

Introduction

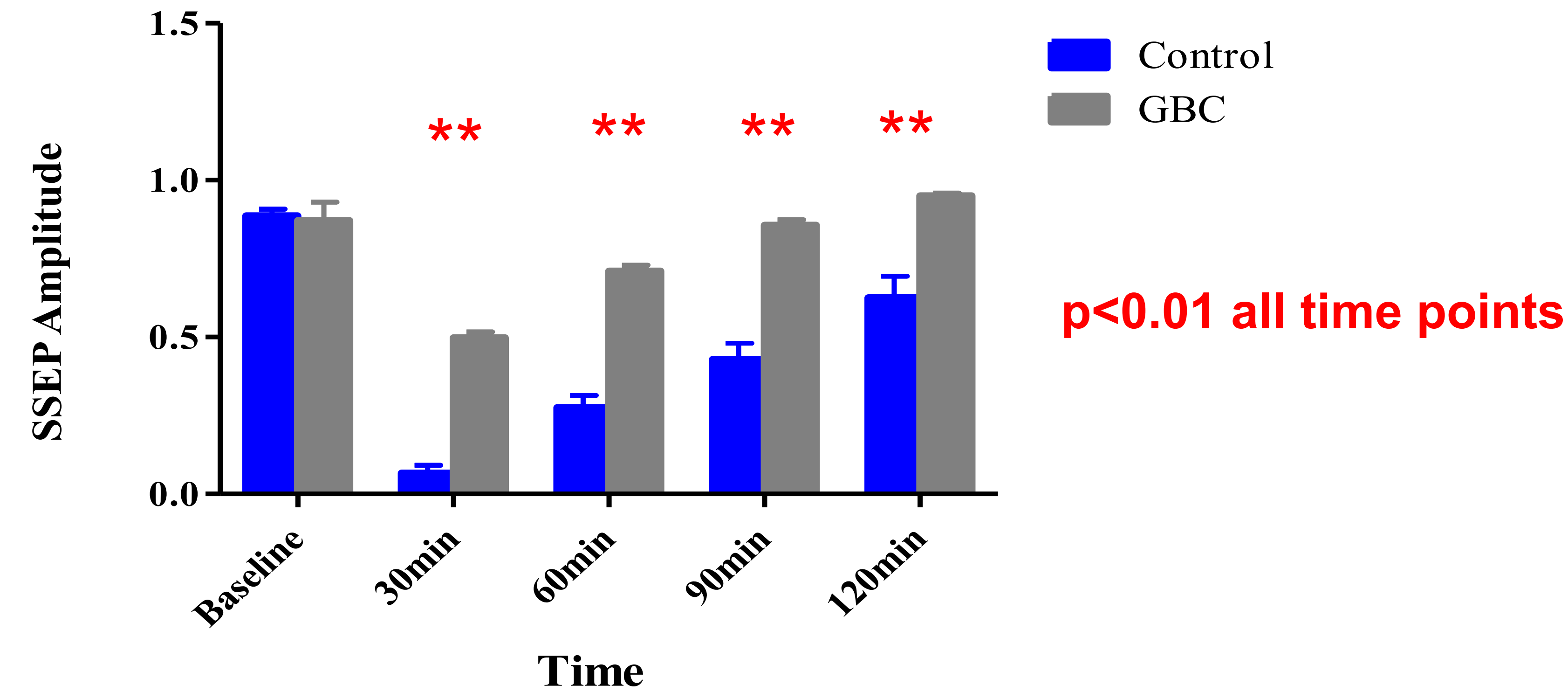
- Glibenclamide (GBC) is a second-generation sulfonylurea working via inhibition of SUR-1 receptors
- GBC has been shown to improve neurological outcome in animal cardiac arrest (CA) models
- Somatosensory evoked potentials (SSEPs) are considered a reliable tool for prognostication after CA
- We analyzed the effects of GBC on SSEP recovery post-CA**

