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Temporal Complex Partial Status Epilepticus Occurring After Withdrawal Phenobarbital

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Abstract:
Background*: Temporal complex partial status epilepticus TCPSE is an electroclinical syndrome consisting of partial, temporal, fluctuating epileptic seizures, recurrent enough to cause a confusional state whose symptomatology is variable. The diagnosis is difficult based on clinical elements alone and requires an emergency electroencephalogram. The EEG examination makes it possible to diagnose temporal complex partial status epilepticus. Temporal complex partial status epilepticusTCPSE is characterized by continuous or recurrent temporal discharges and can be organized in a cyclical manner, this presentation being characteristic but rare.*
Observation*: We report the case of a 36-year-old patient, followed for idiopathic generalized epilepsy, who consulted for mental confusion associated with visual hallucinations and stereotypical automatisms occurring after tapering off antiepileptic treatment (50 mg of phenobarbital).*
Discussion: *The EEG made it possible to make the diagnosis of a partial complex temporal condition by showing a subcontinuous activity of spikes and spike waves in the right temporal region. A clinical and electrical improvement was noted after introduction of the benzodiazepine (clonazepam 2 mg/day) and carbamazepine (600 mg/day) combination by nasogastric tube. Furthermore, the patient did not present any cognitive after-effects.*
Conclusion: *Temporal complex partial status illness can be expressed in the form of mental confusion and poses a real problem of differential diagnosis with acute dissociative psychosis. The emergency EEG helps confirm the diagnosis by showing a specific electrical pattern, which helps guide therapeutic management.*
KeyWords*: Mental confusion, Temporal complex partial status epilepticus, EEG subcontinuous activity, Clonazepam , Carbamazepine.*

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I. Introduction

The definition of complex partial status epilepticus CPSE proposed by Shorvon [1] is broad enough to cover most of the clinical forms encountered: complex partial status epilepticus CPSE is an electroclinical syndrome consisting of partial, temporal or extra-temporal epileptic seizures. extral, fluctuating, recurrent enough to cause a confusional state whose symptoms are variable. Although a distinction of CPSE into clearly demarcated topographic forms is largely arbitrary, temporal forms and extratemporal forms are classically distinguished.

In the temporal complex partial status epilepticus TCPSE, the presentation is that of fluctuating confusion organized cyclically into complex partial epileptic TCPSE seizures with breakdown of contact and stereotyped automatisms. During the interictal period, a disturbance of consciousness and reactive automatisms persist. This form, characteristic but rare, has been linked to a disorganization of internal temporal structures. The second type, more common, is characterized by a continuous confusional state, without marked cyclical fluctuations. The EEG shows recurrent partial seizures in the first type and continuous focal paroxysmal activity in the second.

Abnormalities involve in EEG scalp one or other of the temporal regions. Only a few rare contributions have included exploration using depth electrodes [3].

The clinical symptomatology accompanying the confusional syndrome, which is very varied, depends in fact on the topography of the epileptogenic networks involved by the ictal discharges and can thus include

language disorders, simple or elaborate visual or auditory hallucinations, ideational or ideomotor apraxia. , fixation amnesia, visual field disturbances, autonomic changes [1].

Some have highlighted the frequency of dysthymic manifestations with unpleasant tones and complex gestural automatisms, explaining that at the clinical stage, the picture may suggest acute dissociative psychosis [4].

Motor manifestations, always in the background of the symptomatology, are in principle limited to minor adversive phenomena, non-localizing or barely localizing.

Reversible focal abnormalities are occasionally present on neuroradiological examinations [5]: hypodensity on X-ray scanner with or without associated contrast enhancement, T2 hyperintensity on MRI, hyperperfusion on critical single-photon tomoscintigraphy.

Temporal complex partial status epilepticus TCPSE can occur in patients with pre-existing temporal lobe epilepsy, for example, during untimely discontinuation of antiepileptic treatment. The administration of fosphenytoin by vein appears to be the treatment of choice, as most of these forms do not respond sustainably to benzodiazepines.

