Amnesia treated successfully

SIR—If isolated memory impairment interferes with daily functioning, detailed assessment is necessary to find any treatable causes, such as temporal lobe epilepsy [1].

A healthy 68-year-old man presented with a 2-year history of memory impairment. He had already been evaluated elsewhere. Psychological testing had revealed mild memory impairment. Neurological and psychiatric evaluation, blood tests (erythrocyte sedimentation ratio, total blood count, electrolytes, calcium, urea, creatinine, glucose, bilirubin, liver enzymes, vitamin B1, vitamin B12, folate, thyroid-stimulating hormone, treponemal haemagglutination assay), computed tomography scan of the brain and three routine waking electro-encephalographs (EEGs) were unremarkable. Consequently, early Alzheimer’s disease was considered. This idea had frightened him and he was referred to our clinic for a second opinion. He complained that he could often not remember personal events, such as a conversation or a visit. He was not aware of these gaps unless others pointed them out to him. He said he could not rely on his memory anymore. The further history was unremarkable except for brief attacks of sudden fear that left him exhausted for hours. The Mini-Mental State Examination score was 28 out of 30 [2]. He was fully orientated. Careful questioning of his wife revealed that his memory dysfunction was periodic. The frequent gaps in his memory (e.g. having no recollection of a recent visit by their children) interfered with daily functioning. A few times a week, she observed that he was staring and unresponsive for up to 2 min.

The history suggested memory impairment related to epileptic seizures. The seizures were simple partial (with sudden fear) and complex partial, suggesting temporal lobe epilepsy [3]. Long-term EEG and video-monitoring confirmed the diagnosis (Figure 1). He was treated with carbamazepine 200 mg, three times daily. Six months later, he and his wife were satisfied with the result: there had been no further gaps in his memory during treatment. No more seizures had been observed. His Mini-Mental State Examination score remained 28.

Figure 1. Waves lasting >120 ms and of sharp appearance, representing epileptiform activity in the right fronto-temporal region.
This case illustrates that epilepsy is diagnosed primarily on clinical grounds and that an observer’s account is of paramount importance. A long-term EEG recording confirmed the diagnosis, but no epileptiform activity was observed in the first three routine waking EEGs. This underlines the important (but often ignored) fact that a routine EEG is performed over a short period of time and may miss epileptic activity, which is a fluctuating phenomenon.

Those with epilepsy have ictal, postictal and often interictal brain dysfunction [1, 4, 5]. Overt (but often subtle) complex partial seizures are followed by brief or prolonged episodes of amnesia [1, 4]. Mild cognitive impairment between overt seizures (interictal brain dysfunction) is common [1, 4, 5]. The pathophysiology is multifactorial and includes the epileptic focus being in the medial temporal lobe, interictal epileptic discharges and effects of anti-epileptic drugs [4, 5].

Our patient’s lifestyle was not restricted by the mild interictal memory impairment (measured on tests) but by the frequent memory gaps (disclosed by the history). There was a striking discrepancy between memory complaints and test performance. The prevalence and incidence of epilepsy are highest in later life [6]. However, misdiagnosis and underdiagnosis are common [6]. One reason being the altered presentation of seizures in old age [7]. This case shows that memory loss may be the main complaint in patients with temporal lobe epilepsy.

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