S144 e-Poster Presentation

Conclusions: Viral encephalitis may have serious neuropsychiatric consequences, especially during childhood while the brain development is not finished. When the neurological damage affects the frontal lobes of the brain, behavioural and personality disturbances are expected and an early multidisciplinar intervention should be considered. Antypsichotics are the gold standard pharmacological treatment for behavioural disturbances. During the scholar period, special curricular adaptations should be done in order to reduce study-related stress.

Disclosure of Interest: None Declared

## **EPP0013**

## Transcranial magnetic stimulation (TMS) in a child diagnosed with hypothalamic-pituitary tumour: a case report

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doi: 10.1192/j.eurpsy.2023.358

Introduction: Central nervous system (CNS) tumours are the most common type of solid tumour in the paediatric population. Although advances in treatment have improved survival rates, there is a substantial body of literature documenting the potential long-term effects such as psychological, neurocognitive and health-related sequelae experienced by survivors of paediatric brain tumours. TMS is a non-invasive brain stimulation technique that uses electrical stimuli applied to the cranial surface to restore neuronal connections damaged because of CNS disruption (Burke et. al., 2019).

**Objectives:** To test the efficacy of TMS in a patient diagnosed with a CNS tumour who reported pain and suffered severe cognitive-behavioural alterations refractory to other pharmacological treatments.

Methods: Case Presentation. A 12-year-old boy diagnosed with a hypothalamic-pituitary tumour at the age of 9, having received surgical treatment, radiotherapy and chemotherapy. He suffered loss of vision, cognitive-behavioural and emotional sequelae, and pain, for which he received various pharmacological treatments without benefit. Treatment. The patient underwent a total of 25 sessions where each session took 20 minutes to complete for 3 sessions per week. TMS intervention consisted of 1200 inhibitory magnetic pulses with a frequency of 1hz on right DLPFC at an intensity of 110% of resting motor threshold. Stimulations were carried out using a Magventure MagPro X100 equipment with a double-cone coil. The clinical assessment included The Silhouettes Fatigue Scale (PHQ-9), Pain Catastrophizing Scale (PCS) and Numerical Rating Scale (NRS), verbal subtests of the Weschler Intelligence Scale for Children (WISC-V), Patient Health Questionnaire (PHQ-9) and the Sleep Disturbance Scale for Children, SDSC

**Results:** In the post-treatment clinical interview with the family, qualitative changes included a decrease in subjective complaints of

pain and fatigue. The family reported that the child stopped sleeping tied up after the intervention and a significant change in slowness was observed, which was accompanied by a higher level of awareness and consequently a slight improvement at the behavioural level, which at the present time does allow for psychological intervention. The psychometric results were clinically improved for psychomotor activity, sleep, emotional alterations, and all cognitive domains.

**Conclusions:** 25 sessions of TMS in the right DLPFC could show beneficial effects on pain, fatigue, cognition, health and sleep variables in patients with drug-resistant sequelae derived from CNS tumours. Longitudinal studies with larger sample sizes are needed to determine whether the effects observed after TMS intervention in paediatric patients with CNS diseases are significant.

Disclosure of Interest: None Declared

## **EPP0014**

## Continuous Theta-Burst Stimulation in a 9-year-old girl with a history of neurotoxicity after Acute Lymphoblastic Leukemia B

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doi: 10.1192/j.eurpsy.2023.359

**Introduction:** Transcranial Magnetic Stimulation is a non invasive brain stimulation technique used for several neuropsychiatric conditions. The treatment of Acute Lymphoblastic Leukaemia (ALL) involves many cytotoxic drugs that inhibit the rapid growth of cancer cells, but also damage healthy cells, resulting in a wide range of adverse effects (Śliwa-Tytko et al., 2022). Studies have shown that approximately 10-30% of paediatric ALL patients suffer from psychiatric disorders. Therefore, new therapeutic tools are needed, and repetitive transcranial magnetic stimulation (rTMS) has demonstrated tolerability, effectiveness and safety in children (Allen et al., 2017)

**Objectives:** We discuss the first case of a 9-year-old girl diagnosed with acute lymphoblastic leukaemia B in who underwent Continuous Theta-Burst Stimulation

Methods: Case Presentation. In this study, we describe a case of a 9-year-old girl diagnosed with acute lymphoblastic leukaemia B in November 2016 who completed treatment in July 2019. Since April 2018 she presented symptoms of intracranial hypertension and encephalopathy with behavioural alterations, attention deficit secondary to toxicity. Psychotic outbreaks after toxicity from different treatments was also present. Since starting pericyazine (July 2022) there has been a slight improvement, but her symptoms continue to have a severe impact in her daily functioning. Baseline developmental profile assessed with the Battelle Inventory was significantly below the expected level in all developmental areas except for gross motor skills. Treatment. The TMS intervention consisted of the application on right DLPFC (F4), inhibitory cTBS protocol (5Hz