

symptoms and 5 rashes that have not developed systemic signs (therapy was suspended). Lamotrigine is a well established antiepileptic known to be responsible for hypersensitivity reactions manifested through skin reactions. These kinds of ADRs are potentially life threatening if not recognized on time. The objective was to analyze and identify risk factors in cases of severe skin rashes associated with lamotrigine therapy.

**Participants, Materials/Methods:** Review of collected ADRs from Agency's database by the keyword lamotrigine and evaluation of these reports.

**Results:** Review of three cases of severe skin rashes caused by lamotrigine.

Case 1: 16-year-old patient within few weeks of combined therapy with lamotrigine 75 mg and valproate 450 mg daily experienced febrile reaction, exfoliative rash, had difficulties swallowing, sore throat and generalized maculopapular rash. At the same time, Beta Hemolytic Streptococcus (BHS) was isolated and he received benzatin-fenoxymetil penicillin, antihistamines and corticosteroids but progression of symptoms continued. Lamotrigine was discontinued, patient recovered.

Case 2: 4-year-old infant started receiving 10 mg lamotrigine daily with valproate 45 mg and clonazepam 1 g as a standard therapy. Twenty days afterwards mononucleosis like symptoms, maculopapular rash, enlarged spleen and lymph nodes along with high fever (40°C) developed. Lamotrigine was discontinued and patient recovered within 3 days.

Case 3: 14-year-old female patient received valproate 750 mg. Within 43 days of receiving concomitant lamotrigine 25 mg daily she experienced vulval redness and itching, diarrhea and rash indicating systemic hypersensitivity reaction. Reaction ceased upon discontinuation of lamotrigine.

**Conclusions:** In the presented cases we identified the cause of the severe ADRs as a result of given risk factors: too high dose, pediatric patients, interaction with valproate, drug-induced rash not recognized due to BHS infection respectively. The severity of rash in the reviewed cases and development of more severe symptoms has usually been related to duration of exposure to lamotrigine and it is not possible to predict reliably which rashes will prove to be serious or life threatening. That is why lamotrigine should ordinarily be discontinued at first signs of rash, unless the rash is clearly not drug related.

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### Epilepsy and partial agenesis of corpus callosum (case report)

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**Introduction/Objectives:** Epilepsy may be caused by number of different ethologies. Seizures of partial origin with or without secondary generalization mostly have an underlying structural lesion and it is very important to notice present focal neurological deficit. Congenital malformations of the brain linked to epileptic seizures are well described and manifested in variable clinical spectrum. The association between partial agenesis of corpus callosum (ACC) and epilepsy has not been described often. The impaired psychological functions and the diminished level of some cognitive functions in patients with epilepsy and ACC, especially memory are related.

**Participants, Materials/Methods:** We present 35 year old, left-handed male with late onset of epilepsy presenting with secondary generalized seizures. In past history is information of neonatal central apnea. Neuroradiological features (MRI) were performed to exclude etiological factor for first seizure in his 31 years.

**Results:** Brain MRI revealed the partial agenesis of corpus callosum.

General physical evaluation and neurological examination showed excavated feet with shortened triceps tendon and mild bilateral pyramidal lesions.

Our patient has lower cognitive status than average population and neuropsychological tests demonstrated mental retardation as result of organic cerebral dysfunction.

Epilepsy becomes easily controlled after treatment with lamotrigine 200 mg twice daily.

**Conclusions:** Late-onset epilepsy needs multidisciplinary approach because underlying precipitating factors are different and sometimes unexpected, as it has been shown in our patient.

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### Aseptic meningitis, sensorineural hearing loss induced by simultaneous use of ibuprofen and ciprofloxacin

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**Introduction/Objectives:** Aseptic meningitis (AM), with or without other drug-induced neurological disorders, has been the subject of several reviews.

**Participants, Materials/Methods:** We report clinically rare and serious adverse reactions that occurred after the co-administration of Ibuprofen and Ciprofloxacin: completely reversible aseptic meningitis and irreversible bilateral sensorineural hearing loss, tinnitus, and vestibulopathy.

**Results:** Recurrent urinary inflammations treated with antibiotics, classic migraine, and allergy to trimethoprim-sulfamethoxazole and chromium were favourable predisposing factors for the adverse event in this patient. A close chronological relation between administration of drugs (especially Ibuprofen) and adverse reactions was noted. No evidence of infection and/or autoimmune disease was found.

**Conclusions:** The mechanism of these serious events may be explained as a hypersensitive reaction affecting the meninges and, partially, cochlea.

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### Etiologic aspects of carotid transient ischemic attacks

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**Introduction/Objectives:** Transient ischemic attack (TIA) is a medical emergency indicating unstable brain ischemia with high risk of imminent stroke and requires immediate assessment and treatment. The aim of this study is to analyze the possible etiological factors of carotid transient ischemic attacks.

**Participants, Materials/Methods:** For the purpose of this study we use the traditional definition of TIA based on symptom duration and not on the presence of brain infraction on the brain imaging. During the 1-year period 108 patients (69 men and 39 women) were analyzed in Department of Neurology Clinical Hospital Center Rijeka.

**Results:** Our results show a male predominance (male 64%, female 36%). The principal risk factors like arterial hypertension had 71%

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patients, smoking 64% patients, hyperlipidemia 51% patients and diabetes mellitus 8% of patients. Among these patients, 30% of them had ipsilateral stenosis and 9% had ipsilateral occlusion or subocclusion of extracranial carotid arteries. The possible cardiac embolic pathogenic mechanism among our patients (including atrial fibrillation, which is most common, mitral stenosis, myocardial infarct, mitral insufficiency, open foramen ovale and combined mitral valve defects) is found in 9% of TIAs.

