Pressure on Perfusion

Mean Arterial Perfusion Pressure in Relation to Cerebral Ischemia and Kidney Injury

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Introduction

Idea

How did the idea occur?

Aim

Is there a coherence between mean arterial perfusion pressure and impaired brain or kidney function?

Hypothesis

We hypothesize, that conducting CPB at perfusion pressures below 60 mmHg lead to cerebral ischemia or impaired kidney function.

Method

Prospective randomized blinded trial

Two groups

Protocol

Measurements

Results

Factors | LP (mean) | HP (mean) | P-values
--- | --- | --- | ---
Weight (kg) | 68.7 | 81.2 | 0.06
BSA (m²) | 1.73 | 1.90 | 0.06
Baseline NIRS left side (%) | 63.4 | 73.0 | 0.06
Baseline NIRS right side (%) | 63.6 | 72.8 | 0.07
Metaxodrine (mg) | 0.54 | 1.06 | 0.07
Norepinephrine (mg) | 0.06 | 2.79 | 0.047
MAPP (mmHg) | 46.5 | 68.5 | 0.000006

Patients

LP

40-60 mmHg

5 patients

HP

60-80 mmHg

6 patients

Factors | LP (mean) | HP (mean) | P-values
--- | --- | --- | ---
NIRS left side (%) | 61.9 | 69.4 | 0.015
NIRS right side (%) | 61.3 | 69.2 | 0.03
Creatinine 24 hours ([μM]) | 72.2 | 94.3 | 0.012
Creatinine 72 hours ([μM]) | 76 | 86.3 | 0.34
SO2 (Dura) (mg/L) | 1.32 | 1.2 | 0.78
Fluid (ml) | 2891 | 1724 | 0.14
Lowest hematocrit | 0.247 | 0.306 | 0.02
ΔMAPP | | | |
Conclusion

- We conclude that conducting CPB at perfusion pressure below 60 mmHg has no coherence with cerebral ischemia or impaired kidney function.

- Thank you for your attention.