

NENADEN ZASTOJ SRCA IZVEN BOLNIŠNICE IN SODOBNO POREANIMACIJSKO ZDRAVLJENJE

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KAKO IZGLEDA BOLNIK Z NENADNIM ZASTOJEM SRCA?

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- **Srce se nenadoma preneha krčiti in zato ne“poganja” krvi po telesu**
- **Bolnik v nekaj sekundah izgubi zavest in pade “kot pokošen”**
- **V začetku lahko hrope ali ima mišične krče, potem pa obleži kot mrtev**

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VERIGA PREŽIVETJA NA TERENU



Adapted from
AHA Medical/Scientific Statement
Circulation 1991;83:1832

UHS/CMS/ICCM RJG,MHW 10/91

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Ponovno delovanje
srca v okoli 50%



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Urgenten prevoz v bolnišnico



**POTREBNO JE UGOTOVITI IN ODPRAVITI VZROK
SRČNEGA ZASTOJA-TAKOJŠNJA KORONAROGRAFIJA**

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**Nenadna zapora koronarne
arterije s krvnim strdkom**

POTREBNO JE UGOTOVITI IN ODPRAVITI VZROK SRČNEGA ZASTOJA-TAKOJŠNJA KORONAROGRAFIJA



Perkutana koronarna
Intervencija (PCI)



Nenadna zapora koronarne
arterije s krvnim strdkom

POTREBNO JE UGOTOVITI IN ODPRAVITI VZROK SRČNEGA ZASTOJA-TAKOJŠNJA KORONAROGRAFIJA



**Nenadna zapora koronarne
arterije s krvnim strdkom**

Perkutana koronarna
Intervencija (PCI)



**Prizadeta koronarna arterija
je ponovno prehodna**

Angiographic Characteristics of Coronary Disease and Postresuscitation Electrocardiograms in Patients With Aborted Cardiac Arrest Outside a Hospital

Peter Radsel, MD, Rihard Knafelj, MD, Spela Kocjancic, MD, PhD, and Marko Noc, MD, PhD*

Postresuscitation electrocardiogram (ECG) in patients with aborted cardiac death may demonstrate ST-elevation myocardial infarction (STEMI), ST-T changes, intraventricular conduction delay, or other nonspecific findings. In the present study, we compared ECG to urgent coronary angiogram in 158 consecutive patients with STEMI and 54 patients not fulfilling criteria for STEMI admitted to our hospital from January 1, 2003 through December 31, 2008. At least 1 obstructive lesion was present in 97% of patients with STEMI and in 59% of patients without STEMI with ≥ 1 occlusion in 82% and 39%, respectively ($p < 0.001$). Obstructive lesion was considered acute in 89% of patients with STEMI and in 24% of patients without STEMI ($p < 0.001$). An acute lesion in STEMI had a higher thrombus score (2.6 vs 1.3, $p = 0.05$) and more often presented with Thrombolysis In Myocardial Infarction grade 0 to 1 flow (75% vs 36%, $p < 0.01$). Percutaneous coronary intervention, which was attempted in 148 lesions in patients with STEMI and in 17 lesions in patients without STEMI, resulted in final Thrombolysis In Myocardial Infarction grade 3 flow in 87% and 71%, respectively ($p = 0.34$). In conclusion, STEMI on postresuscitation ECG is usually associated with the presence of an acute culprit lesion. However, in the absence of STEMI, an acute culprit lesion is still present in 1/4 of patients. An acute lesion in STEMI is more thrombotic and more often leads to complete occlusion. Urgent percutaneous coronary intervention in patients with STEMI on postresuscitation ECG. © 2011 Elsevier

Evropska priporočila (EAPCI/SFL) za urgentno koronarografijo in PCI pri bolnikih po nenadnem srčnem zastoju izven bolnišnice

Invasive coronary treatment strategies for out-of-hospital cardiac arrest: a consensus statement from the European Association for Percutaneous Cardiovascular Interventions (EAPCI)/Stent for Life (SFL) groups

