

alternations of level of consciousness in acute stroke appear to be associated with pronounced leukocytosis, hyponatremia, elevated urea and creatinine.

Key words: alternations of level of consciousness, stroke

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Outcome of acute rehabilitation after stroke

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Introduction/Objectives: The aim of this research was to identify the outcome of the acute rehabilitation after the stroke and to analyze a degree of recovery in certain age groups.

Participants, Materials/Methods: Our retrospective analysis included 517 patients treated after the first stroke at Department for physical medicine and rehabilitation in Bizovac, University Hospital Osijek, Croatia in 2005 and 2006.

Results: Average value of BI in all examinees at the beginning of rehabilitation was 52.99 and in the end it was 65.77. Average Delta value of improvement level was 12.78. 15 patients suffered the first stroke at the age less than 44, average BI value at admission was 69.4 and 78.4 at discharge, while Delta value was 9.0. In the age group 45–54 years there were 56 patients, average BI value at admission was 62.7 and 75.82 at discharge, while Delta value was 13.25. In the age group 55–64 years there were 77 patients, average BI value at admission was 55.81 and 68.57 at discharge, while Delta value was 12.92. In the age group 65–74 there were 202 patients, average BI value at admission was 51.23 and 64.26 at discharge, while Delta value was 13.2. In the age group 75–84 years there were 158 patients, average BI at admission was 49.69 and 62.34 at discharge, while Delta value was 12.6. In the age group over 85 years there were 9 patients, average BI value at admission was 34.44 and 49.22 at discharge, Delta value was 14.77.

Conclusions: After conducted acute rehabilitation in all age groups significant recovery of functional deficit was obvious as well as improvement in everyday living activities. Average value of Barthel Index at the admission to the rehabilitation was at the level of severe dependence in all age groups while at the discharge all patients showed improvement and were placed in the group of medium dependence. The value of Barthel Index decreased with age while functional recovery, which was expressed through Delta value, was equal in all age groups. The highest degree of dependence was noticed in patients who were 85 year old or more and one remained the same.

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Correlation between extra-cranial and transcranial Doppler in evaluation of ischemic stroke

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Introduction/Objectives: Disorders of intracerebral hemodynamic as a result of atherosclerotic and arteriosclerotic changes are

frequent cause of ischemic–thrombotic CVI. Goal is to present correlation of extra cranial and transcranial Doppler in case of already developed ischemic CVI.

Participants, Materials/Methods: In this study we analyzed 96 patients with ischemic CVI, according to thrombosis type, confirmed with CT scan.

Results: Patients' age ranged from 45 to 76 years, with 58 women and 38 men. Among risk factors, hypertension was present in 87%, Diabetes 32%, hyper lipids in 29%, and smoking in 92% of patients. In the acute phase of CVI, with TCD method we recorded hypo perfusion in 79% of cases, and extra cranial color Doppler indicated narrowing of ACI above 50% and expressed atherosclerotic changes among 42% of patient, while in 18% ACI narrowing is not found up to 30% and in remaining 28% was without stenosis changes. In 3 cases there was a complete occlusion of ACI (2 on the right and 1 on the left side), and neurology deficit was from very mild to mild hemiparesis.

Conclusions: Disorder of hemodynamic in intracranial part is not in complete correlation with the extra carotid part of circulation.

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Functional diagnostics of reading difficulties in dysphasic adults

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Introduction/Objectives: Dysphasia is one of speech disorders in which there is impairment of the power of expression by spoken language, writing, or signs, or impairment of the power of comprehension of spoken or written language. Functional diagnostics of such patients is directed to the positive rehabilitation outcome. The objective of this study was to present the minimal diagnostic program for reading disabilities in patients with sensorimotor dysphasia.

Participants, Materials/Methods: Ten patients aged 40–80 were tested. Control group consisted of 10 healthy persons matched by age, gender and non-verbal status.

Complete diagnostic evaluation was performed included ophthalmological, otoneurological, evoked auditory and visual potentials, logopedic, psychological and psychiatric evaluation.

Results: The results show the positive correlation between:

1. Auditory synthesis and analysis results and auditory brainstem potentials findings,
2. Vasomotor function results and visual evoked potentials.

Conclusions: Minimal functional diagnostic program for dysphasic patients with reading difficulties must consist of neurological, logopedic and psychological testing. According to the results of psycholinguistic abilities evoked potentials testing (auditory and/or visual one) will be done for the rehabilitation purposes.

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Dysphagia in Huntington's disease – a course analysis

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Introduction/Objectives: Chorea Huntington (HD) is a neurodegenerative genetic disorder with psychiatric symptoms. The most patients die because of aspiration pneumonia which is the follow of dysphagia.

Participants, Materials/Methods: In our study we want to investigate the qualitative and temporal course of dysphagia in HD patients.

It is a prospective cohort study. Two blind clinical investigators evaluate the deglutition with an ordinal scale. The investigator divides the deglutition in an oral, pharyngeal and oesophageal part. For HD staging we use the Shoulson's clinical stages. For statistic analysis we use the Spearman SPSS.

