

pivotal tool in refining diagnostic accuracy, complementing both psychiatric and neurological perspectives, and enabling therapeutic strategies to improve patients' quality of life.

Disclosure of Interest: None Declared

EPV1070

Depression as the main manifestation of central pontine myelinolysis : A case report

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Introduction: Centropontine myelinolysis (CPM) is an acute demyelinating neurological disorder that primarily affects the central bridge and is frequently associated with rapid correction of hyponatremia. Common clinical manifestations of CPM include spastic quadriparesis, dysarthria, pseudobulbar palsy and encephalopathy of varying degrees. In addition, CPM could be accompanied by neuropsychiatric manifestations, such as personality changes, thymic symptoms, acute psychosis, paranoia, hallucinations or catatonia, usually associated with additional brain damage, described as extrapontine myelinolysis (EPM).

Objectives: Study the nature of comorbidity between CPM and mood disorders, particularly depression.

Methods: We present the case of a patient hospitalized in the psychiatry department B of the Hedi Chaker hospital in Sfax in July 2024. He was been admitted at the request of a third party for behavioral disorders such as agitation and refusal of treatment.

Results: This is Mr. S.BH aged 68, with a psychiatric family history of follow-up for unspecified psychiatric disorders in a niece. He has no psychiatric history, but has a somatic history, unmonitored high blood pressure as well as chronic constipation causing hyponatremia, which was quickly corrected 1 month ago. The latter was responsible for CPM objectified on the brain MRI requested by a free practice neurologist who consulted him for agitation. Our patient is married. He has been retired for a few months and previously worked as a farmer for 35 years. According to the family, the history of his illness dates back to March 2024, following professional stressors when he began to present multiple somatic complaints, with anorexia and weight loss as well as a tendency towards isolation. Since June 2024, following the CPM, he believed that the police wanted to harm him. As a result, he became anxious and agitated. At the interview: Slowed down on the psychomotor level, the contact was superficial, the mood was sad, his speech was provoked, poor and conveyed in a low voice verbalizing anhedonia, he presents congestive disorders and he refuses treatment and diet at the beginning. The patient obtained a score of 12 on < the Geriatric Depression Scale GDS >> and a score of 12 on < the mini-mental state examination MMSE >>.

Conclusions: This case demonstrates that depression might represent the main manifestation of CPM, especially in the early stages of the disease, which should be taken into consideration when evaluating patients with acute abnormalities of sodium metabolism.

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EPV1071

The Mediating Role of Cortical Atrophy on the Relationship between the Resilience Index and Cognitive Function: Findings from the Healthy Brain Initiative

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Introduction: Background: Lifestyle factors are linked to differences in brain aging and risk for Alzheimer's disease, underscored by concepts like 'cognitive reserve' and 'brain maintenance'. The Resilience Index (RI), a composite of 6 factors (cognitive reserve, physical and cognitive activities, social engagement, diet, and mindfulness) provides such a holistic measure.

Objectives: This study aims to examine the association of RI scores with cognitive function and assess the mediating role of cortical atrophy.

Methods: Baseline data from 113 participants (aged 45+, 68% female) from the Healthy Brain Initiative were included. Life course resilience was estimated with the RI, cognitive performance with Cognivue®, and brain health using a machine learning derived Cortical Atrophy Score (CAS). Mediation analysis probed the relationship between RI, cognitive outcomes, and cortical atrophy.

Results: In age and sex adjusted models, the RI was significantly associated with CAS ($\beta = -0.25$, $p = 0.006$) and Cognivue® scores ($\beta = 0.32$, $p < 0.001$). The RI-Cognivue® association was partially mediated by CAS ($\beta = 0.07$; 95% CI [0.02, 0.14]).

Conclusions: Findings revealed that the collective effect of early and late-life lifestyle resilience factors on cognition are partially explained by their association with less brain atrophy. These findings underscore the value of comprehensive lifestyle assessments in understanding the risk and progression of cognitive decline and Alzheimer's disease in an aging population.

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EPV1072

Specific learning difficulties and intelligence in children with RASopathies. The Grey Matter project

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Introduction: Children with Noonan syndrome, the most prevalent RASopathy, exhibit a characteristic neurocognitive phenotype. Specific difficulties in learning, memory, and executive function are among the most frequently observed manifestations documented in the scientific literature.

Objectives: The present study aimed to measure specific learning difficulties and intelligence in children with RASopathies.

