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**118176**

A case of delayed post-hypoxic leukoencephalopathy following opioid intoxication

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Background and aims

Delayed post-hypoxic leukoencephalopathy (DPHL) is a rare demyelinating syndrome characterized by cognitive and motor decline. It typically presents with a biphasic course after prolonged cerebral hypox-oxygenation.  
Methods. A 55 years old woman arrived at the emergency department due to a seizure-like episode, after presenting in the previous days a progressive cognitive-motor slowing. The brain CT and blood tests were normal. A month before, she was admitted to another hospital because of respiratory failure following a suicide attempt by medication overdose: she completely recovered in two weeks. After hospitalization in our department, the patient quickly became completely uncontrollable and catatonic. The following tests were performed: blood test including screening for autoimmune/paraneoplastic, trombophilic and infective disease, EEG, brain MRI with gadolinium and spectroscopy.  
Results. The neurological examination showed akinesia mutism and catatonia with diffuse limb rigidity and fixed postures.  
Blood tests were negative; EEG demonstrated a global slowing of the activity. The brain MRI showed a symmetric T2, FLAIR and DWI hyperintensity of the white matter, confluent in the frontal regions. The findings were suggestive of an intramyelinic edema. Control MRI performed after 2 weeks, evidenced a progression of the demyelinating lesions in T2, FLAIR and DWI; spectroscopy demonstrated a decrease of creatine and NAA with an increase of lactate.  
Conclusions. The course of the patient’s symptoms, her medical history of recent coma after drug intoxication and the EEG, MRI and spectroscopy findings, as well as the normal or non significant results of other tests for encephalopathies, were strongly supportive for a diagnosis of DPHL.

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**118177**

End of dose interval (EDI) symptoms in patients undergoing treatment with natalizumab

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Background and aims

Many patients treated with Natalizumab experience End of Dose Interval (EDI) symptoms towards the end of the administration cycle. During the pandemic, due to the unknown effects of SARS-CoV-2 infection on patients undergoing treatment with Natalizumab (NTZ), we decided to shift patients on NTZ from a Standard Interval Dosing (SID of 4 weeks) to an Extended Interval Dosing (EID of 5–6 weeks). Our main objective was to study the prevalence and incidence of EDI symptoms in our MS center, along with its efficacy and safety.

Methods

We reviewed 102 patients in our MS center treated with natalizumab for at least 12 months using EID. When tolerated/possible, patients were shifted from a SID of 4 weeks to an EID of 5–6 weeks. Patients were asked to report any worsening of their symptoms during the administration cycle, fatigue was assessed right before the administration of NTZ, with surveys and Fatigue Severity Scale (FSS).

Results

Among the 102 patients, 41 (40.19%) reported end of dose interval (EDI) symptoms, and the most common one was fatigue. Among those 41 patients: 26 (63%) had a Relapsing Remitting (RR) course while 15 (37%) had a Secondary Progressive (SP) course. Of note, 15 (36.58%) patients reported a new onset of fatigue where none was present before the EID. Our data suggest that with EID efficacy is still preserved since only 6 patients showed new lesions on follow-up-MRI and with little clinical significance.

Conclusions

Our study shows that when EID was adopted, fatigue was higher in the RR course group, with efficacy still preserved.

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**118178**

The relationship between depression and cognition in multiple sclerosis: A meta-analysis

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Background and aims

Studies on the relationship between depression and cognition in people with Multiple Sclerosis (pwMS) are inconsistent (Arnett, 2005; Baumstarck-Barrau et al., 2011). The aim of the present meta-analysis was to evaluate the possible association between depressive symptomatology and cognitive performance on several cognitive domains in pwMS.

Methods

The literature search on three electronic databases yielded 5402 studies (4333 after the duplicates removal). 29 studies compared depressive symptomatology (assessed with specific questionnaires) and cognitive performance (outcomes: global cognition, attention, processing speed, verbal, spatial and working memory, verbal fluency, executive functions). Positive ES were indicative of a negative relationship between depression and cognitive performance. A random-effect meta-analysis was performed and mean weighted effect sizes (ES) were calculated using Hedges’ g, via Prometa3 software. Meta-regression analysis served to explore the potential effect of clinical/sociodemographic variables of samples on outcomes.

Results

Small ES were found in the meta-analysis exploring the relationship between depression and verbal memory (g = 0.25, p = 0.001), spatial memory (g = 0.26, p < 0.001), verbal fluency (g = 0.30, p < 0.001) and executive functions (g = 0.33, p = 0.002), whereas medium ES were found in the meta-analysis evaluating