

101

THINK TWICE BEFORE YOU START INOTROPIC TREATMENT FOR CIRCULATORY SUPPORT...ARE WE DOING GOOD OR BAD?

I.M. Hirfanoglu¹, E. Ergenekon², O. Turan², S. Beken², C. Turkyilmaz², E. Onal², E. Koc², Y. Atalay²

¹*Pediatrics, Gazi University,* ²*Pediatrics, Gazi University, Besevler, Ankara, Turkey*

Objective: The objective of this study was to determine microcirculation by “side stream dark field (SDF) imaging” in neonates receiving inotropic support for circulatory failure.

Method: Neonates needing circulatory support were included. Macrocirculatory (blood pressure, heart rate, capillary refilling times) and microcirculatory parameters (Total vessel density (TVD), perfused vessel density (PVD), microvascular flow index (mfi) and Debacker index) were measured before and after inotropes.

Results: 33 patients were included; GA: 32.7±4.4 weeks; BW: 1900±942 g. 59% were premature, 21% had sepsis, 20% had other diseases. Seventynine % received dopamine only, 18% received dopamine+dobutamine, 6% received dopamine, dobutamine and adrenaline and one patient received hydrocortisone additionally. Circulatory findings are shown in Table

	Before inotrope Mean±SD (median)	After inotrope Mean±SD (median)	p
Mean blood pressure (mmHg)	29,4±7,5(30)	35,1±9,6(35)	<0,001
Capillary refilling time (s)	3,7±0,5(3.5)	2,8±0,9(2.5)	<0,001
mfi (small vessels)	2,6±0,6(2.7)	2,1±0,5(2.2)	<0,001
mfi (all vessels)	2,2±0,4(2.1)	2,6±0,7(2.7)	<0,001
Debacker index	6,9±0,9(7)	7,5±1,4(8)	<0,001
PVD (small vessels)	8,6±2,6(7.9)	8,8±2,3(8.9)	0,82
TVD (small vessels)	10,4±3,2(10.8)	11,2±3,2(11.8)	11,2±3,2(11.8)
PVD (all vessels)	10,5±3,3(10.9)	11,3±3,3(12)	0,03
TVD (all vessels)	11,5±2,4(11.3)	12,0±2,7(12.3)	0,21

[Macro and microcirculation data]

Discussion: While there was significant improvement in macrocirculation and increase in mfi values in all vessels there was decrease in the mfi values in the vessels with diameter under 25 micrometer, following inotropic treatment. This might lead to tissue hypoxia. While correcting macrocirculation with inotropes we might be disrupting microcirculation at cellular level. Nevertheless for further studies on effects of inotropes for circulatory support are needed.

102

A COMPARISON OF CONTINUOUS MULTI-CHANNEL EEG WITH AEEG FOR THE PREDICTION OF OUTCOME AT 24 MONTHS IN HYPOXIC-ISCHAEMIC ENCEPHALOPATHY

D.M. Murray¹, E. Lowe¹, D. O'Rourke¹, D. Azzopardi², L. Hellstrom Westas³, G.B. Boylan¹

¹*Paediatrics and Child Health, University College Cork, Cork, Ireland,* ²*Imperial College London, London, UK,* ³*Lund University, Lund, Sweden*

Background: Accurate prediction of outcome in hypoxic-ischaemic encephalopathy (HIE) remains