Neuroprognostication of the comatose adult patient after resuscitation from cardiac arrest

Targeted temperature management and rewarming

Unconscious patient, 
M ≤ 3 at ≥ 72 h 
without confounders⁽¹⁾

YES

At least TWO of:
• No pupillary⁽²⁾ and corneal reflexes at ≥72 h
• Bilaterally absent N20 SSEP wave
• Highly malignant⁽³⁾ EEG at >24 h
• NSE > 60 mcg/L⁽⁴⁾ at 48 h and/or 72 h
• Status myoclonus⁽⁵⁾ ≤ 72 h
• Diffuse and extensive anoxic injury on brain CT/MR

YES

Poor outcome likely⁽⁺⁾

NO

Observe and re-evaluate

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⁽¹⁾ Major confounders may include analgo-sedation, neuromuscular blockade, hypothermia, severe hypotension, hypoglycaemia, sepsis, and metabolic and respiratory derangements

⁽²⁾ Use an automated pupillometer, when available, to assess pupillary light reflex

⁽³⁾ Suppressed background ± periodic discharges or burst-suppression, according to American Clinical Neurophysiology Society

⁽⁴⁾ Increasing NSE values between 24–48 h or 24/48 and 72 h further support a likely poor outcome

⁽⁵⁾ Defined as a continuous and generalised myoclonus persisting for 30 min or more

⁽⁺⁾ Caution in case of discordant signs indicating a potentially good outcome