

Results: In selected illustrative cases we present imaging findings characteristic for different pathological white matter processes.

Conclusion: MRI is a very sensitive but unfortunately relatively unspecific method for evaluation of WML. As mentioned earlier, differential diagnosis of WML is a long list. Due to that the diagnosis of a specific pathological process characterised by one or more lesions in the white matter has to be made by combining clinical aspect and radiological assessment.

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Surveillance of Croatian pregnant women with epilepsy and effects of antiepileptic drugs exposure in their offspring

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Introduction: The aim was to survey pregnancies exposed to AED and their offspring in order to assess teratogenic/neurodevelopmental effect of newer generation AEDs.

Methods: This is prospective surveillance of pregnancies in women with epilepsy (May 2003–May 2008). Pregnancy planning data, folic acid (FA) supplementation, seizure frequency and AED therapy were obtained.

Results: From 47 pregnancies: 83% (39/47) exposed to monotherapy: 23 to lamotrigine (LTG): 13 live-births (LB), 2 premature deliveries, 2 spontaneous abortions (SA), 1 artificial abortion, 1 intrauterine death and 4 ongoing pregnancies (OP). Seven LB were exposed to carbamazepine (CBZ), 1 LB was under phenytoin (PHT) and 1 under phenobarbiton (PB) with EPH gestosis/periparturient asphyxia. One preterm LB (ASD), severe psychomotor delay and epilepsy) was exposed to gabapentine (GBP), 3LB and 1 OP were under valproic acid (VP). One LB and 1 SA were under phenobarbiton (PB). Six pregnancies were exposed to polytherapy: topiramate (TPM)/VP (1 LB, 1 SA, 1 OP) CBZ/PB (1 stillbirth); TPM/CBZ/PHT (1LB) with intrauterine growth retardation and dysmorphism); VP/clonazepam (CZP) (1 OP). Two women without AED therapy delivered healthy LB. From 35% planned pregnancies, 20% took FA properly. About 25.5% of these women had their second or third pregnancy during our survey and their pregnancy planning was above 50% mainly due to preconceptional counseling.

Conclusion: Pregnancies under polytherapy resulted in larger proportion of complications. Besides 4 SA, 2 still-births, 2 premature deliveries, we have noted 1 possible intrauterine AED effect and 1 premature LB with ASD, psychomotor delay and epilepsy. Adequate preconceptional counseling in women with epilepsy resulted in higher pregnancy planning and FA intake. Follow up of LB till school age is needed.

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Public knowledge and predictors for negative attitudes toward patients with epilepsy in Croatia

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Rationale: We assessed public knowledge of and attitudes toward people with epilepsy in the Croatian population. We also aimed to identify independent predictors of negative attitudes.

Methods: We performed a survey consisting of a representative sample of 1500 adults. The population tested were 18 years or older, living in a private households. Croatia is a country of 5.5 million inhabitants with a socioeconomic and ethnic profile similar to neighboring Middle European countries. Within the sample, the respondents were selected according to the random route method that guaranteed a representative sample concerning households. The survey consisted of questions intended to determine the respondents' socioeconomic background and education, acquaintance with persons with epilepsy and knowledge and attitudes towards them. Urban and rural population was tested living in the places of less than 2,000 to more than 100,000 inhabitants. This survey consisted of 14 questions, tailored to the ones used in earlier studies of public knowledge towards people with epilepsy in other countries. Logistic regression analysis was used to test for independent predictors of negative attitudes. All data were stored and analyzed in the SPSS database.

Results: We surveyed a representative sample of Croatian population aged between 18–94 years. Majority were females (55.3%), living in urban setting (61.3%) with high school or higher degree (78.6%). Majority of the respondents worked for a public or private company (37.5%), and 34% were retired.

The results show that 91% of respondents have heard about epilepsy, 57% of them know a person with epilepsy and 55% have witnessed a seizure. 48% believed that people with epilepsy are treated differently in the society. Majority of them presume that epilepsy is a mental illness (41%), 29% that people with epilepsy should have a lower quality job, 17% do not want that their son/daughter live with person with epilepsy, 17% think that people with epilepsy should not have children, and 12% that they should attend special schools. 87% of respondents without any regular education assume that people with epilepsy should have a lower quality job, however, this is still high belief in the people having a university degree (25%). Consistent independent predictors for all attitudes were a positive response to the question whether one has heard or read about epilepsy, the misconception of epilepsy as a form of mental illness and an infectious disorder. Employment and knowing someone with epilepsy were independent predictors for four out of five tested attitudes.

Conclusion: This is the first study assessing public knowledge of and attitudes toward people with epilepsy in the Croatian population. We showed that public knowledge of epilepsy is similar to other countries, and we defined predictors for negative attitudes. Future educational campaigns on epilepsy should improve attitudes toward epilepsy mainly by targeting misconceptions about epilepsy and by offering opportunities for personal acquaintance with people with epilepsy.

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Importance of early recognition of adverse drug reactions (ADR) induced by lamotrigine

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Introduction/Objectives: During the period from March 2005 to April 2008 Croatian Agency for Medicinal Products and Medical Devices (Agency) received 10 reports of ADRs associated with lamotrigine. Three of those were severe ADRs including Stevens Johnson syndrome and hypersensitivity including multi-systemic

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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 etiologies. 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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