

SUPPLEMENT MATERIAL

L-arginine, asymmetric and symmetric dimethylarginine for early outcome prediction in unselected cardiac arrest victims: a prospective cohort study.

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Table 1. - L-arginine pathway molecules and their change according to the ICU mortality

| | Survivors (n=21; 39%) | Non-survivors (n=33; 61%) | p value |
|--|-----------------------|---------------------------|--------------|
| Biomarker plasma levels within 6 hours after CA | | | |
| L-arginin (μmol/L) | 33.17 [29.43 – 52.68] | 42.25 [23.59 – 49.96] | N.S. |
| ADMA (μmol/L) | 0.58 [0.46 – 0.66] | 0.70 [0.46 – 0.89] | N.S. |
| SDMA (μmol/L) | 0.77 [0.62 – 1.73] | 0.96 [0.81 – 1.46] | N.S. |
| Biomarker plasma levels 24 hours after CA | | | |
| L-arginin (μmol/L) | 48.82 [31.04 – 69.06] | 38.14 [23.24 – 56.77] | N.S. |
| ADMA (μmol/L) | 0.59 [0.51 – 0.79] | 0.54 [0.41 – 0.81] | N.S. |
| SDMA (μmol/L) | 0.97 [0.74 – 2.79] | 1.30 [0.85 – 1.81] | N.S. |
| Biomarker plasma levels 72 hours after CA | | | |
| L-arginin (μmol/L) | 61.01 [47.35 – 77.33] | 53.78 [35.98 – 75.31] | N.S. |
| ADMA (μmol/L) | 0.60 [0.50 – 0.76] | 0.62 [0.45 – 0.85] | N.S. |
| SDMA (μmol/L) | 0.90 [0.67 – 2.20] | 1.48 [0.92 – 1.75] | N.S. |
| ΔL-arginin (24h-6h) (μmol/L) | | | |
| ΔL-arginin (24h-6h) (μmol/L) | 10.81 [-2.78 – 25.16] | 2.84 [-17.13 – 13.24] | N.S. |
| ΔADMA (24h-6h) (μmol/L) | 0.07 [-0.04 – 0.11] | -0.08 [-0.16 – 0.05] | 0.024 |
| ΔSDMA (24h-6h) (μmol/L) | 0.21 [0.003 – 0.46] | 0.11 [-0.01 – 0.39] | N.S. |
| ΔL-arginin (72h-24h) (μmol/L) | | | |
| ΔL-arginin (72h-24h) (μmol/L) | 18.98 [-6.31 – 29.75] | 8.95 [-9.21 – 28.66] | N.S. |
| ΔADMA (72h-24h) (μmol/L) | 0.01 [-0.06 – 0.14] | 0.07 [-0.06 – 0.14] | N.S. |
| ΔSDMA (72h-24h) (μmol/L) | -0.06 [-0.37 – 0.06] | 0.16 [-0.23 – 0.55] | N.S. |

Data are presented as median values with interquartile range [percentiles 25–75]. ADMA: asymmetric dimethylarginine; CA: cardiac arrest; SDMA: symmetric dimethylarginine.

Table 2. – L-arginine pathway molecules and their change according to the 30-day mortality

| | Survivors (n=16; 29.63%) | Non-survivors (n=38; 70.37%) | p value |
|--|--------------------------------|------------------------------------|--------------|
| Biomarker plasma levels within 6 hours after CA | | | |
| L-arginin (μmol/L) | 33.31 [29.24 – 51.86] | 41.67 [25.01 – 51.68] | N.S. |
| ADMA (μmol/L) | 0.54 [0.46 – 0.64] | 0.67 [0.44 – 0.89] | N.S. |
| SDMA (μmol/L) | 0.77 [0.62 – 1.96] | 0.95 [0.76 – 1.43] | N.S. |
| Biomarker plasma levels 24 hours after CA | | | |
| L-arginin (μmol/L) | 42.97 [28.61 – 69.06] | 39.09 [31.26 – 57.75] | N.S. |
| ADMA (μmol/L) | 0.59 [0.51 – 0.77] | 0.54 [0.44 – 0.83] | N.S. |
| SDMA (μmol/L) | 0.89 [0.7138 – 3.06] | 1.18 [0.89 – 1.81] | N.S. |
| Biomarker plasma levels 72 hours after CA | | | |
| L-arginin (μmol/L) | 62.32 [54.14 – 74.25] | 49.26 [36.01 – 78.26] | N.S. |
| ADMA (μmol/L) | 0.59 [0.51 – 0.79] | 0.65 [0.45 – 0.84] | N.S. |
| SDMA (μmol/L) | 1.22 [0.72 – 2.34] | 1.32 [0.74 – 1.71] | N.S. |
| Change in biomarker plasma levels | | | |
| ΔL-arginin (24h-6h) (μmol/L) | 10.81 [-2.48 – 26.59] | 2.84 [-10.41 – 17.60] | N.S. |
| ΔADMA (24h-6h) (μmol/L) | 0.07 [-0.03 – 0.11] | -0.08 [-0.16 – 0.06] | 0.028 |
| ΔSDMA (24h-6h) (μmol/L) | 0.17 [0.003 – 0.56] | 0.14 [-0.01 – 0.41] | N.S. |
| ΔL-arginin (72h-24h) (μmol/L) | 19.16 [4.96 – 34.88] | 8.62 [-7.60 – 27.12] | N.S. |
| ΔADMA (72h-24h) (μmol/L) | 0.04 [-0.05 – 0.16] | 0.06 [-0.07 – 0.13] | N.S. |
| ΔSDMA (72h-24h) (μmol/L) | -0.06 [-0.32 – 0.13] | 0.08 [-0.32 – 0.47] | N.S. |

