

# Treatment after cardiac arrest without hypothermia

## Northern Hypothermia Registry



**Background:** Two randomized studies have shown a neuroprotective effect of therapeutic hypothermia after cardiac arrest in man (New Engl J Med; 2002,346; 549-556, 557-563). Also, see the ILCOR advisory statement (Circulation, 2003; 108: 118-121, Resuscitation, 57 (2003) 231-235).

**Main objective:** To document data on patients after cardiac arrest who are unconscious and not eligible for hypothermia treatment.

**Patients:** Cardiac arrest victims with restoration of spontaneous circulation (ROSC) and persistent unconsciousness, not treated with hypothermia. ROSC is defined as systolic BP >80 mm Hg for >5 min.

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Hospital code

Patient code

Date of arrest (yyyy-mm-dd)

Age

Sex

Weight (kg):

Length (cm):

Smoker:

When Cardiac arrest is unwitnessed, please specify times as from Emergency call to event (CPR, first defibrillation, return of spontaneous circulation etc)

1.1 Patient's major prearrest diseases:

*none*

*coronary disease*

*heart failure*

*hypertensive disease*

*insulin dependent diabetes mellitus*

*non-insulin dependent diabetes mellitus*

*pulmonary disease*

*renal impairment*

*neurological disease*

*hepatic disease*

*malignancy*

*alcohol/drug abuse*

2.1 Cerebral Performance Category (CPC) prior to cardiac arrest:

**Circulatory arrest data:**

3.1 Cardiac arrest – site:

4.1 Witnessed arrest?

4.2 By-stander CPR?

5.1 Initial rhythm at arrival of medical personnel?

6.1 Time from emergency call until ambulance/emergency team is on scene (*not known=999*)?

 min

6.2 Estimated time from arrest until basic CPR by medical personnel (*not known=999*)

 min

6.3 Use of active compression-decompression-device (ACD)?

7.1 Defibrillation performed?

7.2 Estimated time from arrest until first defibrillation (*min, not known=999*)

8.1 Estimated time from arrest until ROSC (*min, not known=999*)?

9.1 Suspected cause of cardiac arrest?

**Treatment data:**

10.1 Glasgow coma score at admission?

10.2 Reaction Level Scale (RLS) at admission?

11.1 Initial body temperature (°C) (*not known=999*)?

12.1 Did the patient receive treatment for temperature control?

*Yes, paracetamol (acetaminophen)*

*Yes, NSAID*

*Yes, corticosteroids*

*Yes, active cooling*

*No*

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**Outcome data:**

13.1 Did the patient survive until ICU discharge?

14.1 Best CPC during ICU stay?

14.2 Best GCS during the ICU stay?

14.3 Best RLS during the ICU stay?

14.4 Did the patient obey commands during the ICU stay?

14.5 Length of ICU stay? (hours)

14.6 Patient discharged to:

15.1 If patient did not survive until ICU discharge – time from arrest until death? (hours)

15.2 Was an autopsy performed?

**If (1) patient was discharged from ICU and (2) hospital-outcome data is available at the time of registration please answer questions 18.1-4**

16.1 CPC at hospital discharge?

16.2 Best CPC during hospital stay? (ICU and ward included)

16.3 How many days from arrest to discharge? (days)

16.4 If CPC 5 (dead) during hospital stay, please specify probable cause of death.

Adverse events during ICU treatment:

17.1 Was there any major bleeding during ICU treatment?

17.2 Serious infection?

 *no* *yes, pneumonia* *yes, sepsis* *yes, other*

17.3 Arrhythmias requiring intervention?

 *no* *yes; bradycardia (<40)* *yes; tachycardia (>130)* *yes; atrial fibrillation* *yes; ventricular tachycardia* *yes; ventricular fibrillation* *yes; other*

17.4 Other adverse events?

 *no* *yes; hypoglycemia (<3mmol/L)* *yes; sustained hyperglycemia (>8 mmol/L, >4h)* *yes; low s-potassium (<3.0mmol/L)* *yes; low s-magnesium (<0.7 mmol/L)* *yes; low s-phosphate (<0.7 mmol/L)* *Body temperature >38° C*

**Investigations:**

18.1 Was a CT scan of the brain performed?

19.1 Was an EEG performed?

20.1 Was a somatosensory evoked potential (SSEP) performed?

21.1 Was an MRI of the brain performed?

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**General treatment data:**

22.1 Did the patient receive antibiotics during the ICU-stay?

 *no* *yes; as prophylaxis* *yes; as therapy* *yes; as SDD*

23.1 What sedatives were used during ICU treatment?

 *midazolam* *opiate* *propofol* *other* *none*

23.2 Were muscle relaxants given?

24.1 Did the patient receive anticonvulsants?

24.2 Clinical signs of seizures?

25.1 Renal replacement therapy?

26.1 Did the patient receive infusion of inotropes and/or vasopressors?

27.1 Was coronary angiography performed before or during the ICU stay?

27.2 Cardiac intervention performed before/or during ICU stay?

 *no* *yes, thrombolysis* *yes; percutaneous coronary intervention* *yes; open heart surgery*

27.3 Was the patient in cardiogenic shock at the initiation of cardiac intervention

27.4 Was an intraaortic balloon pump used?

27.5 Did the patient develop a myocardial infarction

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Please don't forget to add and register data regarding survival and neurological follow-up on the Follow-Up-Form.

Thank You,

The Northern Hypothermia Network

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