

## Malnutrition impact on stroke outcome: an analysis of a patient cohort 3 months after recanalization treatment

\*<sup>1</sup>Diana Concescu, <sup>1</sup>Marie Bruandet, <sup>1</sup>Hélène Beaussier, <sup>1</sup>Mathieu Zuber

<sup>1</sup>Stroke Unit Saint Joseph Hospital, F-75014, Paris, France

\*Corresponding author: Diana Concescu. E-mail: dconcescu@gmail.com

### Abstract

**Background:** Malnutrition is thought to affect 30% to 70% of hospitalized patients. Little is known about consequences of undernutrition during the acute phase of stroke. We would like to assess the impact of pre-infarction malnutrition on stroke patients treated with thrombolysis and/or thrombectomy.

**Material and methods:** We performed a retrospective observational study on a cohort of stroke patients who benefited from thrombolysis and/or thrombectomy during 2015 in Saint Joseph Hospital's Stroke Unit. The main objective of our research was to observe the clinical course of undernourished patients compared to the non-undernourished ones, using the NIHSS score at the stroke unit discharged and the 3 months modified Rankin score. Undernutrition was defined by a body mass index of (BMI)  $\leq 21$ .

**Results:** A total of 81 patients with thrombolysis and/or thrombectomy treatment were included. The median BMI in < 70-year-old patients was 24.5 and 25 in > 70-year-old patients. Initial severity measured by baseline NIHSS score was comparable among the undernourished and non-undernourished patients. Undernourished patients over 70 had a more severe neurological state at discharge (NIHSS 8.5 versus 3.9, NS) and were more disabled 3 months after discharge (Rankin 3.1 versus 2, NS).

**Conclusions:** Undernutrition prior to stroke seems to have an impact on the functional prognosis of cerebral infarction, especially in patients > 70 years of age. Lack of significant results may be explained by the limited statistical means. A complementary study with a larger cohort is planned in order to assess this hypothesis.

**Key words:** undernutrition, cerebral infarction, body mass index.

## Paroxysmal disorders in children with cerebellar tumors

<sup>1</sup>Victor Lacusta, <sup>2</sup>Anatolii Litovcenco, <sup>3</sup>Corina Griu, \*<sup>4</sup>Gheorghe Bordeniuc

<sup>1</sup>Department of Alternative and Complementary Medicine, <sup>2</sup>Department of Neurosurgery, <sup>3</sup>Department of Pediatrics

<sup>4</sup>Department of Therapeutic Dentistry, *Nicolae Testemitanu* State University of Medicine and Pharmacy  
Chisinau, the Republic of Moldova

\*Corresponding author – Gheorghe Bordeniuc. E-mail: gheorghe.bordeniuc@usmf.md

### Abstract

**Background:** The cerebellum is involved in the pathogenesis of epileptic and non-epileptic paroxysmal disorders. Cerebellar lesions or the removal of cerebellar structures leads to a decreased effectiveness of antiparoxysmal treatment. The paroxysmal activity in patients with cerebellar tumors is currently not fully studied. The aim of the study was to find out the frequency of clinical paroxysmal disorders, the duration and intensity of paroxysmal activity of the brain in children with cerebellar tumors.

**Material and methods:** There were enrolled 36 pediatric patients with brain tumors: left hemisphere (LH) – 15; vermis (VE) – 11; right hemisphere (RH) – 10. The paroxysmal clinical manifestations, duration of the paroxysmal activity (Paroxysmal Index, Ip, %) and the intensity of the paroxysmal activity (Io, %) were studied via 3D computerized EEG method and brain localization system technology (BrainLoc – 4).

**Results:** The observed frequency of non-epileptic paroxysmal disorders were: orthostatic syncope (OS) – 11.1%; nocturnal phobias (NP) – 22.2%; hypnic jerks (HJ) – 44.4%; sleep talking (ST) – 33.3%; night terrors (NT) – 22.2%; enuresis (EN) – 11.1%; bruxism (BR) – 22.2%. The following associations of paroxysmal disorders were observed: OS + EN (11.1%); NP + HJ + ST (22.2%), NT + HJ (11.1%), BR + HJ (11.1%). The following values of Ip/Io indices were observed: LH lesion –  $8.9 \pm 1.31\%/72.4 \pm 3.89\%$ , RH lesion –  $8.7 \pm 1.39\%/77.9 \pm 4.92\%$ , VE lesion –  $2.29 \pm 2.11\%/52.5 \pm 8.6\%$ .

**Conclusions:** In children with cerebellar tumors, non-epileptic paroxysmal disorders were observed in 11.1 – 44.4% of cases. In case of lesions affecting the cerebellar hemispheres, the duration and intensity of the paroxysmal activity is higher when compared to vermis lesions.

**Key words:** paroxysmal disorders, paroxysmal index, paroxysmal intensity, cerebellar tumors.