

Ictal asystolia during a temporal lobe seizure

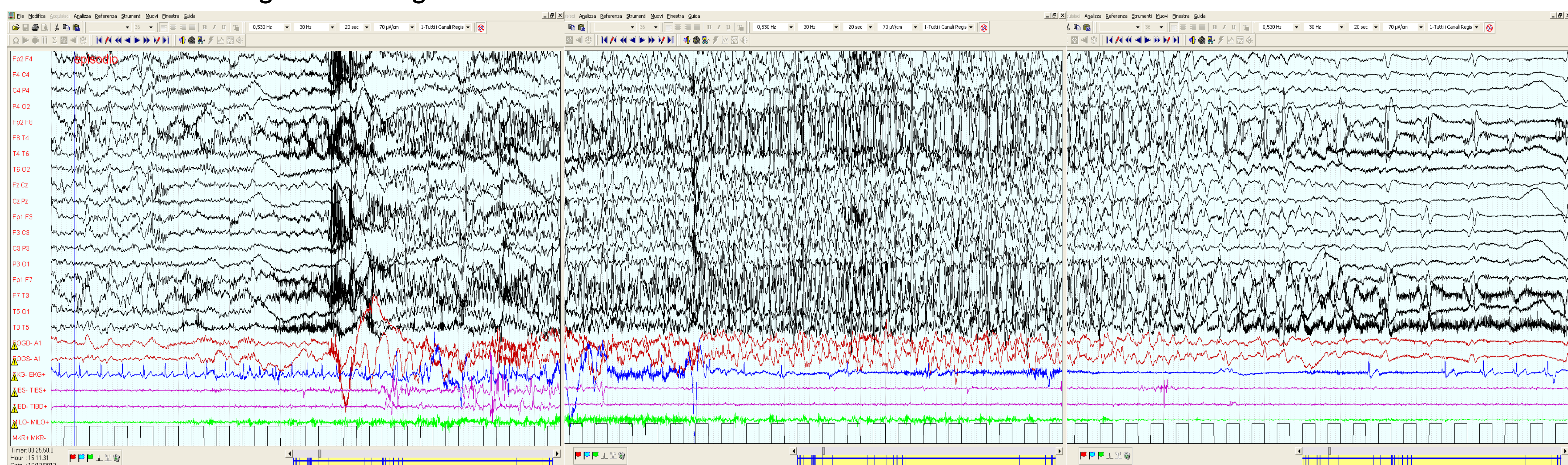
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Introduction: Episodic loss of consciousness represents a diagnostic challenge to the neurologist. Sometimes ictal epileptic discharges can disrupt normal cardiac rhythm causing syncope. Ictal tachycardia is the most frequent finding, it is present in 64-100% of temporal lobe seizures. Ictal bradycardia/asystole is reported in 0.4% of cases¹. Patients with temporal lobe epilepsy seem to be at increased risk for ictal bradycardia and asystole. We report the case of a patient affected by temporal lobe epilepsy that presented a 12 seconds asystole.

Case Report: A 68-year-old woman was referred for a history of stereotyped staring episodes, sometimes followed by loss of consciousness. During her first pregnancy, she had a history of stroke. At 65 years, she experienced the first episode of fall with loss of consciousness, followed by a state of confusion. Standard electroencephalogram (EEG) and EEG after sleep deprivation showed left fronto-temporal focal slowing with theta activity. When she was 68-years old was referred because, in the last year, she had presented five episodes of staring, followed in two cases by loss of consciousness.

Results: Long term video-EEG during 48 h was performed. The patient presented a seizure during sleep. The beginning of ictal EEG showed a generalized cortical suppression followed by rhythmic theta activity on bilateral fronto-temporal regions, with greater amplitude on the left regions. Thirty seconds after the beginning of the ictal episode the electrocardiogram showed a progressive bradycardia followed by complete sinus arrest that lasted 12 seconds. Cardiological investigations were normal.



The patient started therapy with zonisamide. At 3 and 6 months control, the Holter-EEG showed a significant reduction of interictal activity and it did not reveal ictal episodes. The patient did not report any new clinical event.

Discussion: Ictal epileptic discharge originated from temporal lobe can often cause cardiac rhythm alterations.. The ictal bradycardia syndrome has been linked to sudden unexpected death in epilepsy (SUDEP). The underlying mechanisms of SUDEP are not well understood, but seizure-induced cardiac and respiratory arrests are involved. There are no clear guidelines for the management of this problem. Some investigators have supported early cardiac pacemaker implantation²; in contrast, other investigators have reported control of clinical events in ictal asystole patients following antiepileptic treatment initiation alone³.

In our patient the diagnosis of epilepsy was also made for the first time and therefore she had never tried antiepileptic drugs before.

In the differential diagnosis of loss of consciousness, we must consider and investigate the hypothetical presence of ictal asystole. Once this condition is discovered, it is essential to start an antiepileptic treatment and, if it is insufficient, cardiac pacemaker implantation must be proposed.

References

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