

POST-ARREST HYPOTHERMIA PROTOCOL-ECU**08/25/06****1 of 2**

A THERAPEUTICALLY EQUIVALENT PRODUCT, WHICH HAS BEEN APPROVED BY THE PHARMACY AND THERAPEUTICS COMMITTEE OF THE MEDICAL STAFF MAY BE DISPENSED AND ADMINISTERED UNLESS OTHERWISE SPECIFIED. CROSS OUT ANY ORDERS THAT DO NOT APPLY; MARK CHECK BOXES FOR ORDERS THAT DO APPLY.

DOCTOR: PLEASE STATE PERTINENT CLINICAL INFORMATION WHEN ORDERING RADIOLOGY PROCEDURES.

DATE

TIME

ADMIT to ICU/CCU/CVICU: STAT transfer to initiate Arctic Sun

INTENSIVIST CONSULT, please notify of Post-Arrest Protocol

CODE STATUS: _____

ALLERGIES: _____

DIAGNOSIS: _____

- Ventricular fibrillation/ventricular tachycardia - indicated
 PEA/Asystole - recommended

CRITERIA:**Inclusion Criteria:**

- 18 years or older
 Cardiac arrest with return of spontaneous circulation (Initial arrhythmia should be noted)
 Persistent coma (defined as: Not following commands, no speech, no purposeful movement to noxious stimuli, no eye opening) within 15-30 mins after resuscitation; Includes abnormal reflexes (i.e. decorticate or decerebrate posturing)
 Known down time of < 1 hr preferred; unknown downtime may be cause for exclusion

Exclusion Criteria (Absolute):

- Pregnancy
 Known causes of coma (i.e. drugs, status epilepticus, etc.) prior to arrest
 Patient awakening with return of normal mental status within 15-30 mins after successful resuscitation
 Known terminal illness (i.e. Stage IV cancer) or DNR

Exclusion Criteria (Relative):

- Known coagulopathy prior to arrest (i.e. Coumadin, INR > 2.0, APTT > 1.5 control)
 Persistent shock: SBP < 90 mm Hg or MAP < 65 mm Hg after resuscitation with fluids and/or vasopressors
 Bradycardia (HR < 60 beats per min)
 Refractory ventricular fibrillation
 Thrombocytopenia (Platelets < 50,000 x 10⁶/L)

Other Considerations:

1. STRONG consideration for placement of CVC, arterial line
2. Do not delay hypothermia in case of any concurrent cardiac interventions
3. Hypothermia protocol should be initiated within 6 hrs of ROSC (return of spontaneous circulation)

LABORATORY:

- Obtain BMP, Mg, phosphorus, ionized calcium, and PT/APTT levels at initiation **AND** q 6 hrs during protocol
 Dilantin level daily

DIAGNOSTIC:

- Obtain EEG stat

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I. Hypothermia Induction: For ECU**Time Started:** _____**NURSING:**

- Sedation and PRN neuromuscular blockade to be instituted (MUST be intubated and mechanically ventilated). Maintain SAS 1 (unarousable, i.e. minimal or *no response to noxious stimuli*). Also may be judged by heart rate < 100 bpm, systolic blood pressure < 140 mm Hg
- Cooling measures should be instituted immediately
- Temperature readings q 1 hr during protocol. Rectal or bladder probe preferred, tympanic acceptable; no oral / axillary temperatures
- Ice packs applied to bilateral neck, axilla and groins. Remove once Arctic Sun pads are applied or when 33° C attained by cooling blanket
- Arctic Sun pads placed around chest, torso and legs: set to goal temperature of 33° C
- Cooling blanket above and below patient: goal temperature of 33° C
- Neuro checks/pupillary reflexes and vital signs q 1 hr
- Caution: shivering, bradycardia, hypotension, and coagulopathy may result from hypothermia
- Maintain goal temperature 33° C with Arctic Sun

PHYSICIAN NOTIFICATION:

- Shivering**- Notify immediately: Risk for shivering is highest during induction and re-warming
- Seizure**- Notify immediately
- Patient awakening during sedation with relatively intact neurologic exam
- Hypotension (SBP < 90 mm Hg) or bradycardia (HR < 60 beats per min)

HEMODYNAMIC MONITORING:

- Temporarily discontinue infusion/bolus if CVP increased > 5 mm Hg in 5 mins (if CVP monitoring available)

RESPIRATORY THERAPY:

- Turn off ventilator heater use Heat and Moisture Exchanger (HME)

MEDICATIONS (Patient must be intubated, on mechanical ventilation):**Prior to initiating cooling measures:** (Administer Sedation BEFORE NEUROMUSCULAR BLOCKADE)

- Sublimaze (Fentanyl) 50 mcg, IVP STAT for pain control/sedation and q 15 mins PRN; use 1st for shivering
- Midazolam (Versed) 5 mg, IVP STAT for sedation and q 15 mins PRN; for shivering if Fentanyl unsuccessful
- Vecuronium (Norcuron) 10 mg IVP STAT for paralysis and q 1 hr PRN for persistent shivering
- Phenytoin (Dilantin) 20 mg/kg IVPB loading dose STAT; Max 50 mg/min infusion
- Levofloxacin (Levaquin) 750 mg IVPB STAT and daily over 90 mins x 3 days if antibiotics not already ordered by physician; **may be substituted by physician**
- Normal Saline 1500 ml refrigerated (4° C - 6° C) over 30 min **OR** 60 min if suspected cardiogenic shock
- May repeat refrigerated Normal Saline 500 ml boluses q 30 mins until the temperature reaches ≤ 33.5° C
- Dopamine 5-20 mcg/kg/min PRN MAP > 70 mm Hg If BP goal not met after 2L of crystalloid/colloid infusions

IV THERAPY:

- IVF: _____ @ _____ ml/hr

DATE	TIME	VERBAL/TELEPHONE ORDER FROM	SIGNATURE/TITLE
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DATE	TIME	PHYSICIAN'S SIGNATURE	PHYSICIAN ID #
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