

Appendix E. Shivering during Hypothermia Protocol

Bedside Shivering Assessment Scale (BSAS):

- 0 – None - no shivering
- 1 – Mild - localized to neck/thorax, may only be seen on EKG
- 2 – Moderate - intermittent involvement of upper extremities +/- thorax
- 3 – Severe - generalized shivering or sustained upper extremity shivering

BSAS > 1

- Apply BAIR hugger at max temp (43°C)
- Confirm that patient is receiving standing acetaminophen (650 mg q 6h) and buspirone (30 mg q 8 h)

If still shivering

Preferred agents:

1. Propofol (0.1-0.2 mg/kg/min.), (patient must be intubated) or Precedex* (0.2-0.7 mcg/kg/h IV)

If BSAS>1 after 10 minutes, add second agent:

2. Propofol (0.1-0.2 mg/kg/min.), (patient must be intubated) or Precedex* (0.2-0.7 mcg/kg/h IV)

If BSAS>1 after 10 minutes with 2 agents add either:

3. Fentanyl 25-100 mcg/hour IV or Midazolam (0.02-0.10 mg/kg/h IV)

If still shivering

Under special circumstances for refractory shivering:

- cisatracurium* 0.15-0.2 mg/kg IV bolus then 1-2 mcg/kg/min infusion, goal 1-2/4 TOF

* Care if bradycardia, heart block or hypotension

* Paralytics are associated with an increased risk of ICU myopathy/neuropathy, as well as loss of neurologic exam. Routine use is not recommended