SPECIAL CIRCUMSTANCES 2021

5 TOP MESSAGES

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1. CHECK

- Follow the ABCDE approach
- Take safety measures where needed

2. TREAT

- Follow the ALS algorithm
- Minimise no-flow time
- Optimise oyxgenation
- Use your resources

3. PRIORITISE

- Reversible causes
- 4 Hs
- 4 Ts

4. MODIFY

- Modify ALS algorithm
- Special causes
- Special settings
- Special patient groups

5. CONSIDER

- Transfer
- ECPR

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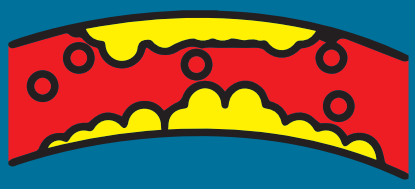
CORONARY THROMBOSIS

KEY EVIDENCE

Cardiovascular prevention reduces the risk of acute events

STEMI patients sustained ROSC immediate PCI if < 120min Fibrinolysis if > 120min



Early reperfusion improves outcomes following CA

No-STEMI patients sustained ROSC individualise decision to perform coronary angiography

KEY RECOMMENDATIONS

Enhance cardiovascular prevention & BLS training

Detect parameters suggesting coronary thrombosis

Activate STEMI network immediately

Resuscitate and choose reperfusion strategy considering setting and patient conditions

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CARDIAC ARREST FOLLOWING CARDIAC SURGERY

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KEY EVIDENCE

Adequate training and protocols improve outcomes

Modifications to the standard ALS algorithm include immediate correction of reversible causes and emergent resternotomy

In patients with VF/pVT defibrillation with up to three stacked shocks might restore perfusion

In case of asystole or extreme bradycardia, epicardial or transcutaneous pacing might restore perfusion

KEY RECOMMENDATIONS

- Apply 3 consecutive shocks
- Apply early pacing
- Correct reversible causes
- Perform early resternotomy

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TRAUMATIC CARDIAC ARREST

KEY EVIDENCE

TCA is different from CA due to medical causes

Treating reversible causes simultaneously takes priority over chest compressions

Ultrasound helps to identify the underlying reason(s)

Hypovolaemia from blood loss is a leading cause for TCA

KEY RECOMMENDATIONS

If appropriate: perform resuscitative thoracotomy or REBOA early

Treat reversible causes immediately

Control haemorrhage and restore blood volume

Don't pump an empty heart

Use ultrasound to target resuscitative interventions

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PULMONARY EMBOLISM

KEY EVIDENCE

Clinical history, capnography and echocardiography help to recognise PE during CPR

Initial PEA and low CO_2 readings support diagnosis

Thrombolytic treatment, surgical embolectomy or percutaneous mechanical thrombectomy might restore pulmonary perfusion

KEY RECOMMENDATIONS

Suspected PE => thrombolytics if CA or severe instability

Perform emergency echocardiography

Known PE => thrombolytics or surgical embolectomy or percutaneous thrombectomy

Use capnography

Consider ECPR as a rescue therapy for selected patients

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ACCIDENTAL HYPOTHERMIA

KEY EVIDENCE

Vital signs should be checked for 1 minute by clinical examination, ECG, EtCO2 and ultrasound

Arrested hypothermic patients should, where possible, be directly transferred to an ECLS centre for rewarming

In-hospital prognostication of successful ECLS rewarming should be based on the HOPE or ICE score, serum potassium prognostication is less reliable

KEY RECOMMENDATIONS

Use HOPE or ICE score for prognostication

Check for presence of vital signs for up to 1 minute

In hypothermic CA use ECLS rewarming