Post Resuscitation Care Guidelines

AIM: To provide guidance to critical care staff managing comatose survivors of cardiac arrest.

KEY POINTS

- Importance of post resuscitation care
- Post Cardiac Arrest Syndrome
- Updated guidelines for post resuscitation care
- Updated guidelines for post resuscitation prognostication

INTRODUCTION

In the past, emphasis in resuscitation has been placed upon seeking early help, provision of good quality CPR and early defibrillation. Increasingly, it is recognised that coordinated post resuscitation care is of paramount importance in determining the ultimate outcome.

The recent consensus statement from the International Liaison Committee on Resuscitation (ILCOR) provides a detailed account of the epidemiology, pathophysiology, treatment and prognostication of post cardiac arrest syndrome. It reinforces the need to consider a timely, detailed, evidence-based approach to delivery of care in this vulnerable population.

Post Cardiac Arrest Syndrome key components:

1. Post cardiac arrest brain injury
2. Post cardiac arrest myocardial dysfunction
3. Systemic ischaemia/reperfusion response
4. Persistence of the underlying precipitating pathology.
**MANAGEMENT**

| **Airway Breathing:** | Maintain SpO2 94-98%  
Maintain normocapnia (PaCO2 4.5-5.0 kPa)  
Ensure continuous capnography + regular ABGs |
| **Circulation:** | Perform a 12 lead ECG:  
• If STEMI: urgent cardiology review for PCI.  
• If NSTEMI or nonspecific changes; discussion with cardiology recommended. Plan for delayed PCI after neurological recovery.  
Aim for MAP 65-70 mmHg. This target should be modified according to the patient’s urine output and their normal BP.  
If patient remains cardiovascularly unstable despite fluids and vasoactive agents, consider cardiac output monitoring.  
Normalise electrolytes. Keep K+ 4.0-4.5 mmol/l |
| **Targeted Temperature Management:** | Site a nasopharyngeal or bladder temperature probe.  
Commence targeted temperature management 33-36°C as quickly as possible and maintain for 24 hours.  
Avoid fever. Use antipyretics if required. |
| **Glycaemic Control:** | Aim for blood glucose 6-10 mmol/l.  
Commence enteral feeding. |
| **Sedation:** | Sedate with propofol +/- alfentanil  
Avoid muscle relaxant infusions. Use boluses if needed for shivering.  
Ensure hourly assessment of pupils and GCS.  
Aim for daily sedation hold and full assessment of neurological function |
| **Seizure Management:** | If there is evidence of seizure activity, treat promptly with Lorazepam 4mg IV.  
Rule out potential precipitating causes; intracranial hemorrhage, hypoglycemia or electrolyte imbalance.  
Consider treatment with Levetiracetam (20mg/kg loading dose) or Phenytoin (20mg/kg loading dose).  
If evidence of myoclonus, use Clonazepam 1mg initially then can be given regularly 2mg QDS, or Levetiracetam. |
| **Communication:** | Ensure early discussion with family.  
Offer guarded prognosis regarding outcome.  
Emphasis the uncertainty regarding neurological recovery in first 72 hours.  
National Cardiac Arrest Audit 2017/2018 data suggest 51% will survive the arrest and achieve ROSC but only 21.9% will survive to hospital discharge. |
| **Prognostication:** | Patient needs to be normothermic (re-warm at a rate of 0.25-0.5°C per hour to 36.5-37.5°C) and off sedatives and neuromuscular blockers for an adequate period to improve reliability of clinical assessment.  
Perform daily thorough clinical examination for signs of neurological recovery or brain death.  
**Poor outcome is associated with:**  
1. Myoclonic status epilepticus within 48 hours after ROSC.  
2. Absent pupillary or corneal reflexes at 72 hours  
3. Bilaterally absent N20 SSEP wave at 72 hours  
4. Status epilepticus or unreactive burst suppression on EEG after 72 hours  
5. Diffuse anoxic brain injury on CT/MRI |

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PROGNOSTICATION POST-CARDIAC ARREST

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<tr>
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Approval process

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Document Links

| Required by CQC | Mandatory standard |
| Required by NHSLA | |
| Other | |

External references used


5. National Cardiac Arrest Audit 2017/2018

Amendments History

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