A community based epidemiological study of epilepsy in Assiut Governorate/Egypt

Eman M. Khedr, Ola A. Shawky, Mohamed A. Ahmed, Noha Abo Elfetoh, Ghada Al Attar, Anwar M. Ali, Mahmoud R. Kandil, Hassan Farweez

Abstract:

Background: The aim of the study was to estimate the prevalence of different types of epilepsy and their possible risk factors in the region of the Assiut Governorate/Egypt. Material and methods: A community based study with random sampling of 7 districts, involving 6498 inhabitants. Out of this sample, 578 dropped out leaving 3066 males (51.8%) and 2854 females (48.2%). There were 3660 (61.8%) urban residents and 2260 (38.2%) from the rural community. Patients were evaluated using a screening questionnaire for epilepsy, and then referred to the hospital to be re-evaluated by a qualified neurologist and with electroencephalography (EEG) and computed tomography of the brain (CT). Results: Seventy-five cases were diagnosed with epilepsy giving an overall the crude lifetime prevalence rate (CPR) for epilepsy of 12.67/1000 (95% CI: 9.8—15.54). The active prevalence rate was 9.3/1000 and the incidence rate was 1.5/1000 (95% confidence interval: 0.53—2.51). Fifty-six cases (75%) had idiopathic epilepsy (CPR 9.5/1000). Symptomatic epilepsy was recorded in 19 (25%) cases (CPR 3.2/1000). Generalized seizures were more common (CPR 6.75/1000) than partial seizures (CPR 2.5/1000). The prevalence rate of partial seizures evolving to secondary generalization was 0.84/1000 while simple partial and complex partial seizures had CPR 1.4/1000 and 0.34/1000, respectively. The CPR of mixed seizures was 0.17/1000. Epilepsy was slightly but not significantly more common among males than females (CPR of 14.4 and 10.9 per 1000 population, respectively). The CPR was higher in rural than urban populations (17.7/1000, with 95% CI 12.2-23.18 and 9.56/1000, with 95% CI: 6.39—12.7, respectively) and in the illiterate group than the literate population (12.02/1000 and 9.94/1000, respectively). The highest prevalence rate was recorded in the early and late childhood period (69.78/100,000 and 43.78/100,000, respectively). Prenatal insults and infection represented major causes of symptomatic epilepsy.

Keywords:

Epilepsy; Epidemiology; Arabic countries; European countries; Asia

Published In:

Epilepsy Research, Vol.103, No.2-3, PP.294-302