MSHS COVID ANTICOAGULATION PROTOCOL

The Mount Sinai Health System has developed and refined a protocol for anticoagulant therapy for patients with Severe Acute Respiratory Distress Syndrome Coronavirus (SARS-CoV-2) disease (COVID). Evidence for the role of in-situ thrombosis and thromboembolism is seen in elevated levels of D-dimers, autopsy data, and studies finding an increased incidence of VTE in ICU patients.

Revision - Synopsis

Empiric intermediate-dose anticoagulation for patients with severe COVID on the medical wards and treatment-dose anticoagulation for patients with COVID admitted to the ICU who do not have a documented VTE or other indication for anticoagulation are no longer recommended.

Studies published since the prior version of the MSHS COVID AC policy have not found a mortality benefit for treatment-dose anticoagulation and suggest increased bleeding rates. Given the available evidence, the emergence of other effective treatments, and the decrease in the COVID mortality rate, the COVID AC workgroup felt the benefits of empiric intermediate- or treatment-dose anticoagulation no longer outweigh the risk for patients with severe COVID.

PROTOCOL

All admitted patients with COVID:

- All admitted patients should be assessed for VTE risk factors, signs or symptoms of DVT and PE, and bleeding risk.
- Increased risk for bleeding includes active bleeding, PLT <50K, or INR >1.8.
- All patients should receive VTE prophylaxis as follows, unless they have a contraindication to anticoagulation:
  - BMI <40
    - CrCl >30: Enoxaparin 30 mg SQ Q12H
    - CrCl ≤30: Enoxaparin 30 mg SQ daily; Alternative - heparin 5,000 units SQ Q8hrs
  - BMI ≥40
    - CrCl >30: Enoxaparin 40 mg SQ Q12H
    - CrCl ≤30: Enoxaparin 40 mg SQ daily; Alternative - heparin 7,500 units SQ Q8hrs
  - If anticoagulant prophylaxis is contraindicated, apply sequential compression device (SCD) per standard MSHS VTE prophylaxis protocol. SCD should not be placed if a DVT is present or there are signs/symptoms of DVT (i.e., unilateral leg swelling and pain).

Confirmed VTE, based on positive diagnostic test (e.g., LE ultrasound, CTA) or high clinical suspicion in patients who cannot undergo diagnostic testing due to clinical instability.
• Treatment dose anticoagulation – Treat as per standard treatment for acute VTE.
  o Can initiate treatment-dose apixaban or rivaroxaban to avoid need to transition from
    LMWH to oral agent.
    ▪ Apixaban dose: 10mg PO BID for 7 days then 5mg PO BID.
    ▪ Rivaroxaban dose: 15mg PO BID for 21 days then 20mg daily.
  o CrCl <30, including RRT
    ▪ No adjustment for apixaban is needed
    ▪ Avoid rivaroxaban if CrCl <30
    ▪ IV heparin and warfarin is a reasonable alternative to use of apixaban.
• Duration – Minimum of 3 months. Total duration should be determined based on an
  individualized assessment of the patient’s risk of recurrent VTE and bleeding.

Post-hospitalization

  ▪ Prophylactic anticoagulation is not recommended after discharge.
  ▪ Patients who were anticoagulated for an established VTE or other indication (e.g., atrial
    fibrillation) should continue to receive the anticoagulation regimen and duration as
    recommended for that indication.
REFERENCES


