23 EPIDEMIOLOGY OF CATATONIA IN A LARGE DATASET

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10.1136/jnnp-2019-BNPA.23

Objectives/Aims Catatonia is an important neuropsychiatric disorder with a high morbidity and mortality. However, due to a perception that it is very infrequent and because of the acuity of the patients, it has remained poorly studied and research has often been confined to small groups. We aimed to establish the demographic, disease-related variables and blood-based biomarkers for catatonia in a large dataset.

Methods We used the Clinical Records Interactive Search (CRIS) system hosted at the NIHR Maudsley Biomedical Research Centre to search the clinical records for patients with catatonia. An initial free-text search was refined by use of a natural language processing app. The results of the app were validated by three of the authors, who included patients in the analysis only if a clinician had made a diagnosis of catatonia and two or more items of the Bush-Francis Catatonia Screening Instrument were in evidence. Demographics, disease-related variables and blood-based biomarkers could then be extracted for these patients and compared, where relevant, to non-catatonic psychiatric patients.

Results The natural language processing app extracted the records of 2766 patients with at least one mention of catatonia in their records. The majority of cases identified by the app could be validated by the researchers. A high proportion of patients had more than one episode of catatonia.

Full results will be available in time for the presentation.

Conclusions This study demonstrates that catatonia is not very rare, even relying on clinician identification. The frequency of recurrence is interesting, as it suggests that catatonia might indicate an underlying trait, rather than merely a transient state.

24 RELATIONSHIP BETWEEN INTEROCEPTION AND STRESS IN PATIENTS WITH FUNCTIONAL NEUROLOGICAL SYMPTOM DISORDER

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10.1136/jnnp-2019-BNPA.24

Objectives/Aims Self-report studies of alexithymic traits in individuals with Functional Neurological Symptom Disorder (FND), suggest that emotion dysregulation in this population is characterised by an impaired ability to detect and identify their own emotions (identification impairments).¹ This regulatory deficit might be particularly problematic for a patient group with an increased incidence of stressful life events relative to healthy controls,² for whom the ability to regulate emotions might therefore be more crucial. Examining sensitivity to changes in physiological cues associated with emotional experience (interoception) is a way of assessing one aspect of participants' capacity to identify their own emotions. However, no studies have yet experimentally investigated how stress might interact with interoception in this population. Therefore, the aim of this study was to investigate patients' interoceptive sensitivity both at baseline and under stress.

Methods Twenty-six patients with FND and twenty-seven healthy controls performed the Heartbeat Detection Task (HBDT) pre- and post- stress-induction with the Cold Pressor Test. The HBDT is a behavioural paradigm, measuring participants' sensitivity to a physiological cue associated with emotional experience - the heartbeat. Participants also completed a self-report measure of emotion dysregulation (The Emotional Processing Scale-25) which includes a subscale capturing 'a detached experience of one's emotions due to poor emotional insight', and a measure of Major Depressive symptomology (The PHQ-9).

Results Relative to healthy controls, patients with FND performed more poorly on the HBDT both at baseline and following stress-induction ($p=0.032$). Patients also reported greater impairments across all domains of the EPS-25 and higher scores on the PHQ-9 than healthy controls (both $p<0.001$). Group differences on HBDT performance were not explained by group differences in age or depressive symptomology.

Conclusions Impaired HBDT performance suggests that patients with FND lack sensitivity to their heartbeat, both under 'normal' conditions and following stress-induction. Physiological cues (like the heartbeat) are an important source of interoceptive information for emotional experience, for example during stress. Our findings therefore represent a form of identification impairment that may contribute to stress-vulnerability in this population. Raised levels of self-reported 'impoverished emotional experience' corroborate the suggestion that patients with FND have difficulty identifying and understanding their emotions. These findings have direct implications for understanding and treating emotion dysregulation in FND.

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25 ON BEING AUTOIMMUNE IN PSYCHIATRIC PLACES: 10 CHARACTERISTIC MENTAL STATE FEATURES IN PATIENTS WITH DEFINITE NMDAR-ANTIBODY ENCEPHALITIS

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10.1136/jnnp-2019-BNPA.25

Objectives/Aims NMDAR-antibody encephalitis frequently presents with psychiatric symptoms. However, new-onset mental illness does not usually receive detailed biomedical investigations. Yet, early diagnosis and treatment correlates with improved outcomes. Here we used detailed psychiatric phenotyping to explore the nature of mental state abnormalities in this immunologically-defined illness.

Methods Prospective and retrospective semi-structured interviews with patients, carers, and clinicians in five consecutive cases of definite NMDAR-antibody encephalitis (all female, median age=20 years, range=16–30, ovarian teratoma in 4). Weekly multi-disciplinary assessment using the Neuropsychiatric

Inventory Nursing Home version (NPI-NH) in 2/5. Network analysis was used to evaluate connectedness of psychopathologic features and a qualitative synthesis distilled recurrent psychopathologic features. Finally, each time point was compared with operationalised diagnoses using an automated classifier and plotted with corresponding symptom complexes over time.

