

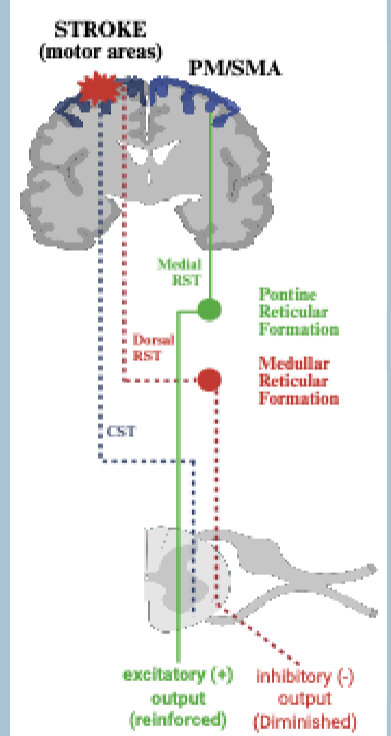


Prognostic value of acute phase iMEPs for post-stroke spasticity

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INTRODUCTION

This ongoing longitudinal study investigates ipsilateral Motor Evoked Potentials (iMEPs) as early biomarkers of post-stroke spasticity, based on evidence linking its development to reticulospinal tract hyperexcitability.



AIM and HYPOTHESES

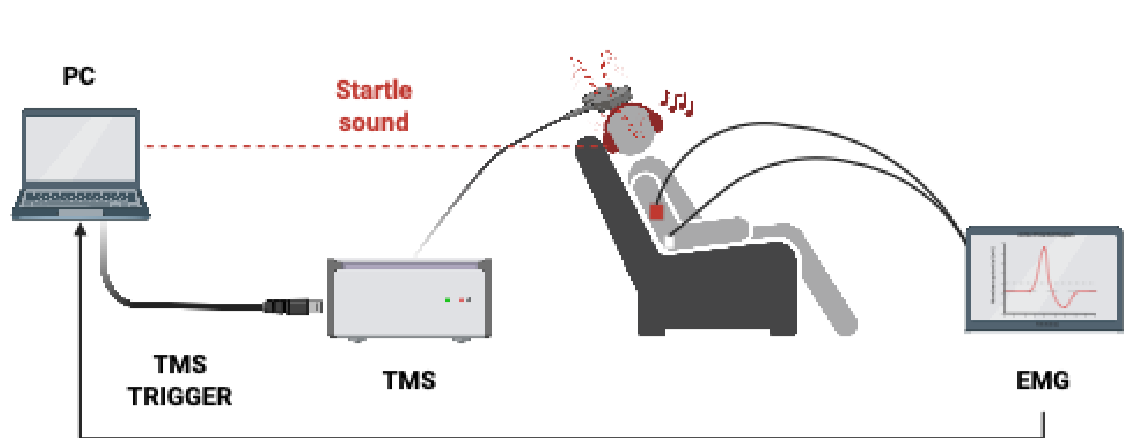
To evaluate the potential of iMEPs as early biomarker of spasticity in people with stroke (PwS).

We hypothesize that PwS who develop spasticity, compared to those who do not, will exhibit iMEPs on the affected side with higher frequency of occurrence and greater amplitude.

METHODS

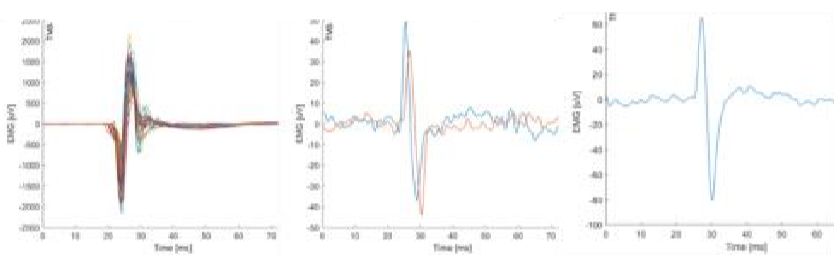
- **Participants:** 8 PwS (mean age: 77 ± 10 years); mean time since stroke: 3 ± 2.3 days
- **Longitudinal assessment:** T0 (within 7 days from stroke); T1 (1 month); T2 (3 months)
- **Stimulation protocol (SAS-TMS):**

	TMS alone	TMS-SAS
Muscle at rest	18	12
Muscle contraction	18	12
Tot for condition	36	24



RESULTS

Representative MEPs Signal from One Patient



cMEP unaffected, N valid=30

cMEP affected, N valid=2

iMEP affected, N valid=1

- **cMEPs less frequent on affected side:**
 - BB: 6.9% vs. 25.6%; FDI: 10.6% vs. 46.6%
 - Amplitude ratios: BB = 0.23; FDI = 0.30
- **iMEPs low but present in all PwS:**
 - BB: 1.6% (A) vs. 5.3% (U); FDI: 4.1% (A) vs. 5.3% (U)

- **In the 2 PwS developing spasticity, iMEPs more frequent on the affected side:**
 - P1: 7.5% (A) vs. 2.5% (U); P2: 12.5% (A) vs. 7.5% (U)

CONCLUSIONS

Preliminary findings suggest iMEPs may serve as early biomarkers for post-stroke spasticity. Further research with a larger cohort is warranted

ACKNOWLEDGMENTS

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