

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

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**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

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**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 assess 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.

## Prevalence and course of anxiety and depression among patients selected for bariatric surgery

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**Aims.** To determine the prevalence of anxiety and depression amongst participants with severe or complex obesity randomised and selected for bariatric surgery in a large multi-centre trial.

To describe the change in prevalence of anxiety and depression amongst participants who had undergone bariatric surgery, within 6 months of randomisation and at 12 months post-randomisation.

**Method.** The By-Band-Sleeve (BBS) study is a multi-site randomised controlled trial evaluating the surgical management of severe or complex obesity and is the largest trial of its kind. Participants completed the Hospital Anxiety and Depression Scale (HADS) on study enrolment (pre-randomisation) and at 12 months post-randomisation. In this sub-study, we describe provisional data concerning the baseline prevalence of anxiety and depression along with change in median HADS symptom score amongst those who actually underwent bariatric surgery.

**Result.** 758 participants met the criteria for study inclusion with 716 (94.46%) and 712 (93.93%) individuals fully completing questionnaires for HADS-A and HADS-D. At pre-randomisation, the prevalence of possible (HADS A/D = 8-10) and probable (HADS A/D >11) anxiety or depression was 46.19% (n 330/716) and 48.17% (n 48.17%) respectively. Paired and complete HADS-A and HADS-D questionnaires were available for 70.25% (n 503/716) and 69.94% (n 498/712) participants. There was a highly statistically significant decrease in median HADS-A and HADS-D scores at 12 months post-randomisation (Wilcoxon signed-rank test  $p < 0.001$ ). This was coupled with a statistically significant reduction in the proportion of cases with possible and probable anxiety (−9.54%,  $p < 0.001$ ) and also depression (−22.21%,  $p < 0.001$ ) at 12 months post-randomisation.

**Conclusion.** Our results characterise the high rate of psychological comorbidity amongst patients with severe or complex obesity selected for bariatric surgery. Whilst bariatric surgery remains the most clinically effective treatment for severe obesity, its effects on long-term post-operative mental health outcomes are less clear. These findings contribute to the growing body of evidence calling for increased pre/post-operative mental health surveillance and integrated care for this cohort of patients.

## Confusion and a cough: an experience of COVID-19 in dementia patients

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**Aims.** To assess the clinical presentation and outcomes of COVID-19 positive patients with dementia and to evaluate the suitability of the “4C mortality score.” Older adults with dementia are a vulnerable patient group therefore it was predicted that this patient demographic would have poorer outcomes and high mortality rates. Ward 24 is an organic old age psychiatry ward in

University Hospital Monklands, Lanarkshire for patients with advanced dementia. Older adults have been found to have atypical presentations and non-specific symptoms in COVID-19, however given COVID is still a new and evolving disease, little is known about the impact on dementia patients. The 4C mortality score was designed to predict in-hospital mortality for hospitalised COVID-19 patients using a number of clinical parameters.

**Method.** Data were collected retrospectively from all inpatients on ward 24 testing positive for COVID-19 between October and December 2020. Data were collected using online MIDIS entries, paper notes, NEWS charts and Clinical Portal. A 4C mortality score was calculated for each patient using an online calculator based on the data collected.

**Result.** 15 patients tested positive for COVID-19; 47% male and 53% female, age range between 64 and 92 years old. 67% of patients had 3 or more comorbidities and 89% had either a high or very high 4C mortality score. Mortality from COVID-19 was 13% and 20% of patients required oxygen. 27% of patients were asymptomatic, these patients also had the lower risk mortality scores. 67% presented with pyrexia, 33% had a cough and 13% had breathlessness. Non-specific symptoms were also seen; 53% had fatigue, 20% had diarrhoea and 20% had unresponsive episodes. Post COVID delirium was seen in 20% of patients.

**Conclusion.** Mortality rates were lower than expected, indicating that the 4C mortality score might not be appropriate to use in this patient demographic due to confounding factors. Atypical symptoms were common in patients, with a variability of clinical presentations within the patient demographic. These findings suggest the importance of having a low threshold for COVID-19 infection even in the absence of typical symptoms. Development of an alternative risk stratification tool would be beneficial for this patient group, with further studies needed on a larger scale to facilitate this.

## Heart rate variability and emotion regulation in adults with eating disorders or obesity: a systematic review

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**Aims.** Emotion regulation (ER) impairments are central trans-diagnostic phenomena across the spectrum of eating disorders (EDs) and obesity, where maladaptive eating behaviors act to suppress negative emotions. Self-report assessments are the most commonly used tools for assessing an individual's ER capacity, however, subjective self-reporting is limited by a tendency toward response bias and issues with common method variance. Prior empirical and theoretical research supports the use of heart rate variability (HRV) to objectively assess individual differences in ER capacity. Several studies have examined the association between HRV and ER in EDs and obesity. However, to date, no review synthesising the overall findings exists. This review aimed to summarise the empirical evidence that has examined the relationship between ER and HRV in adults with EDs/obesity, in addition to assessing the validity of HRV as a physiological biomarker of ER in these populations.