Methods: A total sample of 47 patients (55.3% male) aged 3–16 years ($M = 8.6$, $S.D. = 3.1$) was recruited from various Spanish regions (Murcia, Alicante, Gandía, Valencia, Castellón de la Plana, Tarragona, Cantabria, Asturias, Zaragoza, Madrid, Badajoz, Huelva, Sevilla and Cádiz), within the framework of The Grey Matter project. Most patients were diagnosed with Noonan syndrome, and some had Cardiofaciocutaneous syndrome. The most frequent mutations were PTPN11 (72.3%), RIT1 (6.4%), and unknown mutations in 12.8% of patients. Patients were assessed using the Spanish version of the Wechsler Preschool and Primary Scale of Intelligence, Fourth Edition (WPPSI-IV) or the Wechsler Intelligence Scale for Children, Fifth Edition (WISC-V) according to age; the Spanish Reading Processes Evaluation Battery (PROLEC) according to the appropriate age range (from 6 years); and the Spanish Writing Processes Evaluation Battery (PROESC), from 8 years.

Results: On the one hand, 32.3% presented with severe difficulty in reading words. In turn, 30% of the children showed severe difficulty in reading comprehension of texts when they were read by an examiner, and 29% after reading by themselves. On the other hand, 56% of the children presented severe orthographic difficulty in writing words and 50% presented severe difficulty in written expressions. Finally, regarding intelligence, the mean total IQ of the children was 84.7 points ($S.D. = 15.1$), with better scores on the Verbal Comprehension Index ($M = 89.4$; $S.D. = 16$), Visual Spatial Index ($M = 87.7$; $S.D. = 13.8$), and Fluid Reasoning Index ($M = 88.6$; $S.D. = 11.9$), in contrast with the Working Memory Index ($M = 84.3$; $S.D. = 13.2$), and the Processing Speed Index ($M = 83.2$; $S.D. = 14.4$). In turn, 42.6% of children had low global intelligence scores ($IQ \leq 79$).

Conclusions: In conclusion, children with RASopathies, particularly those diagnosed with Noonan syndrome, need educational support to compensate for all these significant academic difficulties.

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EPV1073

Everyday Executive Functioning in Paediatric Patients Awaiting Solid Organ or Haematopoietic Stem Cell Transplantation

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Introduction: Paediatric patients with severe diseases awaiting solid organ or haematopoietic stem cell transplantation are known to experience cognitive impairments, particularly in executive functioning. Neuropsychological pre-transplant evaluation serves as a baseline for identifying executive functioning deficits that may affect the medical and psychosocial aspects of care. This is clinically relevant because patients with poorer executive functioning may show decreased adherence to medical treatments, face greater challenges in coping with their illness, and be more likely to require educational adaptations, including curricular or methodological adjustments based on pedagogical criteria.

Objectives: This study aimed to assess everyday executive functioning in paediatric patients awaiting transplantation using an ecologically valid measure.

Methods: A total of 49 patients (59.2% male) aged between 6 and 18 years ($M = 11.4$, $S.D. = 3.5$) were recruited from La Paz University Hospital (Madrid, Spain). Patients were awaiting for various types of organ transplants (kidney: 26, heart: 4, lung: 4, hepatorenal: 3, or liver: 2 patients) or haematopoietic stem cells (10 patients). Patients were assessed using the Spanish parent-reported version of the *Behavior Rating Inventory of Executive Function, Second Edition* (BRIEF-2) with age- and sex-adjusted norms from the Spanish general population. The three BRIEF-2 composite scores were analysed (the Cognitive, Emotional and Behavioral Regulation Indexes), and clinically relevant scores were set at $T \geq 65$ points.

Results: Clinically significant levels of executive deficits were observed in 33.3% of patients regarding cognitive regulation problems, in 32.7% regarding emotional regulation difficulties and in 26.5% regarding behavioural regulation problems.

Conclusions: Between 1 in 4 and 1 in 3 patients have shown some type of executive regulation difficulties. The early identification of executive functioning deficits in paediatric transplant candidates is crucial. Incorporating standardised ecologically valid measures, such as the BRIEF-2, into routine assessments can help detect neuropsychological impairments at an early stage, allowing timely therapeutic or preventive interventions (e.g., psychological prehabilitation). This approach can improve medical outcomes and quality of life and guide educational adaptations to support academic performance.

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