■ Šest godina terapijske hipotermije u jedinici intenzivnog liječenja kardioloških bolesnika

Six years of therapeutic hypothermia in a cardiology intensive care unit

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UVOD: Prije 12 godina izašle su 2 manje studije o korištenju terapijske hipotermije (TH) na temelju čega su izdane smjernice koje potiču primjenu navedene metode. Nedavno objavljena randomizirana studija dovodi u pitanje cijeli koncept hipotermije.²

PACIJENTI I METODE: Od 2008. godine ukupno je 38 bolesnika (14 žena, 24 muškaraca) srednje dobi 56 godina (19-80) bilo podobno za TH. Radi se o bolesnicima koji su preživjeli kardiorespiratorni arest nakon čega su ostali u komi. Cilj TH je kroz 24 sata pothladiti bolesnike na 32-34 °C u svrhu poboljšavanja preživljenja i neuroloških (NRL) ishoda. Svim bolesnicima je periarrestno učinjena kompjutorizirana tomografija mozga i ehokardiografski pregled, a većini i koronarografija. Svi su bolesnici mehanički ventilirani i miorelaksirani te je invazivno monitoriran arterijski i centralni venski tlak, centralna temperatura, uz standardne protokole praćenja laboratorijskih krvnih parametara. TH postizana je hladnim paketima i infuzijama hladne fiziološke otopine, lavezama želuca, a od nedavno i uređajem za ekstrakorporealnu membransku oksigenaciju i posebnim centralnim venskim kateterima.

REZULTATI: Ukupno preživljenje u našoj skupini iznosi 47%, od toga je 42% bolesnika imalo potpuni neurološki oporavak. Inicijalni zbir Glasgowske ljestvice za komu bolesnika iznosi 3,3 (3-7). Akutni koronarni sindrom bio je uzrok aresta u 68% bolesnika dok su u ostalih prevladavale kardiomiopatije. Izvanbolnički arest doživjelo je 83% bolesnika, ostatak je bio u ambulantnim/bolničkim uvjetima. Manjina bolesnika (26%) se prezentirala ritmom koji se ne može elektrokonvertirati, što je prediktor lošeg NRL ishoda (samo 20% ove skupine ima povoljan NRL ishod). Inicijalna hemodinamska stabilnost prediktor je dobrog ishoda (samo 11% preživjelih zahtijevalo je inicijalno inotropnu potporu, od 50% ukupno). U 85% bolesnika zabilježene su komplikacije, najčešće infektivne prirode.

ZAKLJUČAK: Ukupno preživljenje u naših bolesnika liječenih TH bitno se ne razlikuje od nedavno objavljenih rezultata (47% vs 50%). I dalje ostaje otvoreno pitanje je li bitnije izbjegavanje hipertermije nakon aresta (ciljna temperatura od 36 °C) od samog pothlađivanja.

INTRODUCTION: Twelve years ago, two small studies on therapeutic hypothermia (TH) were published, on the basis of which guidelines were published that encourage the use of the method.¹ Recently published randomized study calls into question the whole concept of hypothermia.²

PATIENTS AND METHODS: Since 2008, a total of 38 patients (14 female, 24 men), mean age 56 years (19-80) were eligible for TH. These are patients who have survived cardiorespiratory arrest after which they remained in a coma. The aim of TH is to lower the core body temperature over 24 hours to 32-34 °C in order to improve survival and neurological (NRL) outcomes. After successful reanimation, all patients underwent brain CT, echocardiography and coronary angiography. All patients were sedated and mechanically ventilated, and invasive monitoring of central body temperature, arterial and central venous pressure was performed. Standard protocols for blood tests were used. TH was achieved by cold packs and cold saline infusions, gastric lavage, and recently by extracorporeal membrane oxygenation device and a special central venous catheters.

RESULTS: Overall survival in our group is 47%, of which 42% of patients had complete neurological recovery. The initial Glasgow Coma Scale score was 3.3 (3-7). Acute coronary syndrome was the cause of arrest in 68% patients while the other dominant cause was cardiomyopathy. Out-of-hospital cardiac arrest was experienced by 83% of patients, the rest was in ambulatory/hospital setting. A minority of patients presented with unshockable rhythm which predicted poor NRL outcome (only 20% of this group had a favorable outcome). Initial hemodynamic stability is a predictor of good outcome, only 11% of survivors required the initial inotropic support. Complications were present in 85% of patients, the most common infectious in nature.

CONCLUSIONS: Overall survival in our patients treated with TH does not differ from the recently published results (47% vs. 50%). It is still an open question whether the avoidance of hyperthermia (aiming at 36 °C) is more important than TH itself.

LITERATURE

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