Data are presented as median values with interquartile range [percentiles 25–75]. ADMA: asymmetric dimethylarginine; CA: cardiac arrest; SDMA: symmetric dimethylarginine.

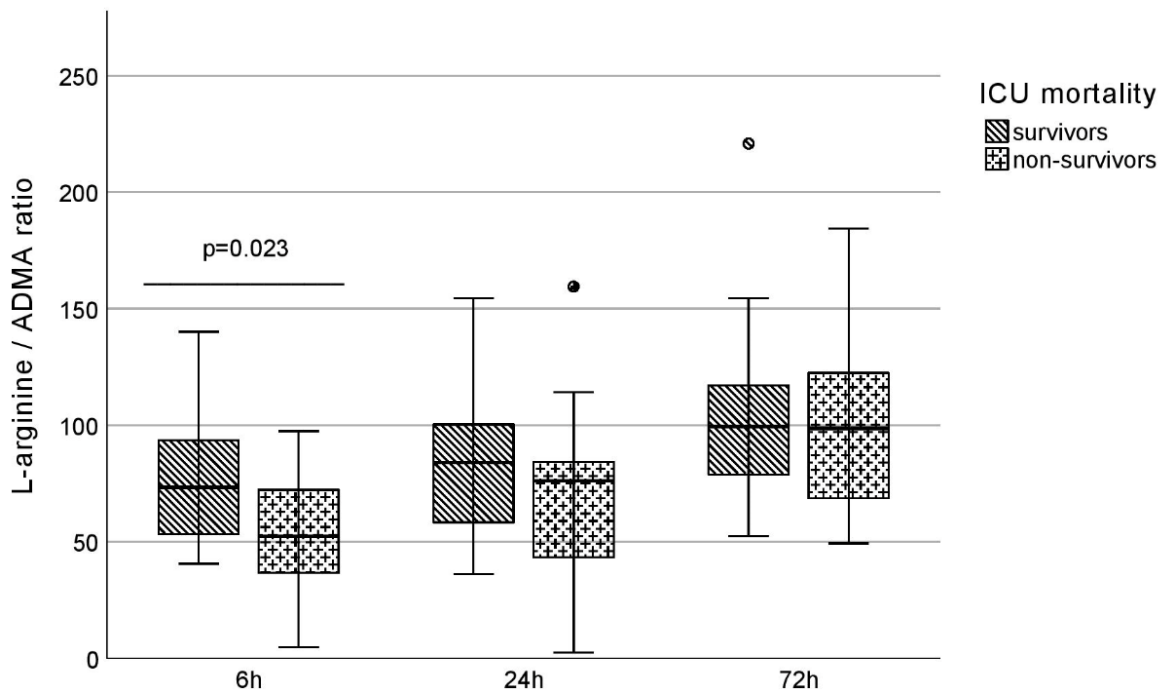


Figure 1. L-arginine/ADMA ratio and ICU mortality in IHCA group

(ADMA: asymmetric dimethylarginine; ICU: intensive care unit; IHCA: in-hospital cardiac arrest)

