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

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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).

Results. The neurological map of four methods (meditation, hypnosis, trance and daydreaming), that can induce ASC was analyzed. It was established the common component- the prefrontal cortex. The next step was studying pain mapping. We discovered that one of the areas involved in the pain phenomenon is, also, the prefrontal cortex. One of the function of it is that this region processes the pain signals and plans action to reduce the dolor syndrome. tDCS and binaural beats were analyzed as a methods of induction in ASC. The common mechanisms of action, of these two methods are the appearance of theta cortical waves and the involvement of the prefrontal cortex.
Conclusions. The prefrontal cortex becomes the main target in the prophylaxis and treatment of chronic pain, through induction in ASC.
Key words: altered state of consciousness (ASC), neuroimaging, chronic pain, neurostimulation

63. MENINGITIS IN STRUCTURE OF PATIENTS WITH NEUROINFECTIONS

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Introduction. Despite modern technologies and improved clinical care, meningitis remains an unsolved problem that leads to high morbidity and mortality rates worldwide.
Aim of the study. To evaluate the structure of meningitis in adults; to determine the risk factors in correlation with clinical outcomes, as well as the etiological factors of adult meningitis.
Materials and methods. It is a retrospective observational study conducted in Institute on Neurology and Neurosurgery from medical records of patients from 2015 to 2016 in the Neuroemergency section. 25 patients aged between 19 and 67 years with confirmed diagnose of meningitis were selected. The outcome was unfavorable for 15 patients (60%), 9 of them (36%) from both groups died. We evaluate the clinical features of the patients, cerebrospinal fluid, and the imagistic and laboratory tests.
Results. From cerebrospinal fluid examination we selected 18 cases (72%) of septic meningitis and 7 cases (28%) of aseptic meningitis. From clinical features we established a rate of 64% of the classic meningitis triad, and a rate of 44% of the alternative meningitis triad. Only in 7 (28%) of 25 meningitis the causal agent was identified: twice Treponema palidum, twice E.coli haemolyticum, Enterococcus Faecium, Streptococcus Viridans and Mycobacterium tuberculosis. The imagistic examination showed signs of meningitis only in 20% of the cases. Out of the laboratory tests we established the highest values of blood glucose in dead patients with septic meningitis (9.87 mmol/l). We have also determined an Odds ratio of 12 (95% CI 1.07 to 134.11, $P<0.05$) of correlation between death risk and diabetes mellitus in patients with meningitis. Other negative predictive factors were the following: high levels of erythrocyte sedimentation rate, low platelets count, high level of blood urea and creatinine.
Conclusions. The presence of diabetes in meningitis patients increased the mortality by 12. Diabetes is a strong independent risk factor for death in community-acquired adult bacterial meningitis. Other risk factors for negative outcome in meningitis patients were: high level of cell counts in cerebrospinal fluid, high level of blood erythrocyte sedimentation rate, urea and creatitine.
Key words: meningitis, cerebrospinal fluid, diabetes.

64. INDUCTION OF ALTERED STATES OF CONSCIOUSNESS THROUGH BINAURAL BEAT STIMULATION ON HEALTHY SUBJECTS, A PILOT STUDY

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