



Interventions affecting long-term outcomes after cardiac arrest

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Background

Long-term outcomes are of utmost importance in cardiac arrest (CA) survivors. Interventions affecting mortality in CA may also affect long-term outcomes, in particular neurological function and quality of life (QoL).

Objectives

We aimed to identify interventions that showed to improve mortality and also reporting long-term outcomes in CA.

Methods

Systematic review, six investigators up to November 2020.
Randomized controlled trial (RCTs) with statistically significant difference in mortality in patients with CA → treatments reporting long-term outcomes.

Results

76.466 papers → 31 RCTs influencing mortality → 24 RCTs long-term outcomes → 7 statistically significant difference

Neurological outcome: 18, QoL: 5, Both: 1

Longest follow up QoL: 1 year, neurological outcome: 6 months

First author	Journal	Year	Treatment	Outcome	Time point
Aufderheide T	Lancet	2011	Active compression decompression CPR vs Standard CPR	Quality of Life	One year
Cohen TJ	NEJM	1993	Active compression decompression CPR vs Standard CPR	Neurological outcome	24 hours
Hallstrom A	NEJM	2004	BLS-D vs BLS	Neurological outcome	Hospital discharge
Holzer M	NEJM	2002	32-34°C for 24 hours vs Normothermia	Neurological outcome	Six months
Mentzelopoulos SD	JAMA	2013	Vasopressin, steroids, epinephrine vs epinephrine	Neurological outcome	Hospital discharge
Wang HE	JAMA	2018	Laryngeal tube vs Endotracheal intubation	Quality of Life	Hospital discharge
Zhang Q	Crit Care Med	2017	Shenfu Injection for 14 days vs Standard treatment	Neurological outcome	Hospital discharge

Conclusions

Long-term outcomes after CA are poorly investigated in RCTs. Given the social importance of these outcomes, further studies using standardized patient-reported outcome are needed.