

Does diagnostic delay impact on the outcome of epilepsy?

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Seizure recurrence in epilepsy poses the patient at risk of self-harm and can have a negative impact on his/her personal and social life. For this reason, the disease, when suspected, should be promptly diagnosed and treated. Unfortunately, this is not the case for several patients. Diagnostic delay in people with epilepsy has been the object of a number of studies that, even with differing results, showed that the disease might go undiagnosed for several years.^{1–4} A delay in the diagnosis of epilepsy may occur preferably when the first seizures are focal or, if generalized, they present with inhibitory features or only mild motor signs. In those cases, the patient might seek medical advice even after several years.²

Along with seizure type, diagnostic delay can be explained by other factors, including patient's own poor awareness of the nature of his/her symptoms, doctor's misdiagnosis, and, not least, the rarity of some events and their modest impact on patient's daily life. However, seizure recurrence with strong impact on one's health and quality of life cannot be excluded even after mild events, particularly in untreated patients, and one cannot exclude that future seizures have a greater impact on patient's and public safety.

For these reasons, Laura Parviainen and co-workers⁵ are commended for having addressed this issue in the intent to verify the impact of diagnostic delay on seizure outcome in patients with newly diagnosed focal epilepsy. The authors examined 176 adult patients who were eligible for inclusion in randomized trials of antiseizure medications. The choice of that sample was motivated by the accuracy of the medical records with specific reference to the history of seizures while untreated. Patients were followed for five years, and seizure recurrence was noted and classified in three categories: (1) Complete seizure freedom after treatment start; (2) Seizure freedom achieved after treatment changes; (3) No seizure freedom despite medication changes. The authors found that

diagnostic delay alone did not correlate with treatment response at five years. However, seizure outcome was worse in patients with a higher number of seizures before diagnosis.

The results of this study confirm previous reports⁶ in showing that diagnostic delay per se does not affect treatment outcome. However, the association between the number of seizures while untreated and treatment response during follow-up is at variance with previous studies that showed that the long-term prognosis of epilepsy (in terms of prolonged seizure remission during follow-up) is not affected by early treatment of seizures (in those studies, treatment of the first seizure).⁷ The differences might be explained by the differing populations at risk (patients seen at the first seizure vs. patients with two or more seizures, the latter perhaps with more severe disease varieties) and by the length of follow-up (as poor treatment response proves to be a dynamic process when long-term follow-up is considered).^{8,9} Then, having several seizures before treatment might be not only the result of diagnostic delay but also of an intrinsic greater severity of the disease at first manifestation.

This study brings to our attention another important problem, that is, if epilepsy should be diagnosed only after seizure relapse or even after the first seizure. The International League Against Epilepsy addressed this issue and concluded that in specific circumstances epilepsy can be diagnosed at the first seizure.¹⁰ This definition helps reducing the diagnostic gap but requires that a comprehensive evaluation of the patient is performed and, for this reason, the diagnosis of epilepsy should be made by specialists who are well aware of the risk factors for seizure recurrence in a patient with a first seizure.

As the diagnosis of epilepsy is mostly based on an accurate history taken from the patient and, where present, from a witness, the diagnostic process is not easy and requires patient's awareness of the nature of his/her symptoms and

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skillness of the caring physician. We agree with the authors that public and healthcare workers should be made aware of the diversity of seizure types and the negative reflections of the recurrence of undiagnosed seizures.

CONFLICT OF INTEREST

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