

## **Post Cardiac Arrest Care Plan**

**Revised 9-09**

### **Hypothermia Protocol**

#### ***Indications:***

Consider hypothermia:

*Patients Resuscitated with Rescue Shocks and/or Chest Compressions*

***AND***

If not following commands ***within 30-60 minutes after return of pulses***

#### ***Absolute Contraindications:***

Active non compressible bleeding, DNR/DNI, going to OR, or other concerns for hypothermia.

#### ***Relative Contraindications:***

Trauma, environmental hypothermia, or intracranial hemorrhage (consider with input from neurosurgery) .

### **Immediate Therapy (within 1-2 hours)**

Induce hypothermia using 4 °C cold saline IV bolus if patient will tolerate fluid load.

Also use cooling blanket(s) to induce and then maintain hypothermia. Individual clinician may choose to use other device (endovascular catheter, for example).

Monitor core temperature in the following order of preference:

-PA catheter, Esophageal, Foley, Rectal. (NOT axillary or tympanic)

Goal temperature is 33 °C for 24 hours.

Tylenol q6 hours for first 48 hours.

Sedate with benzodiazepines, opiates, or propofol.

Paralysis if needed to suppress shivering, but consider continuous EEG for 10-15% incidence of seizures.

Head of bed to 30° as tolerated

Goal MAP >80mmHg. If cerebral oximeter attached, consider titrating MAP for cerebral oximetry between 40-70.

CT Brain to rule out intracranial hemorrhage.

Continuous EEG for first 48 hours (or awakening).

Adequate monitoring including arterial line and central venous access.

### **Cardiovascular**

Obtain EKG as soon as possible.

If STEMI or new LBBB, call Cath Attending for emergent cardiac catheterization.

If VF is primary rhythm of arrest, call Cath Attending to discuss emergent cardiac catheterization and/or emergent echocardiogram to evaluate for wall motion abnormality.

If the patient requires pressors for maintenance of blood pressure, or history otherwise suspicious for acute ischemic event, consider echocardiogram even without VF/ECG changes (Cardiology input)

Central venous pressure 8-12 or euvolemia, unless other concerns (heart failure, etc.)

### **Pulmonary**

Titrate ventilator management for tidal volumes of 6-8mL/kg.

Maintain eucapnia, and consider hypocapnia may compromise cerebral blood flow.

If this results in persistent metabolic acidosis, treat with bicarbonate gtt.

ABG (with K, lactate) q4 hours for first 24 hours.

### **Endocrine**

Maintain BSG<150mg/dL. This frequently requires an insulin drip when the patient is hypothermic.

### **Hematologic**

Guaiac all stools.

H2 blocker for all patients and NGT to LIS. If GI bleed develops, change to PPI.

If hemodynamically significant bleed, rewarm patient to 35 °C. (As rapidly as possible.)

### **Renal**

Maintain K=4.0 and Mg=2.0 (both fall with hypothermia)

### **Call Physician For**

Temp >34 °C or <32°C

Systolic Blood pressure <90mmHg

Urine output <300 ml/hr or <0.5 ml/kg

Evidence of seizure activity

### ***Around 24 hours***

#### **Neurologic**

Rewarm at 0.25 °C/hr. Slower if cerebral edema or seizure-tendency.

Wean sedation as core temperature >36 °C.

HOB to 30°

Tylenol q6 hours prn temp >37.5 °C. Use cooling blanket to maintain euthermia.

If deeply comatose (GCS 3), obtain SSEP and BERs

#### **GI**

Guaiac all stools.

H2 blocker for all patients and NGT to LIS. If GI bleed develops, change to PPI.

#### **Pulmonary**

Titrate ventilator management for tidal volumes of 6-8mL/kg.

## **Renal**

Maintain K=4.0 and Mg=2.0

## ***48 Hours***

### **Neurologic**

HOB to 30°

Tylenol q6 hours prn temp >37.5 °C. May also use cooling blanket to maintain euthermia.

If seizure activity present or clinical concern of seizure, obtain STAT EEG.

If deeply comatose (GCS 3), obtain SSEP and BERs

## **GI**

Enteral feeds if patient will tolerate. (Bacterial translocation will occur as early as 48 hours)

Guiaac all stools.

H2 blocker for all patients and NGT to LIS. If GI bleed develops, change to PPI.

## **Pulmonary**

Titrate ventilator management for tidal volumes of 6-8mL/kg.

## **Renal**

Maintain K=4.0 and Mg=2.0

## ***72 Hours and beyond***

### **Neurologic**

If deeply comatose (GCS 3), obtain SSEP and BERs.

If persistently comatose (GCS 4-6), consider MRI with gadolinium and DWI to eval for extent of ischemic damage.

If awake to follow commands, screen daily for cognitive deficits –

MMSE, questions for memory (fluency), executive function

PT/OT – direct consultations to Deanna Hostler (re – post-arrest patient).

### **Cardiovascular**

Consultation with EP for secondary prevention. May require repeat echocardiogram for better estimation of ejection fraction. Note that EP is separate service from Cardiology consults.

### **GI**

Enteral feeds if patient will tolerate.

Guaiac all stools.

H2 blocker for all patients and NGT to LIS. If GI bleed develops, change to PPI.

### **Pulmonary**

Titrate ventilator management for tidal volumes of 6-8mL/kg.

### **Renal**

Maintain K=4.0 and Mg=2.0

### **Disposition**

Consult PT/OT

Consider consult to PM&R