Marko Noc¹, MD; Jean Fajadet², MD; Jens F. Lassen³, MD; Petr Kala⁴, MD; Philip MacCarthy⁵, MD; Goran K. Olivecrona⁶, MD; Stephan Windecker⁷, MD; Christian Spaulding^{8*}, MD

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The references can be found in the online version of this paper at the following website: http://www.pcronline.com/eurointervention/72nd_issue/22

KEYWORDS

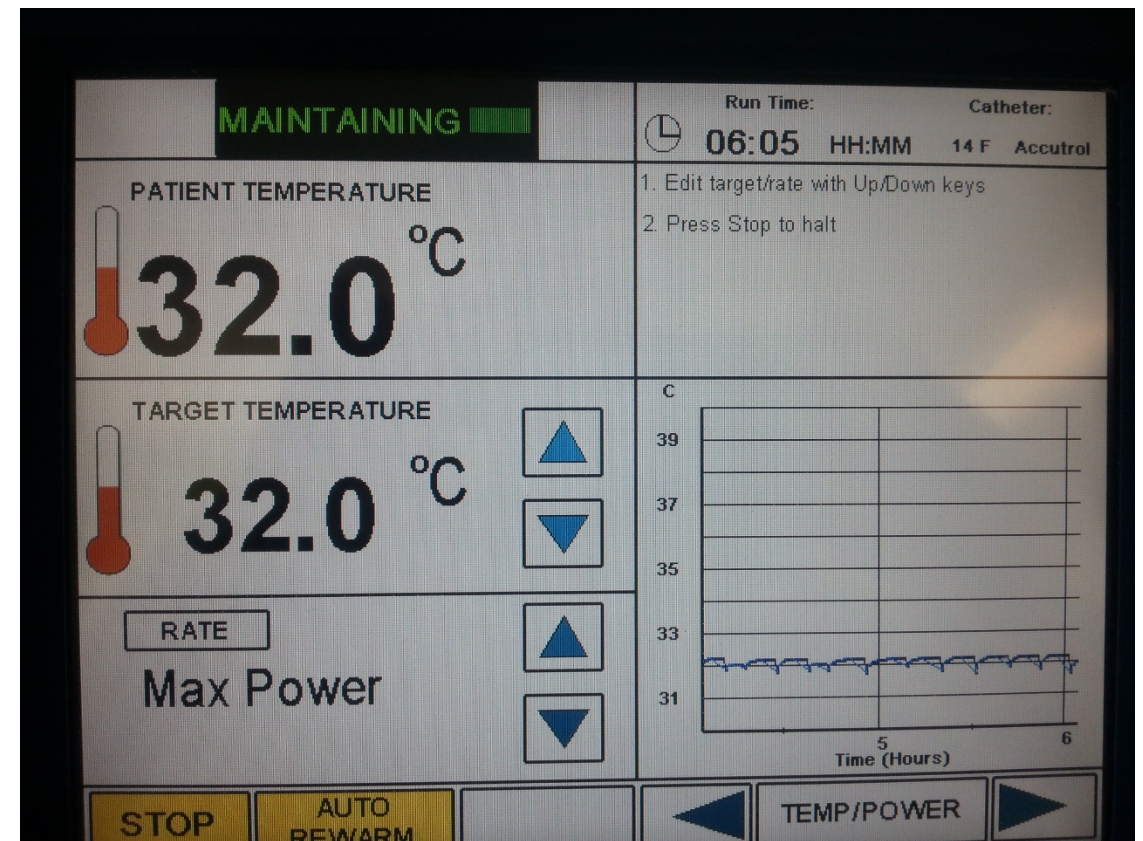
- cardiac arrest
- coronary angiography
- PCI