Results: We found a significant correlation between stage of illness and the whole oral phase of deglutition and between bolus passages of oesophageal phase. There is a correlation between days of illness and the oral phase and penetration of pharyngeal phase of deglutition.

Conclusions: In future it will be important that HD patients get a speech therapy. Deglutition has a high protective factor for neurological disorders. Because of the early dysfunction in the oral phase malnutrition is a big problem for HD patients.

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The characteristics of visual evoked potentials in speech impaired children

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Introduction/Objectives: Previous studies have resulted that some speech impaired children show slower maturation of central visual function. Evoked visual potentials testing with cortical cartography is a useful diagnostic method for the visualisation of functional changes in visual pathway.

The aim of this study was to investigate the characteristics of visual evoked potentials in children with delayed speech development.

Participants, Materials/Methods: Twenty speech-impaired preschool children aged 6–7 were tested, divided to the verbal results (Reynell Developmental Language Scale). Control group consisted of 10 healthy children, matched by age, gender and non-verbal status.

Complete diagnostic evaluation was performed included ophthalmological, otoneurological, logopedic and psychological evaluation. Subjects and controls were examined by checkerboard pattern reversal visual evoked potentials (VEP) according to the 2004. European standards cortical cartography was simultaneously performed by Neuroscan 32-electrode system using Scan 4.3 software for data analysis.

Results: The results show positive correlation among N 135 wave characteristics (thalamocortical level) in visual evoked potentials and psycholinguistic abilities (Psycholinguistic language Acquisition). Children with immature visuomotor function show significantly shortened amplitude and delayed latency of N 135 wave during monocular and binocular stimulation.

Conclusions: Speech impaired preschool children with immature visuomotor function should be evaluated by visual evoked potentials with the purpose of efficient rehabilitation work.

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Differences in motor conductivity velocity (MCV) between Nervus tibialis and Nervus peroneus in case of diabetic polyneuropathy

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Introduction/Objectives: Diabetic polyneuropathy represent one of the main complications of diabetes. It belongs to the group of mixed axon demyelinating sensory and motor polyneuropathies. EMNG analysis in case of clinically obvious polyneuropathy verifies slow down of the sensitive and motor conduction velocities of the nerves, especially in lower limbs due to their length.

Goal: To determine difference of the motor conductivity velocity between N. peroneus and N. tibialis in patients with diabetic polyneuropathy.

Participants, Materials/Methods: For this paper we have randomly selected 30 patients with Diabetes mellitus and with evident clinical signs of diabetic polyneuropathy. In all cases we measured MCV in N. peroneus and N. tibialis with EMNG method and correlated.

Results: In the sample there was an equal number of male and female patients (15 each gender). Average age was 55.7 years. M: 57.5 and women: 54 years. Average duration of diabetes was 8.8 years. On insulin is 60% (18) patients, and on medications 40% (12). Average MCV in N. peroneus was 38.7 m/s, and MCV in N. tibialis 32.9 m/s. Lowest MCV in N. peroneus was 28.8 m/s, and N. tibialis 23.3 m/s.

Statistical analyses of correlation between MCV in N. peroneus and N. tibialis indicates statistically significant difference in conduction velocity, which is much slower in N. tibialis.

Conclusions: Based on our research we can conclude that the motor conductivity velocities are much slower in N. tibialis than in N. peroneus in vast majority of cases (87%), and in average are lower by 5.8 m/s, and in 4 cases (13%) MCV were lower MCV in N. peroneus compared to N. tibialis.

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Vertigo with hearing loss as the first symptom of leptomeningeal carcinomatosis originating from colorectal carcinoma

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Introduction/Objectives: Leptomeninges are common dissemination site of advanced malignant disease. The most frequent primary sites are breast, lung, melanoma and stomach, whereas colon is rarely reported. On the other hand, as the very first dissemination site of malignant disease leptomeninges appear to be quite rare.

Results: We report a case of a 70-year-old man who was admitted to the neurology emergency room with a 3-week history of mild frontal headache, vertigo and vomiting going back 3 days. The patient had no history of malignancies or any other serious diseases. The neurological examination showed an ataxic gait with the tendency to lean to the right, spontaneous nystagmus increased during the left gaze and hearing loss on the right ear. Findings of the multi-slice computed tomography (MSCT) of the brain were unremarkable. Magnetic resonance imaging (MRI) of the brain showed multiple periventricular white matter lesions. During the next few days the patient symptoms progressed to include right peripheral facial nerve palsy, complete hearing loss and mental alteration. Body temperature and inflammation parameters were normal all of this time. In order to ascertain the cause of the neurological deterioration gadolinium-enhanced MRI was performed, which revealed diffuse leptomeningeal enhancement of the cranial base a thickening of both of the vestibulocochlear nerves especially right one. Cerebrospinal fluid (CSF) analysis showed sterile hypercellular ($1184/3 \text{ mm}^3$) CSF with predominantly low-differentiated malignant cells with numerous mitoses, hypoglycorrhachia (1.7 mmol/l) and elevated protein

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