Methods

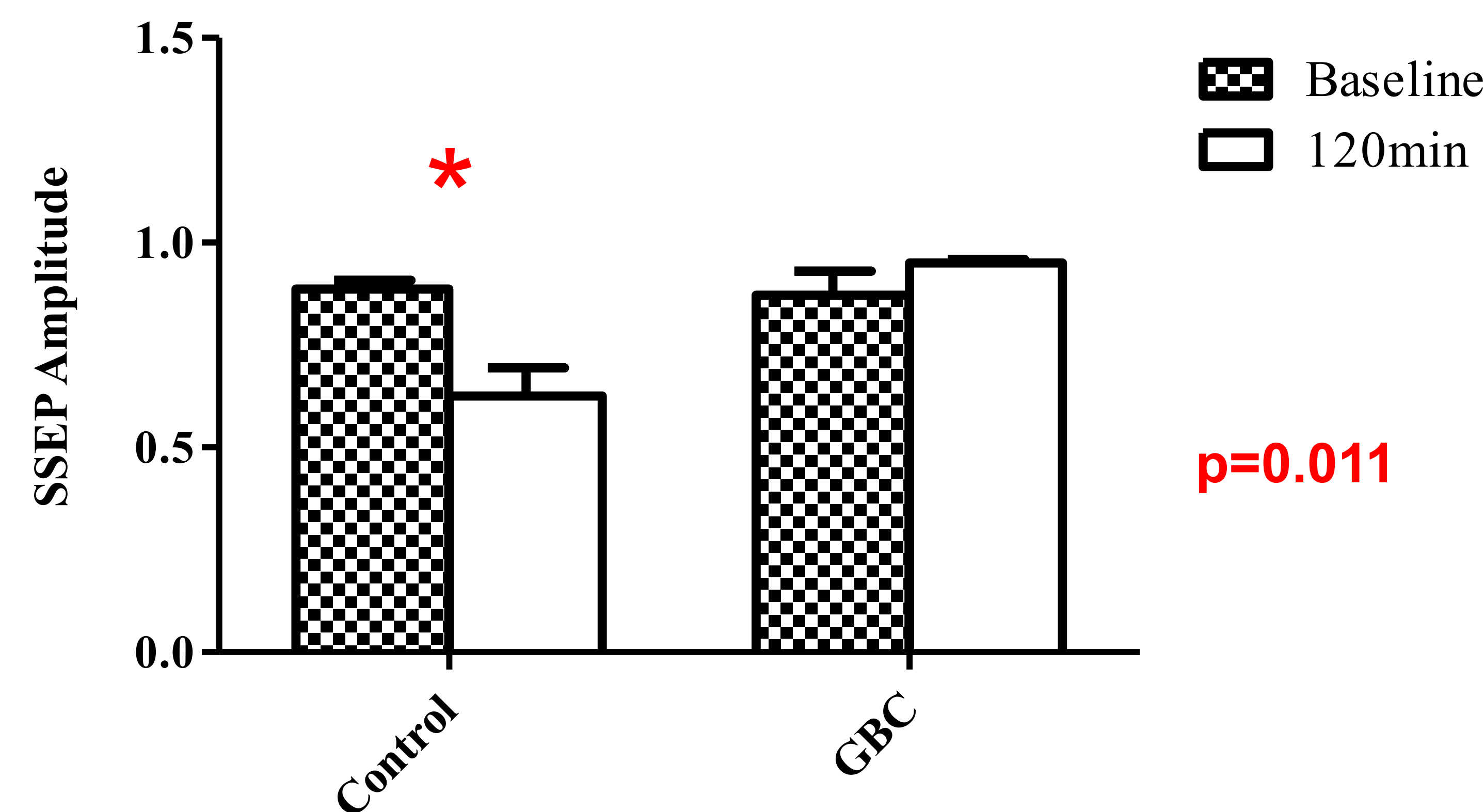
- 16 male Wistar rats subjected to 8-min asphyxia CA randomized to control group (n=8) or GBC group (n=8)
- GBC loading dose 10ug/kg 10min after ROSC; maintenance dose 1.6ug/kg q8h for 24 hours; control received equivalent volume of saline
- SSEP recorded baseline and q15min for 150 minutes following CA
- Subset of neurological deficit score A & B evaluating arousal and brainstem reflexes analyzed at 6, 24, 48, and 72 hours
- Univariate analysis comparing SSEP N10 amplitude between the two groups
- ANOVA test compared SSEP recovery at 30, 60, 90, and 120min post-CA

