
Platelet count $< 50 \times 10^9$/L	179 (1.7)	3.37 (1.84-6.18)
Age ≥ 85 y (vs < 40 y)	1,178 (10.8)	2.96 (1.43-6.15)
Hepatic failure (INR > 1.5)	219 (2.0)	2.18 (1.10-4.33)
Severe renal failure (GFR < 30 mL/min/m^2)	1,084 (11.0)	2.14 (1.44-3.20)
ICU or CCU admission	923 (8.5)	2.10 (1.42-3.10)
Central venous catheter	820 (7.5)	1.85 (1.18-2.90)
Rheumatic disease	740 (6.8)	1.78 (1.09-2.89)
Current cancer	1,166 (10.7)	1.78 (1.20-2.63)
Male sex	5,367 (49.4)	1.48 (1.10-1.99)

Data shown were obtained by multiple logistic regression analysis for characteristics at admission independently associated with in-hospital bleeding (major bleeding and clinically relevant nonmajor bleeding combined). GFR = glomerular filtration rate; INR = international normalized ratio.
[a]Although not specifically studied in medical patients, one would also expect dual antiplatelet therapy to increase the risk of bleeding.

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Sources

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