Abstract

Due to significant improvement in the pre-hospital treatment of patients with out-of-hospital cardiac arrest (OHCA), an increasing number of initially resuscitated patients are being admitted to hospitals. Because of the limited data available and lack of clear guideline recommendations, experts from the EAPCI and "Stent for Life" (SFL) groups reviewed existing literature and provided practical guidelines on selection of patients for immediate coronary angiography (CAG), PCI strategy, concomitant antiplatelet/anticoagulation treatment, haemodynamic support and use of therapeutic hypothermia. Conscious survivors of OHCA with suspected acute coronary syndrome (ACS) should be treated according to recommendations for ST-segment elevation myocardial infarction (STEMI) and high-risk non-ST-segment elevation -ACS (NSTE-ACS) without OHCA and should undergo immediate (if STEMI) or rapid (less than two hours if NSTE-ACS) coronary invasive strategy. Comatose survivors of OHCA with ECG criteria for STEMI on the post-resuscitation ECG should be admitted directly to the catheterisation laboratory. For patients without STEMI ECG criteria, a short "emergency department or intensive care unit stop" is advised to exclude non-coronary causes. In the absence of an obvious non-coronary cause, CAG should be performed as soon as possible (less than two hours), in particular in haemodynamically unstable patients. Immediate PCI should be mainly directed towards the culprit lesion if identified. Interventional cardiologists should become an essential part of the "survival chain" for patients with OHCA. There is a need to centralise the care of patients with OHCA to experienced centres.

*Corresponding
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PRI NEZAVESTNIH BOLNIKIH JE POTREBNO TUDI KONTROLIRANO PODHLAJEVANJE (32-34 C ZA 24 UR) Z NAMENOM ZMANJŠATI OKVARO MOŽGANOV PO SRČNEM ZASTOJU



Prva publicirana raziskava v svetovnem merilu o kombiniranem zdravljenju z koronarografijo/PCI in kontrolirano hipotermijo po nenadnem srčnem zastoju izven bolnišnice



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4 Primary percutaneous coronary intervention and 5 mild induced hypothermia in comatose survivors 6 of ventricular fibrillation with ST-elevation acute 7 myocardial infarction[☆]

8 Rihard Knafelj, Peter Radsel, Tom Ploj, Marko Noc*

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KEYWORDS

Acute myocardial
infarction;
Cardiac arrest;
Hypothermia

Summary Primary percutaneous coronary intervention (PCI) is the preferred reperfusion strategy for ST-elevation acute myocardial infarction (STEMI). In comatose survivors of cardiac arrest, mild induced hypothermia (MIH) improves neurological recovery. In the present study, we investigated feasibility and safety of combining primary PCI and MIH in comatose survivors of ventricular fibrillation with signs of STEMI after reestablishment of spontaneous circulation. Forty consecutive patients undergoing primary PCI and MIH from November 1, 2003 to December 31, 2005 were compared to 32 consecutive patients who underwent primary PCI but no MIH between January 1, 2000 and November 1, 2003. There were no significant differences between the MIH and no MIH groups in general characteristics, cardiac arrest circumstances and angiographic features. Except for decreases in heart rate during hypothermia interval, there was no difference between the MIH and no MIH groups in arterial pressure, peak arterial lactate (5.1 mmol/l versus 5.7 mmol/l; $p = .56$), need for vasopressors (65% versus 53%; $p = .44$), inotropes (48% versus 59%; $p = .44$), aortic balloon counterpulsation (20% versus 22%; $p = .92$), repeat cardioversion/defibrillation (30% versus 34%; $p = .89$) and use of antiarrhythmics (33% versus 53%; $p = .13$). There was also no difference in inspired oxygen requirements during mechanical ventilation and in renal function. Hospital survival with cerebral performance category 1 and 2 was significantly better in MIH group (55% versus 16%; $p = .001$). Our preliminary experience indicates that primary PCI and MIH are feasible and may be combined safely in comatose survivors of ventricular fibrillation with signs of STEMI. Such a strategy may improve survival with good neurological recovery.

Resuscitation 2007;74:227-34.