Results – Somatosensory Evoked Potential Recovery

SSEP N10 Amplitude Baseline and Post-CA

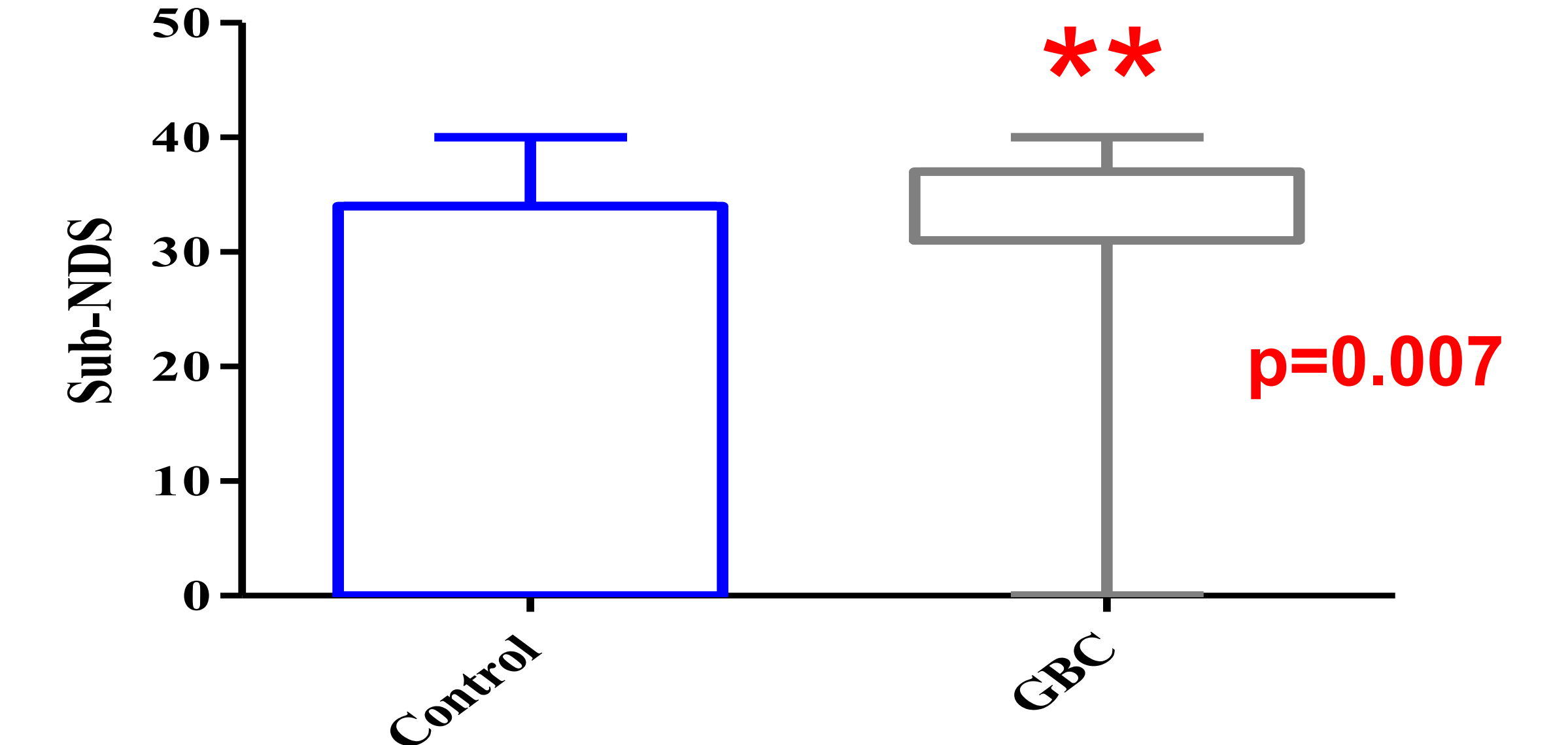


SSEP N10 Amplitude Baseline vs. 120min

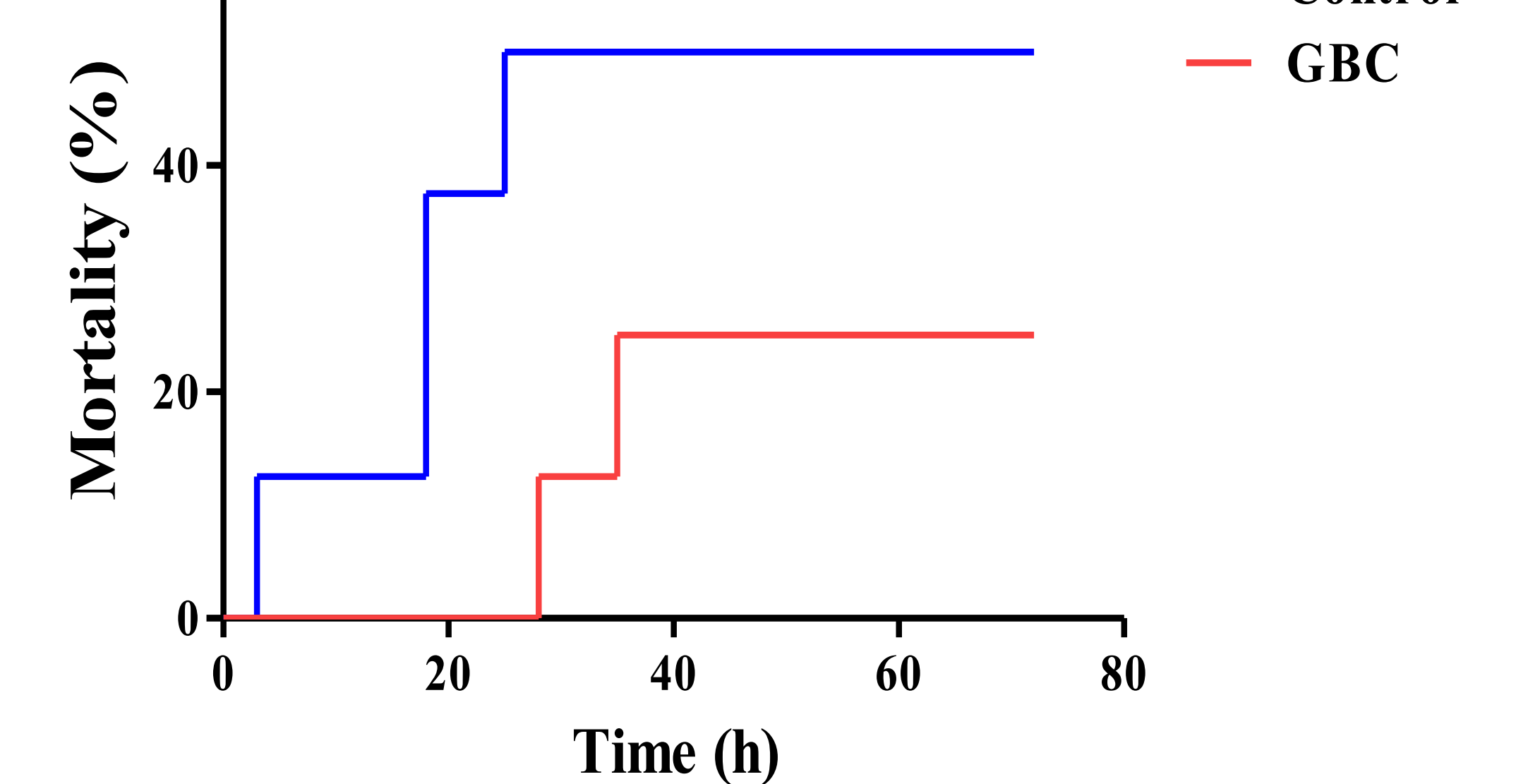


Results – Functional Recovery

Aggregate NDS A+B



Cumulative Survival



Discussion

- GBC improves SSEP recovery post-CA**, with N10 amplitude reaching baseline at 120 minutes compared to control
- GBC improves coma recovery and survival after CA
- GBC warrants further exploration as a potential drug therapy to improve functional and electrophysiologic outcomes after CA

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