

**Table S1.** Plasma TAC levels measured using ABTS.

ABTS (TEACmM)	
Group (n=62)	Mean [IQ95%]
C (n=12)	5.549 [5.32–5.92]
HI (n=10)	3.959 [3.42–4.26]
HIA (n=10)	5.63 [5.11–5.81]
HIH (n=13)	4.41 [4.04–4.62]
HIHA (n=17)	4.88 [4.62–5.05]

Mean [Interquartile range] C: Control, HI: Hypoxia–ischemia, HIA: Hypoxia–ischemia + allopurinol, HIH: Hypoxia–ischemia + hypothermia, HIHA: Hypoxia–ischemia + hypothermia + allopurinol.

**Table S2.** Plasma GSH/GSSG ratio.

Ratio GSH/GSSG	
Groups (n=36)	Median [IQ95%]
C (n=9)	2.23 [1.99–2.67]
HI (n=6)	1.55 [1.45–1.64]
HIA (n=7)	4.65 [2.85–5.65]
HIH (n=7)	3.73 [2.20–5.14]
HIHA (n=7)	2.80 [2.47–4.50]

Mean [Interquartile range] C: Control, HI: Hypoxia–ischemia, HIA: Hypoxia–ischemia + allopurinol, HIH: Hypoxia–ischemia + hypothermia, HIHA: Hypoxia–ischemia + hypothermia + allopurinol.

**Table S3.** Cerebral Spinal Fluid TAC levels.

FRAP CSF (mMFeSO4)	
Groups (n=41)	Median [IQ95%]
C (n=9)	0.837 [0.647–1.07]
HI (n=9)	0.533 [0.485–0.601]
HIA (n=9)	0.646 [0.588–0.792]
HIH (n=6)	0.552 [0.505–0.691]
HIHA (n=8)	0.592 [0.51–0.75]

Mean [Interquartile range] C: Control, HI: Hypoxia–ischemia, HIA: Hypoxia–ischemia + allopurinol, HIH: Hypoxia–ischemia + hypothermia, HIHA: Hypoxia–ischemia + hypothermia + allopurinol.

**Table S4.** Plasma carbonyl group levels.

Carbonyl groups (nmol/gprot)	
Groups (n=64)	Median [IQ95%]
C (n=12)	1.29 [1.06–1.67]
HI (n=12)	3.25 [2.83–3.94]
HIA (n=12)	1.71 [1.35–1.91]
HIH (n=13)	1.89 [1.559–2.186]
HIHA (n=15)	1.82 [1.77–1.99]

Mean [Interquartile range] C: Control, HI: Hypoxia-ischemia, HIA: Hypoxia-ischemia + allopurinol, HIH: Hypoxia-ischemia + hypothermia, HIHA: Hypoxia-ischemia + hypothermia + allopurinol.

**Table S5.** Lipid peroxidation.

8-iso-PGF2 $\alpha$ levels (pg/mg protein)		
Groups (n=26)	Hippocampal Median [IQ95%]	Cortical-subcortical area Median [IQ95%]
C (n=5)	1.27 [1.21–1.54]	1.64 [1.25–2.02]
HI (n=6)	1.41 [1.39–2.46]	2.92 [2.17–3.43]
HIA (n=6)	1.48 [1.13–1.70]	2.23 [1.40–2.44]
HIH (n=4)	1.14 [1.1–1.19]	1.41 [1.07–1.78]
HIHA (n=5)	1.36 [1.16–1.67]	1.82 [1.47–2.14]

Mean [Interquartile range] C: Control, HI: Hypoxia-ischemia, HIA: Hypoxia-ischemia + allopurinol, HIH: Hypoxia-ischemia + hypothermia, HIHA: Hypoxia-ischemia + hypothermia + allopurinol.