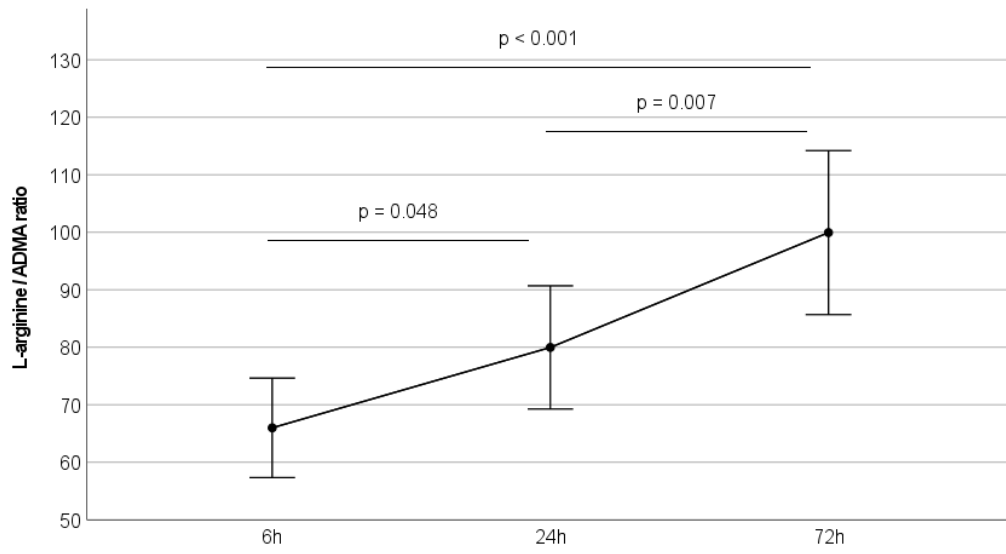


Figure 2. The kinetics of the L-arginine/ADMA ratio in the total population
(ADMA: asymmetric dimethylarginine)

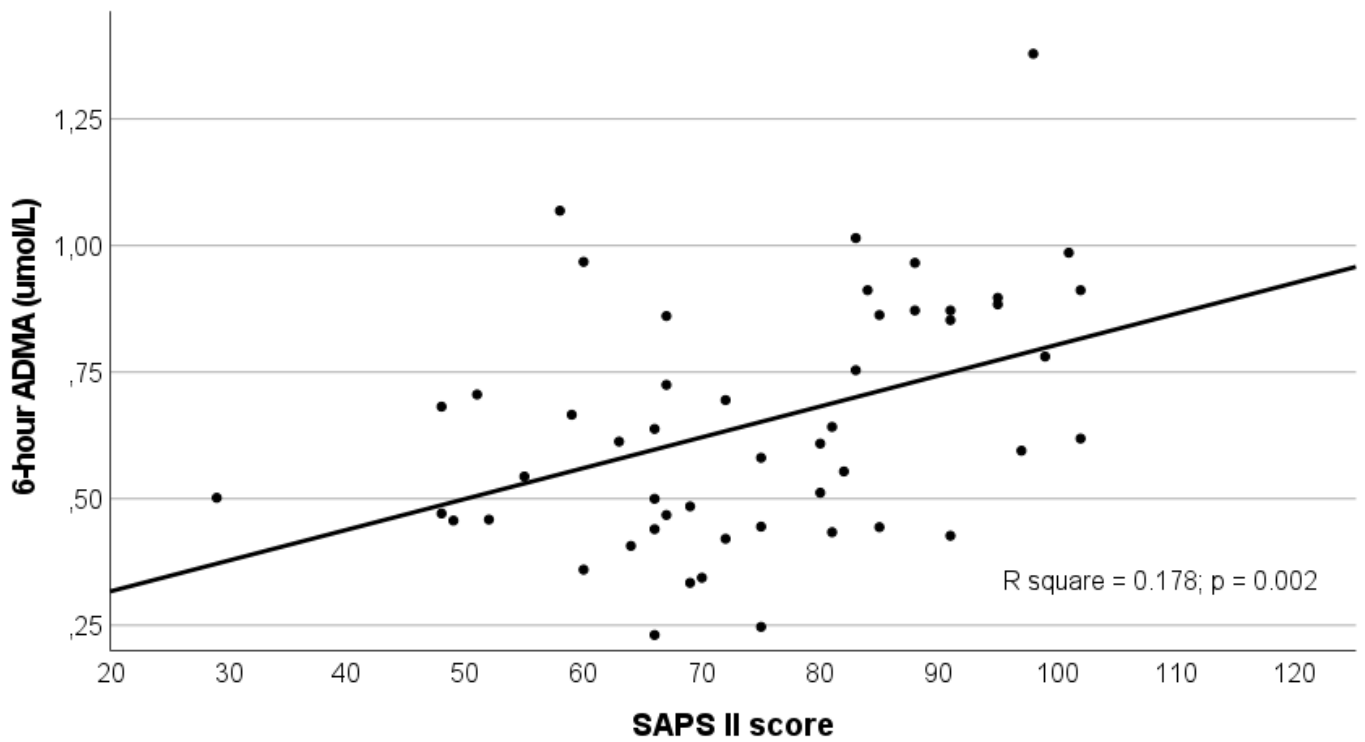


Figure 3. – Correlation between 6-hour ADMA levels and SAPS II score
(ADMA: asymmetric dimethylarginine, SAPS: simplified acute physiology score)