Drug-Resistant Epilepsy: Risk Factors and Prevalence in a Low-Incoming Country

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Introduction: the prevalence of epilepsy worldwide is 1%. The International League Against Epilepsy estimates that 30% of epileptic patients do not respond to medication, so advanced, high-cost surgical measures are indicated. The incidence of drug-resistant epilepsy (DRE) varies in different countries according to different studies, being few of them realized in Latin America. The objective was to determine the incidence of DRE in Argentina and establish risk factors (RF). Methods: prospective multicenter (2 hospitals) observational study, between March 2021 and April 2022 that included patients >18 years-old, with diagnosis of epilepsy. Patients with psychogenic seizures and/or follow-up <2 years were excluded. The ethics committees of both hospitals authorized the study. The following were evaluated: age, sex, history, years of evolution, type of epilepsy, etiology, type of seizure, complementary studies. Continuous variables were described as median and CI (25-75 percentile) and qualitative variables as percentages. Patients were grouped according to whether they were DRE or not. Groups were compared using the Mann-Whitney and Fisher tests. Multivariate logistic regression was performed for RFs expressed as OR and 95%CI. Results: a total of 114 patients were included, 51 of whom were men, with a mean age of 39.59 ± 14.01 years. Drug-resistant patients were 40.3% (n:46), with an earlier age of onset of the first seizure than drug-sensitive patients, 22.3 ± 16.3 vs. 15.6 ± 9.3 years, p:0.0055. When evaluating personal and family history, the only one that increased the risk was febrile seizures (OR:4.41). Regarding the type of epilepsy, focal epilepsies increase the risk of DRE. Complex focal seizures also constitute a RF (OR:2.81). Finally, the structural cause increases the risk (OR:2.87) and that explains why abnormal MRI is also a RF (OR:5.7). Conclusion: the incidence of DRE in Argentina is higher than estimated. In agreement with studies in other countries, we found that the history of febrile seizure or certain characteristics of epilepsy are RF and should be considered to improve early treatment planning, especially in low-income countries where it is difficult to perform advanced studies as well as surgical measures due to the high cost and difficult access to them.