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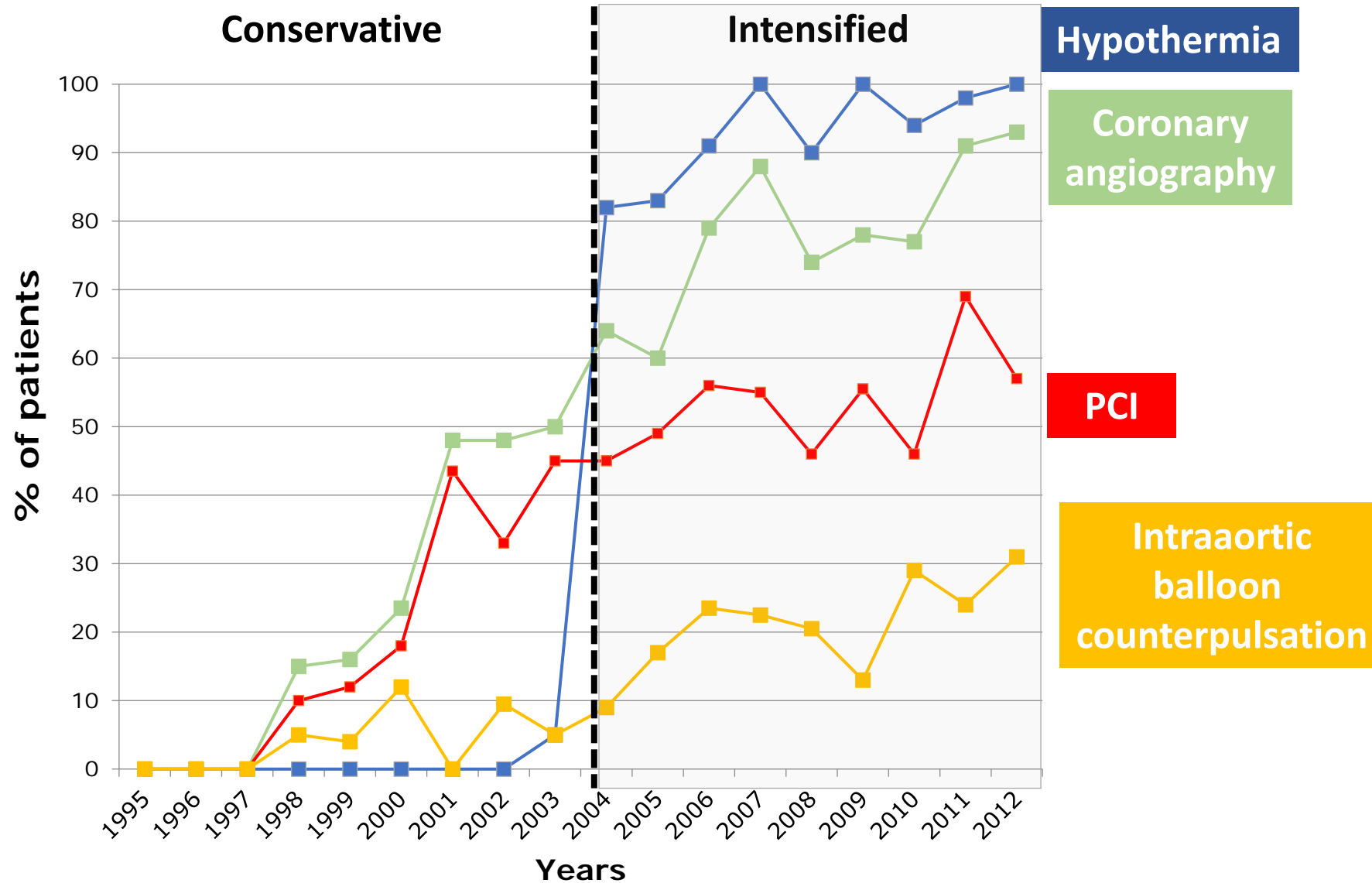
Primary percutaneous coronary intervention and mild induced hypothermia in comatose survivors of ventricular fibrillation with ST-elevation acute myocardial infarction

