Post-Resuscitation Care

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July 28, 2008
Immediate Considerations

• Continue support and what is working
• Antiarrhythmics-usually amiodarone if v.fib or v. tach
• Ventilatory & pressor support
• Transfer to ICU if not already there
Immediate Considerations

- Frequent assessment of vital signs, rhythm
- Treat any electrolyte, acid-base disturbances
- Acidemia may self-correct if perfusion and ventilation restored
Evaluate for Cause

• What happened just before the arrest?
• 6 H’s: Hypovolema
  Hypoxia
  H+ ion: acidosis
  Hyper/hypokalemia
  Hypoglycemia
  Hyperthermia
• Five T’s: Toxins
  - Tamponade
  - Tension pneumothorax
  - Thrombosis: MI/PE
  - Trauma
Specific Situations

• Hyperthermia: Associated with worse outcomes—especially neurologic

• Hyperglycemia: Associated with worse outcomes

  - No specific studies but avoid extremes of sugars. Insulin drip the easiest way
Respiratory

• Most patients will need mechanical ventilation
  - Avoid hyperventilation - decreases cerebral blood flow
  - Avoid high airway pressure - decreases venous return & increases ICP
  - Best duration of sedation/paralysis unclear
Cardiovascular

- Transient myocardial stunning caused by:
  - Arrest itself
  - Defibrillation
- Cardiac markers increased - global ischemia &/or acute MI
- Hemodynamic instability: fluids, pressors, central monitoring
- Antiarrhythmics of unproven survival benefit
Cardiovascular

- Try to normalize oxygen and O2 transport
- Similar to protocols for goal directed therapy for sepsis but no good data to support this
Central Nervous System

- Brief hyperemia after arrest, then hypoperfusion
- Maintain normal to slightly elevated BP
- Cooling: lower temperature to 33°C x24hr.
  - Studied mostly in out of hospital arrests
  - Significant decrease in mortality and improved neurologic outcome
Neuronal Injury

- Initial ischemia-lipolysis & release of glutamate & accumulation of arachidonic acid
- Inflammation and release of cytokines
- Reprofusion-metabolism of arachidonic acid & free radical formation
- Cooling may slow these adverse metabolic events
Predictors of Poor Outcome

- Absent corneal reflex at 24 hours
- Absent pupillary response at 24 hours
- Absent withdrawal to pain at 24 hours
- No motor response at 24 hours
- No motor response at 72 hours
Summary

• Maintain circulation/respiration
• Look for causes of arrest
• Identify/correct electrolyte imbalances
• Avoid hyperthermia
• Consider cooling
• Frequent reassessments