Many cases also occur initially, during an acute structural disorder of the central nervous system. Other etiopathogenic factors have been described: drugs (lithium, cyclosporine, ciprofloxacin, vigabatrin), electroshock, iodinated contrast products, cancer, neurosyphillis, alcohol, crack cocaine, etc. [1].

II. Clinical Case

Patient aged 36 years, right-handed,followed for idiopathic generalized epilepsy evolving since the age of 16, arriving in the emergency neurology room in a picture of mental confusion associated with visual hallucinations and stereotyped automatisms, after tapering of antiepileptic treatment (50 mg of phenobarbarbital).

The EEG examination made it possible to make the diagnosis of a temporal complex partial status epilepticus, showing subcontinuous spike and spike wave activity in the right temporal region.

Brain CT: without abnormalities. Anterior brain MRI: without abnormalities. The new brain MRI: Normal. A clinical and electrical improvement was noted after introduction of the benzodiazepine (clonazepam 1 mg iv) and carbamazepine (200 mg by nasogastric tube), then carbamazepine 600 mg as monotherapy in progressive stages.

One week later the control EEG showed no epileptic activity. the patient was discharged, treated with carbamazepine 600 mg and phenobarbital 50 mg, and was without confusional symptoms or cognitive after effects, although she had no idea of the episode.

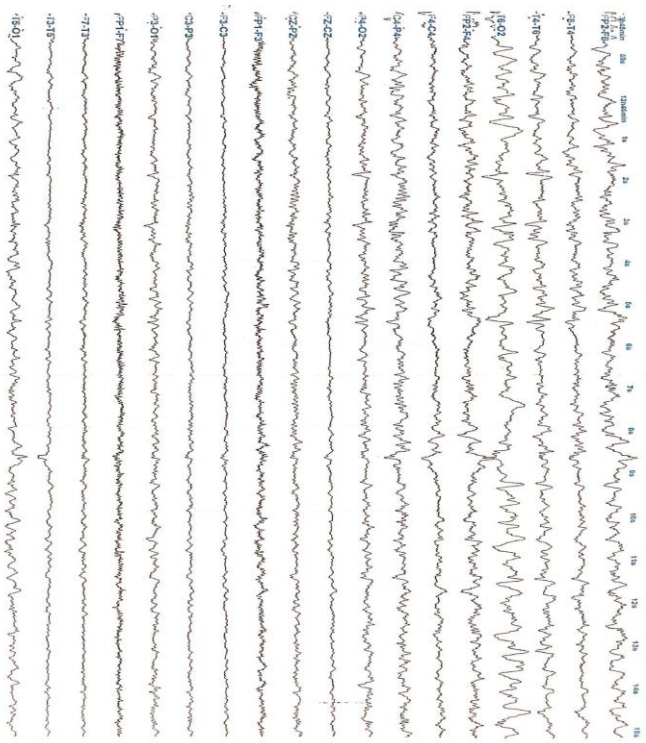

Figure 1. EEG during TCPSE episode: subcontinuous spike and spike wave activity in the right temporal region.