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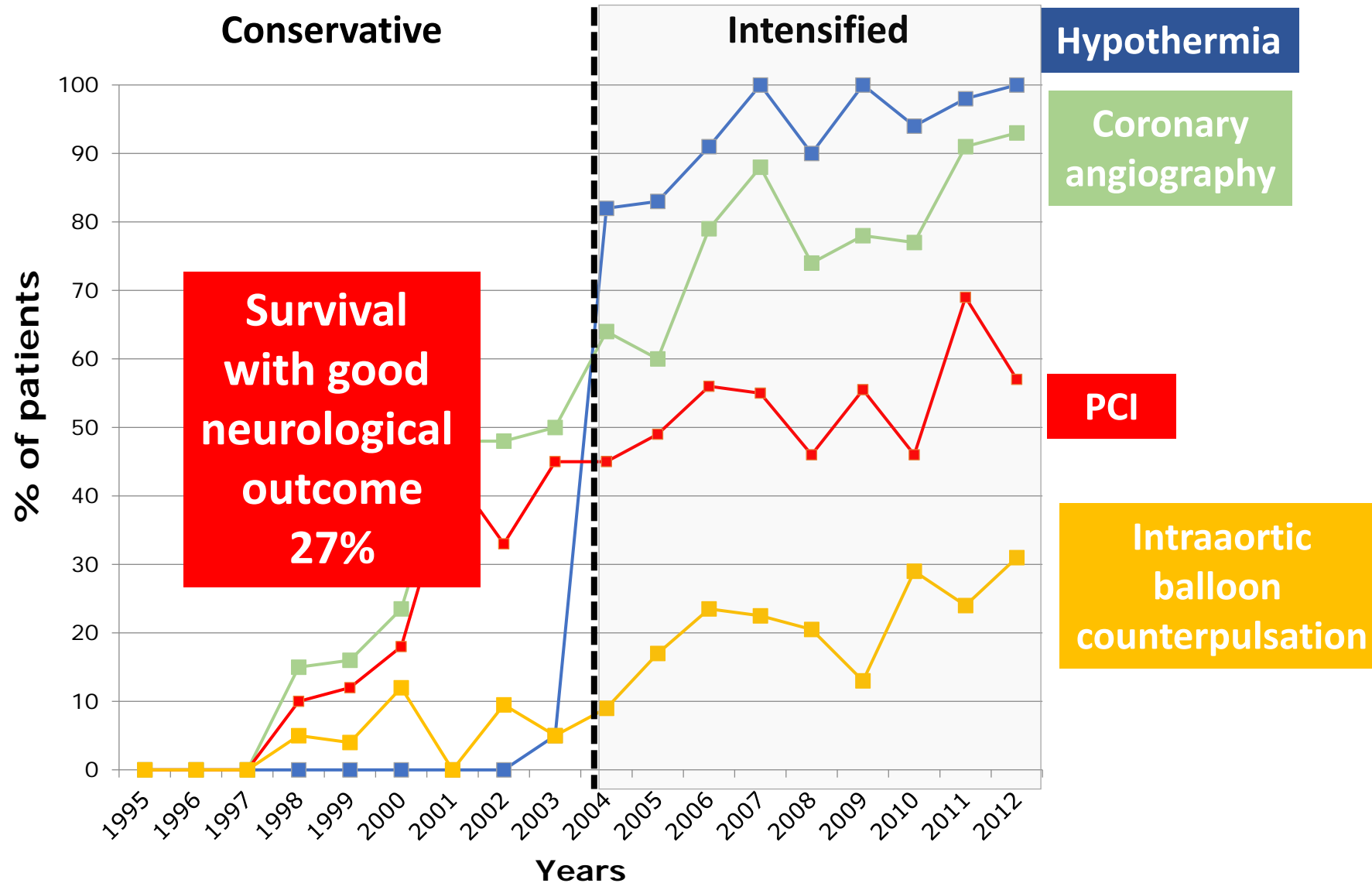
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