**Conclusions:** Although by definition TIA's cause no residual disability, they indicate an imminent high risk of a more serious cerebrovascular and cardiovascular event. Therefore, patients risk factors should be identified and appropriate action should be taken to reduce the patient's overall vascular risk.

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### Is asymptomatic carotid artery stenosis really asymptomatic?

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**Introduction/Objectives:** Asymptomatic carotid artery stenosis (ACAS) contributes stenosis of one or both internal carotid arteries, without cerebral ischemia related to it (transient ischemic attack, cerebral infarction, amaurosis fugax). Several studies showed that ACAS is not really asymptomatic and it is frequently associated with cognitive decline.

This study was aimed to analyze association between vascular risk factors, especially insulin resistance, and cognitive decline in 100 patients with ACAS and 50 age-, sex- and educational level healthy matched control subjects.

**Participants, Materials/Methods:** Insulin resistance was tested by homeostasis assessment model (HOMA IR), plasma insulin levels by radioimmunoassay, levels of total-, LDL-, HDL- cholesterol, triglycerides and plasminogen activator inhibitor-1 were measured. Carotid plaques characteristics and intima-media thickness (IMT) were determined by ultrasound system (ALOKA Alpha 10, Japan). We used detailed neuropsychological testing to examine attention and concentration, memory, executive and visual constructional functions, motor performance, language and speech. Study was prospective and all patients were followed-up for 2 years.

**Results:** In comparison with controls, ACAS patients had significantly lower results on all neuropsychological tests at the beginning ( $F [1.71] = 6.37; P < 0.001$ ), and after 2 years of follow-up, with further cognitive decline from the baseline ( $F [1.71] = 71.12; P < 0.001$ ). Insulin resistance was significantly associated with memory, language and visuospatial disturbances ( $CC = -0.3891; P < 0.001$ ) and carotid plaques characteristics with attention, executive and motor functions ( $CC = -0.4662; P < 0.001$ ).

**Conclusions:** ACAS is not asymptomatic, because it is associated with specific profile of cognitive impairment. Specific risk factors predict cognitive decline in certain neuropsychological domains, and this could have important therapeutical implications.

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### Unusual neck artery branching as a cause of transient ischemic attacks

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The case of a 50-year-old patient who was received in the neurology department because of repetitive transient alter, left hemifacial, palsies and right hemiplegic attacks is present. Risk factors for a cerebrovascular disease were arterial hypertension and smoking. Transient attacks occurred two times before last hospital treatment. In that period (2006–2008) an EMG, CT and MR of the brain and spinal cervical cord and even a cervical myelography has been done with normal results, except cervical degenerative spondylotic changes. Routine color Doppler analysis of the carotid arteries was also normal according the patients age. A vertebral artery examined by Color Doppler showed that right one is lean and short. After the last similar attack at September 2008th, again the complete hospital examination occurred, this time with an MSCT angiography of the aortal arch, carotid and vertebral arteries. An unusual, atypical, common starting point of the brachio-cephalic aortic branch and left common carotid artery, together with a thin and lean, right vertebral artery has been found. Last one could be followed up to CII–CIII cervical segment. According to the above findings, authors opinion is that this atypical neck and brain vascularisation was the origin of clinical disturbances. Color Doppler findings of vertebral artery defects must be sometimes verified with, a proper radiological investigation.

#### References:

Chaturvedi S, Lukovits TG, Chen W, Gorelick PB. Ischemia in the territory of a Hypoplastic vertebrobasilar system. *Neurology*. 1999;23;52(5):980–3.  
Cillessen JP, Kappelle LJ, van Swieten JC, Algra A, van Gijn J. Does cerebral infarction after a previous warning occur in the same vascular territory? *Stroke*. 1993;24(3):351–4.

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### Early treatment of cerebrovascular insult with atorvastatin application

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**Introduction/Objectives:** Given the above-mentioned pathophysiological processes that occur during the stroke, and the extreme importance of atherosclerosis behind most strokes, we felt that the early i.e. urgent treatment of stroke provided room for treatment of the very process of atherosclerosis i.e. taking advantage of additional effects of hipolypemic agent Atorvastatin (Atorvox), aimed at improvement of the total survival rate, better outcome and reduction of neurological damage in patients who suffered stroke.

**Participants, Materials/Methods:** During 2-month observation of the work of the emergency service of “JU Dom Zdravlja Fojnica” medical center and its family medicine department, a group of eleven patients (seven males and four females) was covered, year of birth ranging from 1925–1950. All patients carried certain risk from development of cerebrovascular insult (Diabetes, smoking, hyperlipidemia, atrial fibrillation), and were admitted at the emergency service in 20 to 70 minutes.

Upon admittance, urgent laboratory tests (complete blood picture, blood sugar level, transaminases, CK) and ECG were made. Anti-edematous therapy was applied, norotrophic, O<sub>2</sub> through a mask, antihypertensives (Urapidil), Atorvastatin (Atorvox) 80 mg PER OS, and the patients were urgently sent to the neurological department of the Cantonal Hospital in Travnik, where they arrived in 55 minutes average.

**Results:** All 11 patients were hospitalized for 24 days in average. During hospitalization, they underwent CT, laboratory tests, and received supportive therapy without any active thrombolytic treatment (rt-PA). None of the patients had increased values of

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