Pediatric Sentinel Events
Case 2

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Day 0

• AM
  – 14 y/o male presents to PMD with complaints of malaise, fever
  – 60 Kg, 165 cm
  – Receives Tamiflu, sent home

• PM
  – 20:00 - Call PMD, worsening symptoms
  – 21:00 arrives in ER
    • RDS
    • Intubated ventilated
    • Fluid bolus 100 ml/kg
Day 1

- ~0000 arrives in PICU
  - Aline, mech vent, fluid boluses (100 mL/kg), epi drip
- 0200 – ECMO activation, VA ECMO, neck cannulation
- 0700 “stable” on ECMO
  - Cont. fluid boluses (I&O = +38 liters)
    - Profound 3rd spacing
  - CI 2.2 L/min/m²
  - Epi drip
  - ACT’s 190 – 220 sec (Hemochron Elite ACT+ cart)
  - Anti-Xa 0.4 unit/mL
  - High line pressures, low inlet pressures, high bladder pressure
    - Perfusion suggesting ultrafiltration
Day 2

• Epi & Neo drips to maintain MAP >70 mmHg
• ACT’s dwindling 160-180’s
  – Heparin drip increases to 30 units/kg/hr
  – Heparin boluses
• anti-Xa 0.5 units/mL
• I&O +35 liters
  – Rounds perfusion suggesting ultrafiltration
Day 3

• AM rounds
  – ECMO specialists complaining unable to maintain ACT’s (160’s)
  – Anti-Xa 0.3 units/mL
    • Perfusion encouraged ECMO specialist to increase drip & bolus per ECMO order set
  – Epi drip & Neo drip
  – I&O + 33 liters
    • Cont push for ultrafiltration
Day 4

• Intensivist on night shift called throughout night w/ ACT’s 150’s
  – multiple heparin boluses, drip increases
• MAP 70’s, epi drip
• No AM anti-Xa sent secondary to no stable state heparin admin overnight
• I&O + 34 liters
  – Cont push for ultrafiltration
• Surgery consult for compartment syndrome legs
• ENT consult for bleeding from left ear
  – Perfusion suggested
• 1800 - anti-Xa 1.2 units/mL
• Circuit pressures high, inlet pressures low, bladder pressure high
Day 5

• Pupil changes
• CT scan
• OR
  – Decannulate
  – Protamine
  – Neurosurgery
RCA

• All staff interviewed involved with patient care
• No invitation to the RCA
  – Perfusion Manages ECMO Team
    • RN/RT ECMO Specialist, Primers, Coordinator
    • Rev & Exp, Capital, Training/Education, QI
• RCA Summary
  – Heparin overdose (anti-Xa 1.2 units/mL) secondary to perfusion “inappropriately” ordering heparin