

Title page

Title:

Enhanced extracorporeal CO₂ removal by regional blood acidification: effect of infusion of three metabolizable acids

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ONLINE SUPPLEMENT

Supplemental Results

Circuit Withdrawal Port	Variable	BL	post Acetic	post Citric	post Lactic
1	pH	7.36 ± 0.04	7.40 ± 0.00	7.36 ± 0.01	7.38 ± 0.00
	pCO ₂ (mmHg)	39.7 ± 2.6	41.7 ± 4.0	39.4 ± 0.6	41.0 ± 0.4
	HCO ₃ ⁻ (mEq/L)	22.3 ± 2.6	25.6 ± 2.1	22.0 ± 0.1	22.3 ± 1.8
2	pH	7.38 ± 0.04	7.43 ± 0.01	7.36 ± 0.02	7.38 ± 0.02
	pCO ₂ (mmHg)	34.5 ± 2.6	36.5 ± 2.8	32.5 ± 2.8	37.0 ± 0.4
	HCO ₃ ⁻ (mEq/L)	19.8 ± 2.9	23.7 ± 1.7	18.1 ± 0.8	20.6 ± 2.3
3	pH	7.75 ± 0.06	7.83 ± 0.04	7.74 ± 0.02	7.76 ± 0.05
	pCO ₂ (mmHg)	14.6 ± 0.7	15.3 ± 0.2	14.0 ± 0.2	14.6 ± 0.1
	HCO ₃ ⁻ (mEq/L)	20.4 ± 3.7	25.3 ± 3.0	19.0 ± 0.8	20.6 ± 2.4
4	pH	7.74 ± 0.03	7.75 ± 0.05	7.75 ± 0.02	7.76 ± 0.05
	pCO ₂ (mmHg)	14.0 ± 1.1	15.7 ± 0.4	13.3 ± 0.4	14.4 ± 1.0
	HCO ₃ ⁻ (mEq/L)	18.8 ± 2.7	21.6 ± 3.2	18.5 ± 1.3	19.9 ± 3.8
5	pH	7.68 ± 0.11	7.82 ± 0.09	7.66 ± 0.11	7.62 ± 0.08
	pCO ₂ (mmHg)	17.1 ± 1.7	15.8 ± 1.3	17.7 ± 2.1	17.3 ± 2.8
	HCO ₃ ⁻ (mEq/L)	20.4 ± 4.2	25.6 ± 3.4	19.6 ± 2.8	17.4 ± 0.4

Table S1. Extracorporeal circuit gas analyses during baseline and re-equilibration phases, following infusion of acetic, citric and lactic acid. 1-4: circuit blood withdrawal sites. (1) Inlet, (2) post-acid, (3) post-ML, (4) outlet. (5) Ultrafiltrate withdrawal site. Bicarbonate Ions (HCO₃⁻). No statistically significant difference has been observed.

	Circuit Withdrawal Port	Acetic	Citric	Lactic
iCa ⁺⁺ (mMol/L)	1	1.23 ± 0.14	1.07 ± 0.14	1.24 ± 0.01
	2	1.24 ± 0.14	0.55 ± 0.14*	1.18 ± 0.04
	3	1.25 ± 0.14	0.50 ± 0.10*	1.16 ± 0.02
	4	1.27 ± 0.13	0.51 ± 0.10*	1.23 ± 0.07
	5	1.11 ± 0.13	0.47 ± 0.08*°	1.09 ± 0.03

Table S2. Ionized Calcium concentration in extracorporeal blood. Ionized calcium (iCa⁺⁺). . 1-4: circuit blood withdrawal sites. (1) Inlet, (2) post-acid, (3) post-ML, (4) outlet. (5) Ultrafiltrate withdrawal site. *) p < 0.001 versus 1 (Inlet). °) p < 0.05 versus 2 (post-Acid).

	BL	Post-Acetic	Post-Citric	Post-Lactic
pH	7.40 ± 0.06	7.42 ± 0.07	7.40 ± 0.06	7.40 ± 0.10
pCO₂ (mmHg)	37.3 ± 2.5	38.0 ± 5.7	36.1 ± 2.7	33.7 ± 0.3
HCO₃⁻ (mEq/L)	22.8 ± 1.6	24.1 ± 3.6	22.6 ± 1.5	20.3 ± 0.7

Table S3. Arterial blood gas analyses during baseline and re-equilibration phases, following infusion of acetic, citric and lactic acid. Bicarbonate Ions (HCO₃⁻). No statistically significant difference has been observed.

