INTRODUCTION

The treatment of epilepsy, especially in epileptic encephalopathies is a challenge because of their high resistance, sometimes discouraging of the recurrent crises. It consists of...
The polymorphic nature of the seizures, their variability during treatment supported by the drug control inefficient to seizures and by the maintenance for long periods of EEG patterns characteristic in most cases, make of these forms of EE, true redouts, sometimes insurmountable.(2) The most common forms of this group are the West syndrome (WS), Lennox-Gastaut syndrome (LGS) and Lennox-Gastaut syndrome evolved from the West syndrome (WS-LGS).(2) The diagnosis in WS is based on the infantile spasms triad (symmetric, asymmetric, asynchronous, focal, combined with focal seizures or preceded by these, subtle, subclinical or preceded by short atonia), EEG characteristic pattern, hipsaritmia (classical, fragmented, asymmetrical, unilateral, atypical) and psycmotor retardation, accentuated initially or developed over time.(3,4) The diagnosis in LGS is also based on a triad, ie polymorphic seizures (mostly generalized, tonic, tonic-clonic and atomic, and atypical absence and status epilepticus), EEG characteristic pattern, discharged generalized by spike-wave complexes with periodic character, pseudo-rhythmical and psycmotor regression after the onset of seizures (some forms are evolving from WS in which both clinically and in terms of EEG, there has been a transition of the types of seizures, respectively of the EEG aspect.(5,6) Monotherapy is an utopian concept, and the bi- or polytherapy represents the rule. Drug combinations are based on objective principles, represented by compliance with the recommendations provided in epilepsy treatment guidelines developed by recognized international boards and according to rational politherapy principles which involve combining AED with different mechanisms of action.(7,8) However, there are many situations where the medical treatment has not proved fully effective, so that we need to resort to non-pharmacological methods, such as epilepsy surgery (subpial multiple transsection, section of corpus calosum, hemispherectomy) (9), ketogenic diet, vagal nerve stimulation, cerebellar stimulation, neuromodulation of the centro-median thalamic nucleus (after previous unsuccessful attempts to stimulate the anterior thalamic nucleus).(10,11) The above-mentioned methods refer mainly to the group of resistant epilepsies, united under the term of epileptic encephalopaties. In order to adopt and observe a common language on the definition of accurate operational terms in the treatment of epilepsy, at the International Epilepsy Congress that took place in Budapest in 2009, the Executive Committee of the ILAE (International League Against Epilepsy) defined the treatment resistance by using two hierarchical levels.(12)

The first level is advancing a general scheme to include in categories the answers to each therapeutic intervention based on a minimum set of data on the need for intervention. The second level suggests the essence of the definition of treatment resistance: “failure of adequate attempts with one or two antiepileptic drugs carefully chosen, well tolerated and commonly used to obtain control over the seizure”.(12) This definition has become a necessity in order to adopt a common language; in circumstances marked by a rapid development of the therapeutic options. Defining seizure control was also an important issue under discussion and was finally defined as: “control over all types of seizures for a period of 12 months or a period equivalent to three times longer than the time between seizures, before a new therapeutic intervention, no matter what it would be”.

The benefit of these specifications lies in the possibility to choose as objectively as possible, the most favourable moments for the most effective combination of AED.(12)
different and varied degrees of control regarding the above-mentioned parameters. These aspects required new therapeutic decisions, taking into account the aspects of EEG captured. The most common types of seizures in WS were the infantile spasms, whether they occurred in flexion or extension, in bursts or isolated, symmetric or asymmetric, preceded or not preceded by focal seizures, strongly manifested or with subclinical aspect, each of these features represent a valid criterion in a determined stage. Generalized tonic seizures followed, the tonic-clonic seizures, amiotonic seizures (irrespective that they referred to the head or trunk flexion and convulsivant epileptic seizures characteristic of LGS status. As it can be seen in Figures 1, 2 and 3, drug control has been shown progressively consistently favorable in infantile spasms (figure no. 2), while in the other two categories (generalized and focal seizures), the control proved variable in the different stages (Figure no. 1 and no. 3).

EEG patterns were represented in considerable proportions in hipsarrythmia, that registered different percentages according to the moment of recording (nearly 30% at the first recording, 12% at the second, then the percentage declined below 10%) eventually replaced by the generalized discharges of spike-wave complexes, first with the percentage representation of 14%, followed by successive increases to 24%, maintenance records set at 3 and 4 and finally increased to almost 30%, the fifth record) (Figures 4-8), and one of the variant of HA (hipsaritmia fragmented, having an opposite trend, with progressively increasing percentage values to values below 10%, above) (Figures 4-8), sometimes with outbreaks in various locations, but mostly frontally and/or temporally, characteristics in the LGS. In one case, we found status epilepticus in slow wave sleep. Statistical representation of those stated before was possible by applying specific tests and by the graphical representation of the results.

The therapeutic combinations revealed an important aspect that of the frequent involvement of valproic acid in many combinations, while other drugs such as lamotrigine and
topiramate used according to the recommendations as adjuvant medication were found in lower percentages without significant statistical importance. Based on the current results, it can be stated that the group of EE represents the powerful forms of epilepsy in the therapeutic options (at least in terms of numbers in full progress), which is reflected in the clinical pictures, too revealing almost in all the cases, mixed severe retardation in development (motor, mental and language retardation). It is largely maintained by the lack of control or by partial insufficient control on seizures (too many, too strong, too resistant). In this context, epilepsy surgery was proved very useful in the West syndrome, whereas vagal nerve stimulation, cerebellar stimulation and centromedian thalamic nucleus neuromodulation, mainly in the Lennox-Gastaut syndrome by controlling seizures in 40-42% of cases, improve these patients' quality of life.

Figure no. 7. EEG 4 patterns frequency

Figure no. 8. EEG 5 patterns frequency

REFERENCES