eating disorder symptoms, the focus should be on the pattern of appearance or emergence of symptoms, their phenomenology, clinical and family background of the patient, and clinical status on follow-up.

**Conclusion.** The comorbidity between eating disorders and psychosis is infrequent and raises several conceptual and methodological questions. Epidemiological and family studies show that there is no more significant association between psychosis and ED, although these results are somehow limited by the lack of rigorous data regarding ED.

## Effectiveness of repetitive transcranial magnetic stimulation (rTMS) for the treatment of obsessive-compulsive disorder (OCD): a meta-analysis

Kabir Garg<sup>1\*</sup>, Naomi Fineberg<sup>2</sup>, Luca Pellegrini<sup>2</sup>, Arun Enara<sup>3</sup> and Eduardo Cinosi<sup>4</sup>

<sup>1</sup>Oxleas NHS Foundation Trust; <sup>2</sup>Hertfordshire Partnership University NHS Foundation Trust, University of Hertfordshire; <sup>3</sup>Hertfordshire Partnership University NHS Foundation Trust and <sup>4</sup>Hertfordshire Partnership University NHS Foundation Trust \*Corresponding author.

doi: 10.1192/bjo.2021.118

Aims. OCD is a chronic and debilitating psychiatric illness. Current first-line treatments include serotonin reuptake inhibitors and cognitive behavioural therapy, but a substantial minority of patients fail to respond adequately, requiring further forms of intervention usually provided in a sequenced algorithm. Repetitive Transcranial Magnetic Stimulation (rTMS) uses magnetic pulses passed through a coil placed on the scalp to stimulate the underlying brain region. Clinical trials of r-TMS in OCD have produced conflicting results, possibly related to the variability in the site of stimulation, protocols used, and variability in the selection of patients. We perform an updated systematic review and meta-analysis of the effectiveness of rTMS for the treatment of OCD aimed to determine whether certain rTMS parameters (i.e. site, duration, protocol etc.) or patients' characteristics (i.e age, duration of illness, illness severity, treatment resistance etc), are associated with effectiveness. Our overarching aim is to determine the place of rTMS in the sequenced OCD care-pathway.

Method. The meta-analysis is pre-registered in PROSPERO (ID: 241381). Potentially relevant studies will be retrieved using the MEDLINE, PsycINFO, and Cochrane Library databases using the parameters ['obsessive compulsive disorder' or 'OCD' or 'obsessions' or 'compulsions'] AND ['transcranial magnetic stimulation' or 'TMS']. The reference lists of retained articles will also be scrutinized for additional relevant publications. Only full text English language articles will be included in the review. The methodological quality of the studies will be assessed using CONSORT criteria. A summary of the study's quality as a randomized clinical trial will be produced.

Result. Our preliminary analysis shows some efficacy for r-TMS in non-treatment resistant OCD than treatment resistant OCD. Detailed results will be presented in the poster at the event. Effect measure will be either categorical (e.g. relative risk (RR) or odds ratio (OR) or continuous (mean difference or standardized mean difference - Hedge's g or Cohen's d - when taking into consideration the severity of the disorder as a dimension). These outcomes will be measured through validated instruments, in the form of both self- rated scales and observer rated scales including semi-structured interviews.

**Conclusion.** This meta-analysis will identify the patient, illness and protocol parameters that determine clinical outcomes, as guide to optimizing the role of rTMS in the care of patients with OCD.

## A neuropsychological study of chromatin disorders

Benjamin Geers<sup>1\*</sup>, Siddhartha Banka<sup>2</sup> and Daniel Weisburg<sup>2</sup>
<sup>1</sup>University of Manchester and <sup>2</sup>Manchester University NHS
Foundation Trust
\*Corresponding author.

doi: 10.1192/bjo.2021.119

**Aims.** Analyse neuropsychological assessment data collected from a chromatin disorder clinic to determine the neuropsychological profile associated with chromatin disorders. Assess for differences in neuropsychological profile by diagnostic group and gender. Hypothesis: A systematic neuropsychological review of chromatin disorders will reveal previously unknown patterns.

**Background.** Chromatin disorders (CD) are a group of genetic conditions that result in developmental delay and intellectual disability. Thus far the neuropsychological profile of CDs has been poorly studied.

Method. Cognitive functioning, adaptive behaviour, psychosocial difficulties and perceived impact on the family were systematically assessed in a cohort of 42 patients with CDs from November 2016 to February 2019. Cognitive functioning was assessed via Full-Scale Intelligence Quotient (FSIQ), adaptive behaviour was assessed via Vineland's Adaptive Behaviour Scores (VABS), anxiety and depression was assessed via the Revised Children's Anxiety and Depression Scale (RCADS) and communication skills were assessed via the Social Responsiveness Scale-2 (SRS-2). Family Impact Scale was used to assess for the perceived impact on the family. Mean scores for each neuropsychological domain were calculated firstly sorting patients by diagnosis, and then by gender. Unpaired t-tests were run to asses for statistically significant differences in mean scores by diagnosis and gender. Spearman's correlation was used to determine and potential correlations between FSIQ, VABS, RCADS and SRS-2 scores and Family Impact Score.

Result. Patients with CDs were found generally to have mild intellectual disability (mean FSIQ = 64.57) and markedly deficient adaptive behaviour functioning (mean VABS = 50.19). Patients had a mean SRS-2 score of 70, indicative of high rates of autism spectrum disorder associated symptoms. RCADS and SRS-2 scores were negatively correlated with Family Impact Score with statistical significance (-0.562 and -0.429 Correlation coefficient for RCADS and SRS-2 respectively). Females had statistically significant average higher RCADS scores than males. CHARGE Syndrome was frequently an outlier having a mean higher FSIQ score, lower adaptive functioning and lower psychosocial impairment; however, these differences were not statistically significant.

Conclusion. Adaptive behaviour functioning of patients with CDs is lower than expected for their FSIQ. Females with chromatin disorders have higher levels of anxiety and depression than males however the reasons for this are unknown. The psychosocial challenges and family's impact should be considered in the clinical management of CDs. Further research with a larger data set is needed to identify the neuropsychological profiles of different CDs and to confirm whether the observed differences in CHARGE Syndrome are significant.