Β7. ΘΕΜΑΤΑ ΕΠΕΙΓΟΥΣΑΣ ΙΑΤΡΙΚΗΣ

Β7.Α. RETURN OF SPONTANEOUS CIRCULATION AND MONITORING

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Abstract

Objective: To review current evidence about return of spontaneous circulation (ROSC) and monitoring after cardiac arrest. **Methods**: Articles were obtained through a PubMed literature search. **Results**: International guidelines recommend monitoring cardiopulmonary resuscitation (CPR) quality and ROSC using end-tidal carbon dioxide ($ETCO_2$) or invasive hemodynamic data. New monitoring techniques such as near-infrared spectroscopy (NIRS) for measuring cerebral oximetry (rSO_2) and point-of-care (transthoracic or transesophageal) ultrasound (POCUS) emerge. These techniques are feasible, may not necessarily distract from high-quality CPR and may have an adjunctive role as quality parameters of CPR and predictors of ROSC. Other techniques using electrocardiogram and the thoracic impedance acquired by defibrillation pads for detecting ROSC are still under development. Maintaining monitoring after establishing ROSC is of paramount importance. Depending on the cause of the arrest and the severity of the post-cardiac arrest syndrome, many patients will require multiple organ support and the monitoring they receive during this post-resuscitation period influences significantly the overall outcome and particularly the quality of neurological recovery. Monitoring facilitates the achievement of hemodynamic goals, targeted temperature management, proper respiratory care, blood glucose management and minimizes factors associated with ischemia-reperfusion injury. Multiple modalities of monitoring (clinical exam, electrophysiology, brain imaging or biomarkers) might also help to prognosticate neurological outcome in some post-arrest patients.

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