Child with Sickle Cell Disease (SCD) with Suspected Stroke (ED/Inpatient)

Initiate Sickle Cell Suspected Stroke EDP Powerplan or Inpatient Powerplan

Provide immediate stabilization management:
- Supplemental oxygen to keep saturations > 96%
- Place on monitors obtain vital signs (including BP) every 15 minutes for first hour
- Place at least one antecubital 22G intravenous catheter
- Treat seizures and increased intracranial pressure if indicated
- Provide adequate pain control
- Consult: Hematology / Oncology, PICU, Apheresis Team
- Make patient NPO
- Obtain the following labs:
  - Type & crossmatch for sickle-negative PRBCs (Order 1 unit for pts < 30 kg and 1 to 2 units for patients > 30 kg), hold blood as per blood bank for extended phenotype
  - CBC, reticulocyte count, Hemoglobin S, BMP, Mg, iCa, Phos, PT, INR, aPTT, LFT, Fibrinogen, D Dimer, Urine hCG (female > 10 years) or serum beta hCG, POC Glucose
  - If patient has fever: obtain blood culture then treat with acetaminophen and antibiotics
- Do not delay imaging, notification of consulting providers, and placing orders to obtain labs or IV access

Is sedation needed for neuroimaging and is Hgb < 9?
- Yes
  - Discuss transfusion volume with Hematology and initiate
  - Is MRI scan safely possible within 60 minutes?
    - No: Obtain non-contrast head CT STAT
    - Yes
      - Consult Neurosurgery and plan for PICU admission

Does imaging identify hemorrhage, ischemic stroke, or inconclusive findings?
- Inconclusive
  - Admit to PICU or Hem/service if patient is stable and consult Neurology
- Ischemic stroke
  - Admit to PICU
  - Prepare for exchange transfusion (to occur in PICU)

If patient is known to CM:
- Review Critical Information note and type of Sickle Cell (SS, SC, Sβ+, Sβ0)

Obtain history of:
- Stroke, Moya Moya
- Headaches (H/A)
- Nausea or vomiting
- Visual changes
- Weakness
- Loss of coordination
- Numbness and tingling
- Fever
- Syncope
- Seizures
- Recreational or prescribed drug use

Physical exam:
- Baseline mental status with detailed neurologic exam
- Hydration status
- Signs of infection

Acute Sickle Stroke Neuroprotective Care
- Head of bed flat: if tolerated and no signs of increased ICP
- Avoid hypotension: bolus PRN with NS 10-20 ml/kg
- Normovolemia: 1/2NS at maintenance or D5 ½ NS if glucose < 100
- Normothermia: Treat T > 38°C with antipyretics, +/- cooling
- Seizure control: ASAP with any suspected seizure activity. Consider cEEG to monitor subclinical seizures.