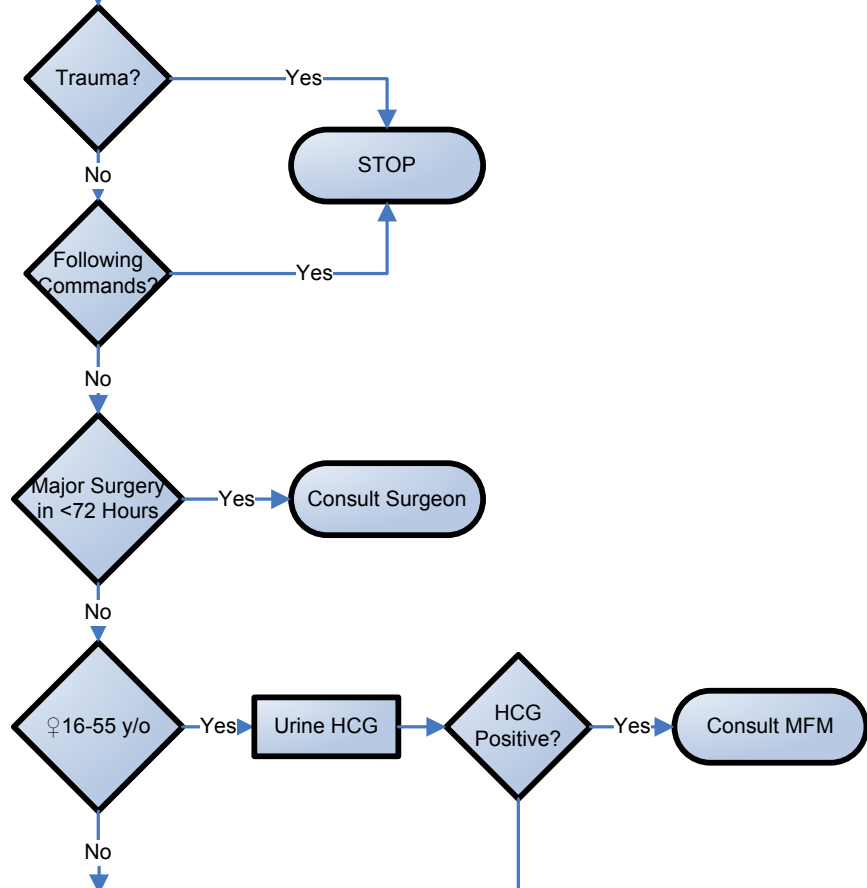


EmergencyKT: Hypothermia after Cardiac Arrest

Cardiac Arrest with Return of Spontaneous Circulation

Neurocritical Care Fellow #: 4-PAGE

Pharmacy #: 584-1680



*Note: Neurocritical Care Fellow should be consulted as soon as possible after every atraumatic ROSC patient whether or not initiation of hypothermia is planned. If planned, consultation should be simultaneous with initiation of the protocol

Consult Neurocritical Care Fellow*
+
Begin Hypothermia Induction: Goal Temp 33°C (32°C - 34°C; 89.6°F - 93.2°F) in 1 hr

Nurse insert Foley Temperature Probe
OR (if anuric)
R2 insert Esophageal Temperature Probe

-Expose Patient
-Ice packs to neck, axillae, torso, groin, proximal lower extremities
-30 cc/kg Iced Saline under pressure (100 cc/min) x 1
-Cooling Blanket
-Cooling Fan
-NCC Fellow to place cooling catheter

CPQE: Hypothermia after Cardiac Arrest

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Obtain:
Labs
 PTT/PTT/INR, CBC, EP-1, Mg, iCa, Ph, Lactate, Troponin, Cortisol, ABG
 -Mg > 2.0
 -K+ >3.5
 -Glucose 80 – 200
 -Ical, Ph: Keep WNL

Imaging
 CXR
 Head CT*
 * Must be done prior to ICU admission; may delay if emergent PCI necessary

Assess Shivering (Table 1)

*Manage Shivering
 **Goal BSAS = ≤ 1 (Table 2)

Ensure MAP 70-110
 Place Arterial Line

Consult (within 10 min of ROSC)
 -Neurocritical Care Fellow
 -If indicated
 Cardiology Fellow
 MICU Fellow

Manage Complications (do NOT stop hypothermia)
 -HR <40 → Pressors
 -Minor Bleeding → Ensure temp 32-34°C
 -Dysrhythmia → Ensure temp >30°C
 -Hemodynamic Instability → search for cause

Table 1. The Bedside Shivering Assessment Scale

Score	Definition
0	None: no shivering noted on palpation of the masseter, neck or chest wall
1	Mild: shivering localized to the neck and/ or thorax only
2	Moderate: shivering involves gross movement of the upper extremities (in addition to neck and thorax)
3	Severe: shivering involves gross movements of the trunk and upper and lower extremities

Table 2. (Goal BSAS Score ≤ 1)

Step	Step	Intervention	Dose
0	Baseline	Acetaminophen Buspirone MgSo4 Surface Counterwarming	650-1000mg q 4-6 hr 30mg NG q 8 hr 0.5-1 mg/hr (goal: 3-4 mg/dL) Bair Hugger to BL Upper Extremities
1	Mild Sedation	Fentanyl	25 mcg/hr-100 mcg/hr
2	Moderate Sedation	Fentanyl+ Meperidine	25 mcg/hr-100 mcg/hr 50-100 mg IV
3	Deep Sedation	Propofol	50-75 mcg/kg/min
4	NMB	Cisatracurium OR (if pt in Renal Failure) Vecuronium	0.15 mg/kg IV, then 1-3 mcg/kg min 0.1 mg/kg IV

*Initiate prior to hypothermia protocol, even if GCS 3
 **Shivering should be controlled by whatever means possible, including the use of paralytics earlier in the protocol if necessary