**INCLUSION CRITERIA**

- Sudden cardiac arrest (in- or out-of-hospital)
- Initiation of resuscitation within 15 minutes of arrest (including bystander CPR)
- Return of spontaneous circulation (ROSC) within 60 minutes
- Comatose (Does not open eyes to pain or follow commands)
- Systolic blood pressure (SBP) greater than 90 mmHg with up to one vasopressor/inotrope (stable dose equivalent to less than 10 mcg/kg/min dopamine)
- Age greater than 18 yrs

**EXCLUSION CRITERIA**

- Neurologically intact (following commands) after successful resuscitation
- Vasopressor refractory shock systolic blood pressure (SBP) less than 90 mmHg or requirement for vasopressors dose equivalent to greater than 10 mcg/kg/min dopamine in order to maintain SBP greater than 90 mm Hg)
- Refractory ventricular arrhythmias (VT, VF, Torsades)
- Other, more likely, causes for the coma (severe pre-existing neurologic impairment, drug overdose, Cerebral Vascular Accident (CVA), hypoglycemia, sepsis, seizure, traumatic brain injury)
- Primary coagulopathy (including DIC) or uncontrolled bleeding (INR greater than 2.5, platelet count less than 30,000)—Thrombolytics are not a contraindication)
- End-stage terminal illness
- Pre-existing hypothermia less than 34° C
- Pregnancy

**NURSING INSTRUCTIONS**

**SEDATION AND ANALGESIA**

- Fentanyl 1-2 mcg/kg/hr for analgesia
- Propofol initiated at 5 mcg/kg/min IV and titrated by 5 mcg/kg/min IV every 5 minutes to a goal of 30-50 mcg/kg/min or as tolerated by blood pressure
- Midazolam initial dose 0.5-2mg IV bolus followed by 1-10 mg/hour
- Discontinue sedation 2 hours after vecuronium stopped

**PARALYSIS**

- Vecuronium 0.1mcg/kg bolus then 1mcg/kg/min. Titrate to 1-2 out of 4 train of fours every 1 hour to suppress shivering
- Keep head of bed at 30° while receiving paralytics
- Ointment from pharmacy to eyes every 8 hours while receiving paralytics
- Discontinue paralytics after patient is warmed to 36.5° C
NURSING INSTRUCTIONS (cont.)

COOLING/REWARMING PROTOCOL

- Place rectal or bladder temperature probe for continuous temperature monitoring.
- Apply two cooling blankets (one beneath a damp sheet under patient and one over a damp sheet above patient).
- Set cooling machine to 4°C. Target temp = 33°C, not lower than 32°C, not higher than 34°C.
- Once temperature reaches 33°C (will take 3-8 hours) remove ice packs, but continue cooling blankets to maintain temperature of 32-34°C for total 24 hours from start of cooling.
- Cooling with iced Normal Saline (NS) gastric lavage and ice packs on patient’s groin, axilla and neck may be used to achieve the target core temp in obese patients and in cases where core temp does not begin to drop within 1/2 hour. (Goal is to reach target temperature within 6 hours)
- Stop all potassium administration 8 hours prior to rewarming. Discontinue all potassium IV fluids. (rewarming causes rebound hyperkalemia)
- After 24 hours at 33°C, rewarm passively to 36.5°C by setting the cooling unit to “manual” mode and re-set unit by increasing target temperature by 1°C every 2 to 4 hours.

BLOOD PRESSURE AND VOLUME MANAGEMENT

- Dopamine 400mg/250ml Normal Saline to maintain mean arterial pressure greater than 80 mmHg.
- Normal Saline at 100ml hour
- Further blood pressure management at the discretion of the MICU team

ADDITIONAL MEDICATION

- Arixtra (Fondaparinux) 2.5 mg SQ daily
- Famotidine 20 mg per N.G. daily

LAB

- CBC with platelets, PT/PTT, CMP, BNP, CK, CK-MB, Troponin, ABG, CXR, EKG upon initiation of cooling protocol
- Glucose and Potassium level when target temperature reached.
- CBC, CMP, CK, CK-MB, troponin, PT/PTT every 8 hours
- Blood and Urine Cultures at 12 and 24 hours