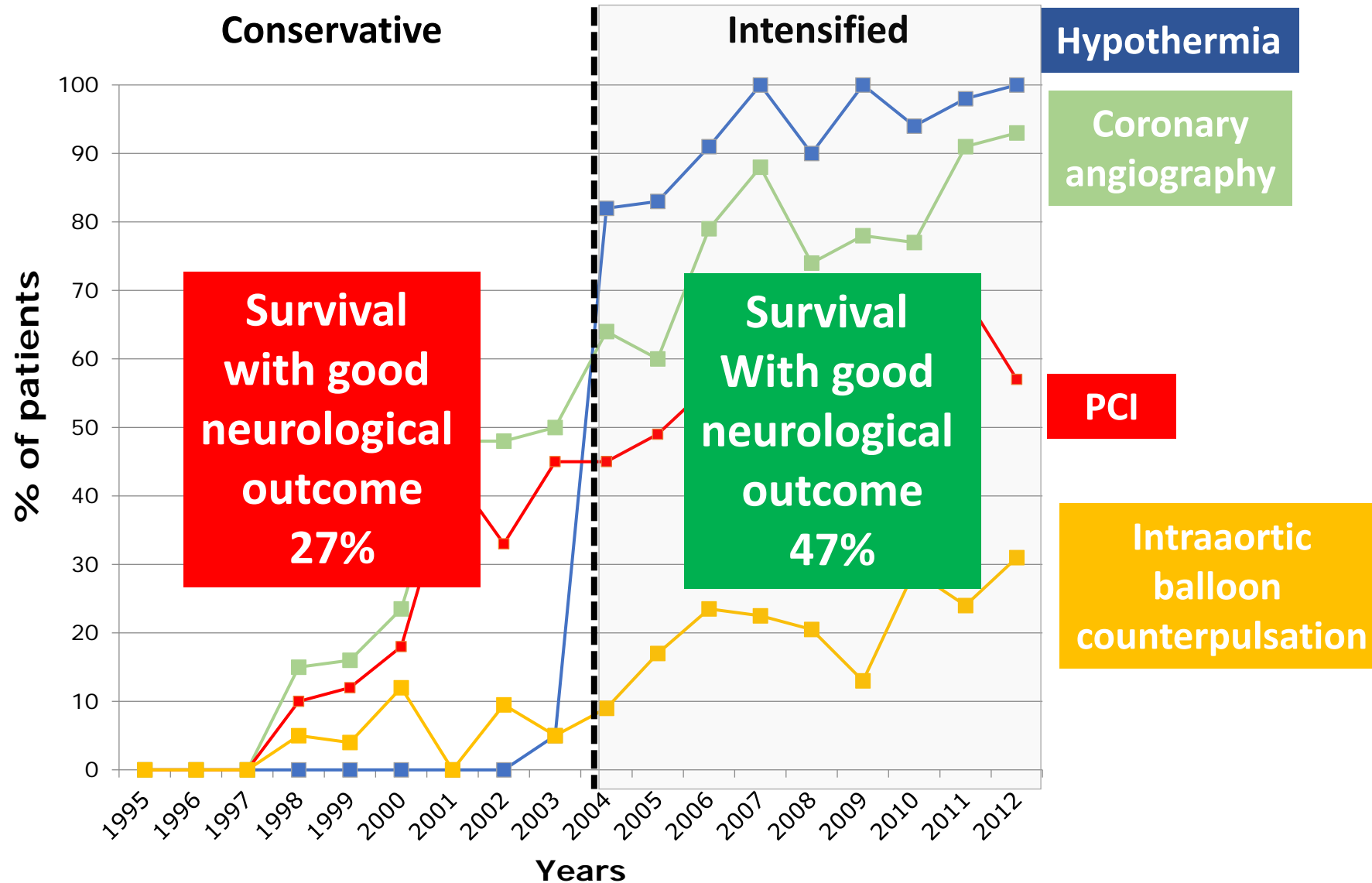
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**S SKUPNIMI MOČMI SMO PRIŠLI NAD MEGLO,
A POT DO NEBA JE ŠE DOLGA...**