

Repetitive transcranial magnetic stimulation with disorders of consciousness: a sham-controlled randomized double-blind study protocol

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Introduction

Few existing treatments for patients with disorders of consciousness (DOC)

➤ rTMS = non-invasive method that induces changes in cortical neural excitability

➤ DOC patients¹:



➤ Hypothesis : high frequency rTMS pulses on the left prefrontal cortex will significantly increase neurobehavioral functioning

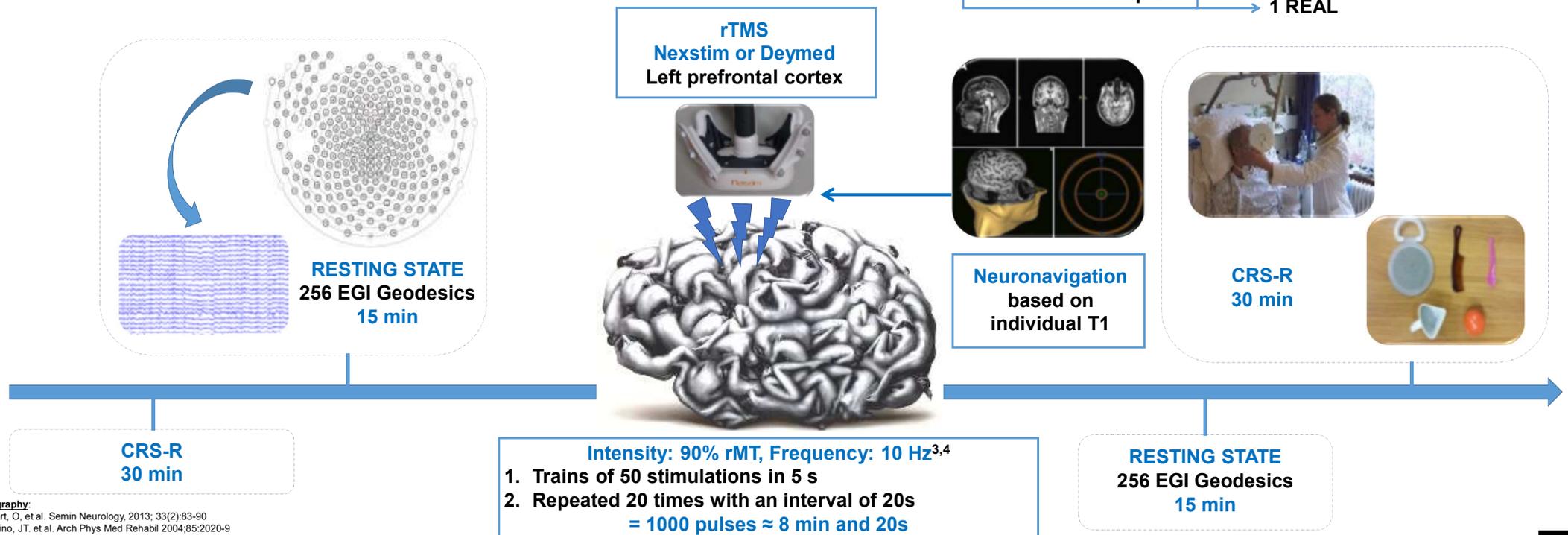
Methods

POPULATION
 10 UWS patients and 10 MCS patients
 Diagnosis based on 5 Coma Recovery Scale – Revised² (CRS-R)

MULTICENTRIC STUDY
 1. Coma Science Group (Belgium)
 2. Therapiezentrum Burgau (Germany)

2 BLIND EXAMINERS → Examiner A : CRS-R
 → Examiner(s) B: rTMS sessions

2 SESSIONS
 Minimum 48h apart → 1 SHAM
 → 1 REAL



Bibliography:
 1. Bodart, O. et al. Semin Neurology, 2013; 33(2):83-90
 2. Giacino, J.T. et al. Arch Phys Med Rehabil 2004;85:2020-9
 3. Xia, X. et al. Front. Neurol. 2017; 8(182)
 4. Naro, A. et al. Neurorehabil and Neural Repair. 2015; 29:603-13