Results All had psychiatric features at onset and were seen first by general practitioners or emergency departments. All received an incorrect initial diagnosis (1 neurological, 4 primary psychiatric). Two patients were referred to mental health services and detained while three were admitted to a general hospital. Psychiatric diagnoses spanned psychotic, mood, and stress categories. None had a personal or family history of serious mental illness or substance misuse. Despite the atypicality all were ascribed to non-specific psycho-social aetiologies. Autoimmune encephalitis was then first suspected between 4–28 days from onset (median=21 days) because of the psychopathology (n=2) or development of clear-cut seizures or movement disorder (n=3). 10 consistently reported features were identified: sleep disturbance, nightmares, mixed unstable mood, perplexity, incoherent repetitive speech, musical $\pm$ visual hallucinosis, catatonic facies, possession-like/drugged, dissociative-disorganised, and regressed behaviour.

The symptom complex peaked rapidly (within 3 weeks). The peak burden was large and crossed multiple psychopathologic domains. Overall the syndrome is poorly-described by any single primary disorder; mixtures of mixed mood-psychotic-catatonic disorders performed best. Furthermore, it showed clear qualitative and hence diagnostic shifts between onset, peak, and resolution.

Conclusions The psychopathology of NMDAR-antibody encephalitis is complex and dynamic, likely contributing to diagnostic difficulties. However, it appears stereotyped between individuals, hence sensitive features can be derived. Inconsistency with psychosis and/or mood disorder constructs and better approximation with 'mixtures of mixtures' suggests specificity is possible but similar studies with primary disorder comparators are needed. As the disease can only be ruled out with cerebrospinal fluid antibody testing the practical implication is that the mental health system needs to embrace lumbar puncture as a routine part of practice in high risk groups.

26 PREDICTORS OF CARER BURDEN IN IMPULSE CONTROL DISORDERS IN PARKINSON'S DISEASE

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10.1136/jnnp-2019-BNPA.26

Aims/Objectives Impulse control behaviors (ICBs) affect 15%–35% of Parkinson's Disease patients. There is evidence of increased carer strain due to these behaviours; however, little is known about clinical variables mediating this effect. This study aims to investigate the factors predictive of carer burden within a cohort of Parkinson's Disease patients with ICBs. Identification of such factors may allow for targeted therapeutic intervention.

Method Data was collected from 45 patients with clinically significant ICBs and their carers including levodopa equivalent daily dosage, assessments of motor and neuropsychiatric symptoms, cognitive function and ICBs. Carer burden was assessed using the Zarit Burden Interview (ZBI). Univariate analyses

were performed using Spearman's Rank Correlation Coefficient. A backward model was used to remove variables to create a final multivariate model using ZBI score as the dependent variable.

Results Univariate analysis identified significant correlations between ZBI and total NPI ($r_s=0.50$, $p<0.0005$); four NPI sub-scores: agitation-aggression ($r_s=0.41$, $p=0.005$), depression-dysphoria ($r_s=0.47$, $p=0.001$), apathy-indifference ($r_s=0.49$, $p=0.001$) and irritability-lability ($r_s=0.38$, $p=0.03$); and carer GHQ ($r_s=0.52$, $p<0.0005$). Multivariate linear regression retained total NPI and GHQ scores, collectively predictive of 36.6% of variance in ZBI.

Conclusions This is the largest study to date, looking at associations between carer burden and ICBs. Our findings indicate low mood, poor motivation, social disinhibition and neuro-psychiatric symptom burden to be significant factors in carer burden. We also observe that carers reporting poorer health had increased carer strain. Further work should explore methods of physical and psychosocial support and coping strategies for carers.

27 MEDICAL STUDENT EDUCATION IN SLEEP AND ITS DISORDERS: HAS IT IMPROVED OVER 20 YEARS?

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10.1136/jnnp-2019-BNPA.27

Objectives/Aims There is growing recognition that sound sleep is a pillar of health, alongside adequate nutrition and exercise. Sleep problems are common and often treatable, improving lives. Twenty years ago, Stores¹ revealed the paucity of UK medical school-education on sleep disorders, with a median teaching time of 20 min: we investigate here whether this situation has changed.

Methods A cross-sectional survey of 34 medical degree courses in the UK, adapted from Stores' 1998 questionnaire, including time spent on teaching sleep medicine, sub-topics covered, and forms of assessment. Responses were coded and analysed numerically where possible; free text was analysed thematically. We excluded responses not concerned with general undergraduate education.

Results Twenty-five (74%) UK medical schools responded to our survey. The time devoted to teaching sleep medicine during undergraduate training was median 1.5 hours, mode <1 hour, and mean 3.2 hours (standard deviation = -2.6).

Only two schools reported a sleep medicine syllabus or dedicated compulsory module (8%), whilst two had optional student-selected sleep medicine modules (8%). Sleep medicine was generally described as being subsumed into other areas, primarily respiratory medicine, sometimes ENT, Psychiatry and Neurology; coverage of subtopics mirrored this pattern. Asked if enough time is allotted for teaching on sleep medicine, 50% said Yes, 38% No, 13% were unsure.

Free-text comments made by our respondents had recurring themes: sleep medicine is typically **subsumed** into teaching by other specialties, consequently course directors are **uncertain** about the details of provision, **obstructive sleep-apnoea** is often identified as the key or only relevant sleep disorder, knowledge of sleep disorders is regarded as **optional**, and there is **inertia** about the prospect of change. However, a substantial minority of respondents are **enthusiastic** about making