

EPILEPTIC SEIZURES IN POLAND BETWEEN JUNE 2000 AND MAY 2001: TYPES AND FREQUENCY. A MULTI-CENTRE STUDY

Jerzy Majkowski¹, Teresa Korwin-Piotrowska², Joanna Jędrzejczak³, Andrzej Kozik⁴, Sergiusz Józwiak⁵, Ewa Motta⁶, Beata Majkowska-Zwolińska⁷

¹Epileptology Foundation, Centre for the Diagnosis and Treatment of Epilepsy, Warsaw ²Chair and Clinic of Neurology, Pomeranian Medical Academy, Szczecin, ³Department of Epileptology and Neurology, Postgraduate Medical Education Centre, Warsaw, ⁴Specialist Interdisciplinary Hospital, Department of Child Neurology, Wrocław, ⁵Institute - Child Health Centre Memorial Hospital, Department of Neurology, Warsaw, ⁶Chair and Clinic of Neurology, Silesian Medical Academy, Katowice, ⁷Department of Neurosurgery, Medical Academy, Warsaw

Summary

Introduction. Epilepsy is a heterogeneous and dynamic process and these characteristics affect the variety of types and the frequency of seizures.

Objective. The purpose of this study was to identify the frequency of seizures depending on a) types of seizures in one-type seizure groups (os) and mixed seizure groups (ms), b) age and c) sex.

Material and method. All in all, 6193 patients with epilepsy (M – 51.9%, F – 48.1%) were studied. Together, these patients presented 8194 types of seizures. Age: 1-95 years (M = 26.37; Me = 22.0), average duration of epilepsy: 9.8 years (Me = 6.3). Statistics: χ^2 and Pearson's χ^2 for contingency tables.

Results. As far as types of seizures are concerned, 71% of the patients had one type, 26% had two types and 3% had three or more types ($p < 0.0001$). In mixed seizures, one patient had 2.1 types of seizures on the average. One-type seizures (os) were more frequent in men than in women ($p < 0.004$); no significant differences between men and women were found for mixed seizures (ms). Primary generalised convulsive seizures (PGC) were more frequent (34.1%) than secondary generalised seizures (26.5%) ($p < 0.005$); partial complex seizures were found in 23% of the patients, absence seizures in 7%, partial simple seizures in 6.3% and myoclonic seizures in 2.9%. Focal attacks were found in 56% of the patients in the one-type group and 76% of the patients in the mixed group. PGC seizures were present in 10% of the patients with mixed seizures and three times fewer patients in the one-type group ($p < 0.0001$). Incidence of focal seizures increases with age. Absence and myoclonic seizures are negatively correlated with age. Absence seizures are more frequent in women than in men. Whatever their type, the distribution of seizures is bi-modal (with a slight modification for absence and myoclonic seizures): the first peak of patients is found for seizures occurring 2-4 times month and the second peak occurs for seizures occurring 2-5 times a year. Coexistence of other types of seizures does not alter this bi-modal frequency distribution. Frequent seizures peak at partial seizures and infrequent seizures peak at generalised tonic-clonic seizures (no sex differences were found for the frequencies of this type of seizure). Coexistence of another type of seizure has a significant effect on the prevalence of partial seizures and secondary generalised seizures whose numbers increase with age in both men and women ($p < 0.0001$). In the single-type seizure group, partial complex seizures occur more frequently in women than in men ($p < 0.0005$) whereas their number decreases with age in men ($p < 0.0001$). The number of secondary generalised seizures increases with age in both men and women in both the single-type seizure group and the mixed group.

Key words: Epilepsy – Types of seizures – Frequency of seizures – Effects of age and sex