

Spike-and-wave complexes and seizure exacerbation caused by carbamazepine.

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Abstract

The purpose of this research is to analyse patients in whom carbamazepine (CBZ) therapy adversely affected electroencephalogram (EEG) recordings leading to seizure exacerbation and to identify risk factors for these events. From a total number of 2191 patients (p.) included in the Municipal Epilepsy Center (MEC) database, 77 patients with spike-and-wave (SW) discharges while on CBZ treatment have been selected. Patient population was divided in two groups: (i) patients who were already receiving CBZ at the time of their first visit to the MEC; and (ii) patients to whom CBZ was prescribed during follow-up at the MEC. CBZ was discontinued in all patients with confirmed evidence of an increase in seizure frequency, or with no improvement of epilepsy. During follow-up, EEG findings as well as all clinical changes were duly recorded. Group 1:

Carbamazepine was discontinued in 17 patients (p.) as a result of paradoxical reactions. This condition occurs when an antiepileptic drug (AED) appears to exacerbate a type of seizure against which it is usually effective, or when it leads to the onset of new types of seizures. Three p. were withdrawn because of inappropriate drug selection. Group 2: CBZ was discontinued in six patients (p.) as a result of paradoxical reactions. The paradoxical reaction was more frequent in patients with frontal epilepsy and generalized SW discharges on the EEG ($P=0.09$) and patients with benign rolandic epilepsy (BRE) with diffuse interictal sharp and slow-wave discharges. In both groups, clinical and electrical changes returned to their initial status upon CBZ withdrawal. On the basis of this study, it may be concluded that EEGs might eventually help to screen high-risk patients. If EEG recordings become substantially worse, with more frequent and longer generalized SW bursts after initiation of CBZ therapy, patients should be carefully monitored in order to detect any sign of clinical impairment.