

Assessing the efficacy of Accelerated Theta Burst Stimulation (aTBS) for the treatment of pharmacoresistant depression in adolescents and young adults

Record number : OPR-1097

Overview

RESEARCH DIRECTION

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INFORMATION

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ADMINISTRATIVE UNIT(S)

Faculté de médecine et des sciences de la santé
Département de pédiatrie
Département de médecine nucléaire et radiobiologie
Département de pharmacologie-physiologie

LEVEL(S)

2e cycle
3e cycle

LOCATION(S)

Campus de la santé

Project Description

Background. Transcranial magnetic stimulation (TMS) is a non-invasive option for treatment resistant depression (TRD) in adults. Recently, a new TMS protocol called “Accelerated theta-burst stimulation (aTBS)” has shown impressive efficacy, with 57%-86% response and remission rates, and a 60% reduction in suicidal ideation. However, no studies have evaluated its effectiveness in adolescents. This project aims to assess the efficacy of aTBS in 40 adolescents and young adults with TRD.

Primary outcomes include depression severity, as measured by the Children’s Depression Rating Scale Revised (CDRS-R) and suicidal ideation. The study will also explore sex differences, as females are at higher risk for depression and suicide attempts. TMS, with minimal risk, offers a favorable safety profile compared to antidepressants. Ultimately, this project will contribute to the transformation of adolescent TRD care.

Design and methods. Participants will undergo a randomized controlled trial where aTBS or classical rTMS approaches will be compared. Resting-state fMRI will identify the brain region for stimulation, and depressive symptoms and suicidal ideation will be monitored for 3 months post-treatment using online questionnaires.

Role of the Student: The student will be in charge of the project, including participant recruitment, acquisition of TMS data, data analysis, and preparation of scientific communications (posters and articles). Collaborators include psychiatrists, research staff, and other graduate students.

Requirements: This project is open to individuals with a bachelor’s/master’s degree in neuroscience, psychology, pharmacology, kinesiology, or any other relevant fields. The person must demonstrate good organizational skills, show initiative, and have a strong academic record in their prior studies. Bursary available.

Discipline(s) by sector

Sciences de la santé

Administration de la santé, Anatomie, Biochimie, Biologie cellulaire, Kinanthropologie, Kinésiologie, Neurosciences, Pharmacie, Pharmacologie, Physiologie, Psychiatrie, Sciences de l'imagerie médicale

Sciences naturelles et génie

Biologie et autres sciences connexes

Sciences sociales et humaines

Psychologie

Funding offered

Yes

\$21 000 to \$23 000

The last update was on 12 September 2024. The University reserves the right to modify its projects without notice.