

disease; 2 being of I degree and one of II degree. 6 out of 20 patients had head trauma without loss of consciousness. The protective factors were: daily coffee intake (3-4 cups) found in one person, and tobacco use in the past, found in another 4 patients.

**Conclusions.** We observed a domination of causal factors in relation to protective factors.

**Key words:** Parkinson's disease, risk factors, protective factors

## **60. KINESIO TAPING AND MASSAGE THERAPY AS A METHOD OF REHABILITATION OF CHILDREN WITH CEREBRAL PALSY (CP) OUTSIDE OF THE HOSPITAL**

Authors: **K. K. Kabdullina, Zh. M. Baymagambet, Z.Y. Lamezhanova**

Scientific adviser: T.T. Kispava, MD, PhD, Professor, Department of Neurology  
Karaganda State Medical University, Karaganda, Kazakhstan

**Introduction.** Among the causes of disability in children central nervous system pathology ranks first. The lesion of this system often leads to child CP. According to statistical data, 13238 children are suffering from CP in the Republic of Kazakhstan (as of January 1, 2015).

**Aim of the study.** Exploring modern methods of rehabilitation for children with CP.

**Materials and methods.** This research was designed as a randomized, controlled research. 30 children with unilateral spastic CP were included, and were equally divided between the Kinesio Taping (KT) group and the control group that received usual care. KT is an additional study to increase proprioceptive feedback and improve fitness, gross motor function, and activities of daily life in children with CP. The next study included 31 cerebral palsied children scored as of level III, IV or V according to gross motor functional classification system. Children were randomly separated into two study groups (KT and physiotherapy) and a control group (only physiotherapy) for 12 weeks.

**Results.** A total of 60 children with CP were randomly assigned to the treatment group and the control group equally. All were treated with rehabilitation training, but massage with SMKT was carried out additionally for those in the treatment group, five times every week and 3 months as a therapeutic course. All children showed significant improvement in GMFM-66 after treatment. Massage with SMKT manipulation shows a better effect compared to rehabilitation training therapy alone in treating spastic CP. We can use kinesio taping and massage therapy as a method of rehabilitation for children with CP out of the hospital, which is more convenient and cost effective for parents (guardians). Time of children with CP is limited in a hospital or rehabilitation center, and rehabilitation of children with this pathology requires a long time. It should be noted that the massage therapist's services are not always possible for parents because of the financial situation in different families. We have worked and analyzed studies of foreign scientists on the topic of children CP.

**Conclusions.** The result suggested that in clinical settings KT may be a beneficial treatment approach when combined with physiotherapy. We also came to the conclusion that the complex of KT and massage therapy is effective in the treatment of children suffering from CP. In addition, the use of these methods can prevent the harmful possible outcomes of CP.

**Key words:** rehabilitation, massage, kinesio taping

## **61. CURRENT ACHIEVEMENTS IN REPORTING BRAIN IMAGING IN ISCHEMIC STROKE: ZONES AND SCORE ASPECTS**

Authors: **Tatiana Plescan<sup>1,2</sup>, Elena Costru-Taşnic<sup>1</sup>, Pavel Gavriliuc<sup>1,2</sup>**

Scientific adviser: Mihail Gavriliuc<sup>1</sup> MD, PhD, Professor, Department of Neurology no.1

<sup>1</sup>*Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova

<sup>2</sup>Institute of Neurology and Neurosurgery of the Republic of Moldova

**Introduction.** Ischemic stroke incidence and mortality rates show a constantly increasing trend worldwide. As the only specific treatment for ischemic stroke, considered the gold standard, tissue plasminogen activator can be applied only in first 3 hours from the symptoms onset, imaging report must contain maximal volume of information regarding the ischemic lesion. The Alberta Stroke Program Early Computer Tomography Score (ASPECTS) accurately classifies and standardizes regions of middle cerebral artery circulations and describes the subtle changes in imaging patterns, providing possibility to identify ischemia and appreciate its severity. ASPECTS represents a quantitative topographic assessment scale with 10 points for normal brain appearance and subtraction of 1 point for every area, where early ischemic signs are present.

**Aim of the study.** To appreciate applicability of ASPECTS reporting in CT studies in the routine workflow for identification and severity assessment of acute ischemic stroke.

**Materials and methods.** Our prospective study has included the evaluation of 167 consecutive patients with acute middle cerebral artery (MCA) ischemic stroke (first 6 hours) with ASPECTS score reporting for admission non-contrast CT (NCCT), functional perfusion CT (PCT) maps (48 patients). Volume and severity of final ischemic injury was assessed in ASPECTS circulation zones on the control non-contrast CT scan in subacute phase.

**Results.** Of total 1670 NCCT ASPECTS regions (10 zones in 167 patients), 542 regions showed final stroke on control NCCT scan. Sensitivity and overall accuracy of NCCT ASPECTS score, comparatively to the subacute NCCT scan, consisted 43% and 80% respectively. Of total 480 PCT cerebral blood volume regions, 155 showed final ischemic lesion on control NCCT. Sensitivity and overall accuracy of PCT ASPECTS score, comparatively to the subacute NCCT scan, consisted 89% and 93% respectively.

**Conclusions.** ASPECTS imaging grading model represents important, fast, reliable reporting score in patients with acute MCA ischemic stroke and shows greater accuracy in PCT maps. Introducing of ASPECTS reporting system increase substantially inter-reader agreement and rapidity of assessment and inter-disciplinary medical communication, regarding the ischemic brain patterns not only in hyperacute phase, but also in final stroke lesion in subacute phase. Application of ASPECTS zones classification in routine reports provides essential information for stroke assessment and emergency decision-making.

**Key words:** ischemic stroke, ASPECTS, non-contrast CT, perfusion CT

## **62. ALTERED STATE OF CONSCIOUSNESS AS A POSSIBLE FACTOR TO AMPLIFY THE THERAPEUTIC EFFECT IN THE CASE OF NEUROSTIMULATION IN THE CHRONIC PAIN**

Author: **Maria Vasilieva**

Scientific adviser: Ion Moldovanu, MD, PhD, Professor, Department of Neurology no.1

*Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova

**Introduction.** Chronic pain affects the American population more often than diabetes and cancer altogether. Neurostimulation is the new trend used in the treatment of neurological pathology. Non-invasive cranial neurostimulation includes the following types: transcranial electrical stimulation (tDCS), binaural beats stimulation. ASC is a state in which a person feels a qualitative change in their mental functioning model. tDCS and binaural beats stimulation can induce ASC, in healthy people.

**Aim of the study.** Studying the possibilities of neurostimulation in the induction of ASC, the presence of which would amplify the therapeutic effect in the treatment of chronic pain.

**Materials and methods.** Bibliographic analysis (PubMed).