CROATIAN INTERNATIONAL PUBLICATIONS

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Nenadic-Baranasic N[1], Gjergja-Juraski R[1,2], Lehman I[3], Turkalj M[2,4], Nogalo B[2,5], Barisic N[3,6]. Overnight video-polysomnographic studies in children with intractable epileptic encephalopathies. Med Sci Monit. 2018;24:5405-5411.

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BACKGROUND The aim of this study was to assess sleep architecture and respiration during sleep in children with intractable epileptic encephalopathies using overnight video-polysomnography (V-PSG). MATERIAL AND METHODS Between 2015 to 2017 overnight V-PSG recordings were made for 31 children (22 boys and 9 girls) with intractable epileptic encephalopathy with a mean age of 6.78±3.61 years and a mean body mass index (BMI) of 15.83±3.16 kg/m3. Thirty-one healthy children were matched for sex, age, and BMI as the control group. The phases of sleep studied included rapid eye movement (REM) sleep, and non-REM (NREM) phases NREM 1, NREM 2, and NREM 3. Respiratory function during sleep was evaluated. RESULTS Children with epileptic encephalopathies receiving anti-epileptic treatment had significantly decreased total sleep time (TST) (p=0.038), significantly increased percentage of NREM1 (p=0.033), and a significantly lower percentage of total REM (p<0.0001), compared with the control group. All children 31/31 (100%) with epileptic encephalopathies had interictal epileptiform discharges, and 4/31 (12.9%) had ictal events. The number of respiratory events did not differ significantly between the two groups (p=0.118), but children in the epileptic encephalopathy group had a significantly shorter average duration (p=0.008) and longest duration (p=0.048) of respiratory events. Average (p=0.006) and least (p=0.0004) oxygen saturation (SatO2) were significantly lower in children with epileptic encephalopathies compared with the control group. CONCLUSIONS Children with epileptic encephalopathies had altered sleep architecture and marked oxygen desaturation, which supports the need for referral of children with epileptic encephalopathy for overnight sleep evaluation.

Habek M[1], Pavičić T[2], Ruška B[2], Pavlović I[2], Gabelić T[1], Barun B[1], Adamec I[3], Crnošija L[3], Krbot Skorić M[4]. Establishing the diagnosis of multiple sclerosis in Croatian patients with clinically isolated syndrome: 2010 versus 2017 McDonald criteria. Mult Scler Relat Disord. 2018;25:99-103.

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AIM: To compare the sensitivity, specificity and accuracy of the 2010 and 2017 revisions of the McDonald criteria in a Croatian cohort of patients with a clinically isolated syndrome (CIS). METHODS: Prospectively collected data from 113 patients were retrospectively analyzed. Sensitivity, specificity and accuracy for both criteria were calculated regarding conversion to clinically definite

multiple sclerosis (Poser CDMS) or multiple sclerosis (MS) (defined as fulfilment of clinical or MRI evidence for dissemination in space and the development of a second relapse and/or ≥1 new T2 lesions on the follow-up MRIs) during a two-year follow-up. Survival analysis was performed to estimate the cumulative risk of patients developing Poser CDMS. Binary logistic regression model was used to determine which variables are statistically significant predictors for the conversion to MS. RESULTS: The 2017 revision had higher sensitivity (85 vs. 30% and 85 vs. 41%) and lower specificity (33 vs. 63% and 63 vs. 85%) compared to the 2010 revisions, for conversion to Poser CDMS and MS, respectively. Patients who did not meet the 2017 McDonald criteria had a higher chance of conversion-free survival for Poser CDMS than those who met the 2017 McDonald criteria (p = 0.037). Results of the multivariate regression analysis revealed that patients who at baseline fulfilled 2017 revisions of the McDonald criteria have the increased likelihood of conversion to MS (Exp(B) 9.68, 95%CI 3.62-25.90, p < 0.00001). CONCLUSION: This study provides new information about the application of the 2017 revisions of the McDonald criteria in a Croatian cohort of patients with typical CIS.

Katalinic L[1], Krtalic B[2], Jelakovic B[1,2], Basic-Jukic N[1,2,3]. The unexpected effects of L-Carnitine supplementation on lipid metabolism in hemodialysis patients. Kidney Blood Press Res. 2018;43:1113-1120.

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BACKGROUND/AIMS: There is a growing body of evidence that the long-term hemodialysis (HD) treatment leads to disturbances of carnitine homeostasis but the results of L-carnitine supplementation in HD patients have been conflicting. In the present prospective study, we investigated the effectiveness of intravenous L-carnitine in mitigating dialysis-related protein-energy wasting (PEW) based on pre-treatment albumin levels. METHODS: Fifty patients (46% male, mean age 63±18.28 years, HD vintage 37.5 (7-288) months) received 1 g L-carnitine intravenously at the end of every HD session for 12 months. Clinical data were obtained from the medical records and charts. Intradialytic hypotension periods (defined as a decrease of systolic blood pressure by ≥ 20 mmHg) were recorded. Dietary habits were evaluated using a self-administered questionnaire prior to L-carnitine supplementation. Laboratory parameters were measured prior to the supplementation and controlled in 6-months intervals. Anthropometric measurements were performed prior to HD session, including "dry" body weight and height, body mass index (BMI), and body composition analysis using bioimpedance spectroscopy. Malnutrition-inflammation score (MIS) was used as a scoring system representing the severity of PEW and an indicator of general functional capacity. RESULTS: A significant increase in total cholesterol, predominantly on the account of LDL was found (p=0.005). Simultaneously, HDL decreased (p=0.001) while triglyceride levels remained unchanged. Although the rise in serum prealbumin could be observed, lean tissue index (LTI) decreased and fat tissue index (FTI) increased which resulted in reduction of the LTI/FTI ratio (p=0.002). When divided into two groups according to the pre-treatment albumin values (< 35 g/L or ≥35 g/L), patients from the higher albumin group showed significant increase in prealbumin (p=0.005), and improved MIS (p=0.03). Multivariate regression analysis showed that higher FTI after introduction of L-carnitine led to greater hemodynamic stability (OR 1.709, 95% CI 1.006-2.905, p=0.048). As there was no differences in HD treatment characteristics, primery kidney disease or residual diuresis we could conclude that positive energy balance (with an increase in prealbumin and FTI) eventually led to better hemodynamic stability. CONCLUSION: Our results show significant effects of L-carnitine supplementation on lipid metabolism. Further clinical trials, as well as experimental research are needed to define the role of lipid metabolism in CKD population. Significant benefits of L-carnitine supplementation in patients with better initial serum albumin levels suggest that this therapy should not be restricted to patients with the worst nutritional and overall status.index (PMI). RESULTS: Among 1500 women who fulfilled the inclusion criteria, 1181 (78.7%) were diagnosed with sacroiliac dysfunction and 1143 completed all follow-up. Pain assessed by the NPRS gradually worsened from the first toward the third trimester (P<0.001). The level of disability assessed by the PMI also increased from the beginning to the end of pregnancy (P<0.001). CONCLUSION: Sacroiliac dysfunction represents an important problem during pregnancy; pain severity and mobility problems increased during the course of pregnancy in the present study. AUSTRALIAN NEW ZEALAND CLINICAL TRIALS REGISTRY: ACTRN12613000246785.