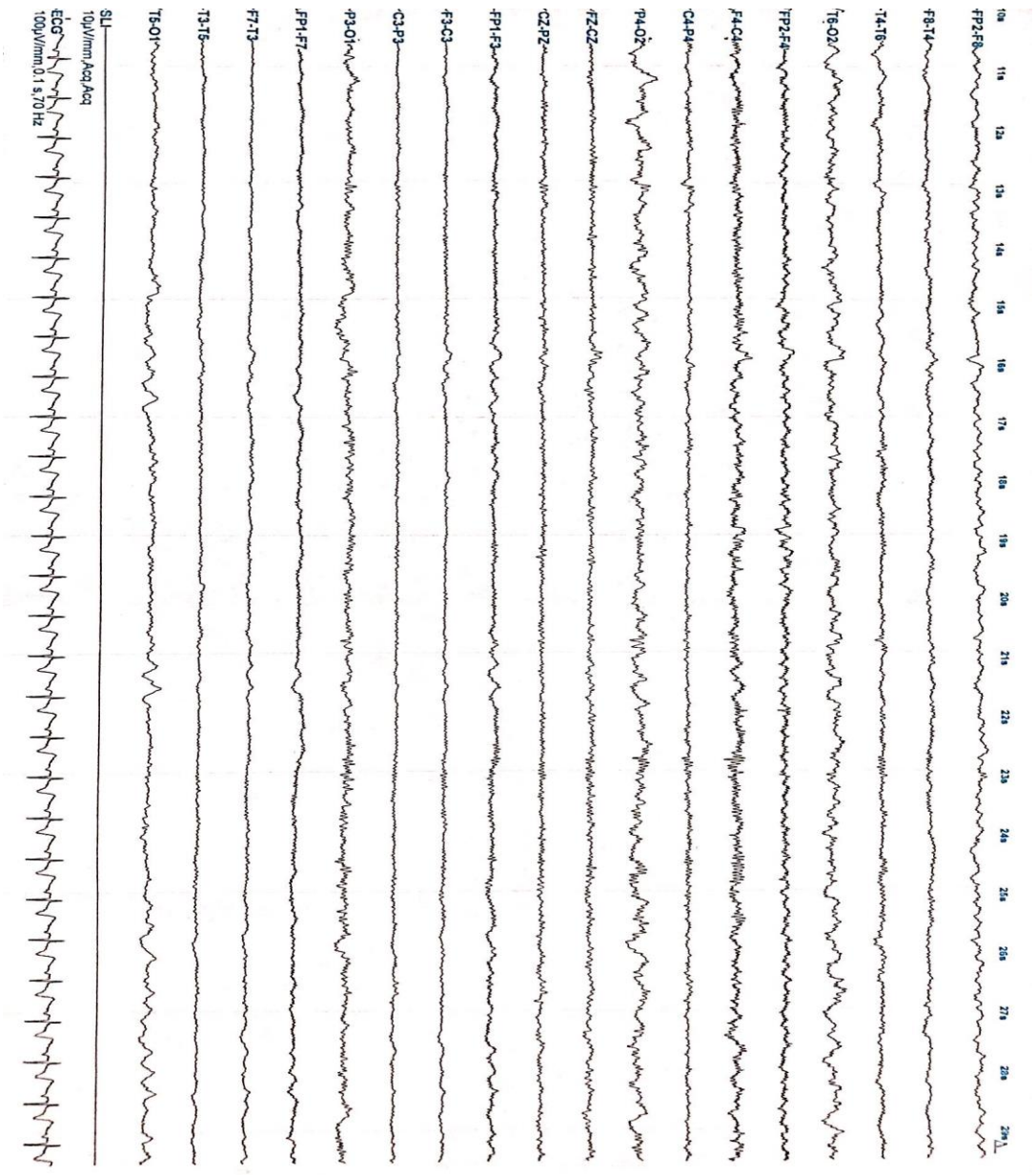

Figure 2. EEG after clonazepam 1 mg (iv) and carbamazepine 600 mg (by nasogastric tube): no epileptic activity.

III. Discussion

Our patient presented with serial complex partial temporal epileptic seizures, leading to a non-convulsive state of illness, and expressed in the form of mental confusion, following the decline of antiepileptic treatment.

The EEG examination made it possible to make the diagnosis and guide the therapeutic management.

There is a favorable response to the benzodiazepine and carbamazepine combination.

Nonconvulsive status epilepticus NCSE is defined as a persistent epileptic state without a convulsive seizure, associated with continuous or near-continuous epileptiform discharges in the EEG.This condition, because it is seizure-free, is often misdiagnosed [6].

EEG is necessary to make a definitive diagnosis, but this can be made difficult due to poor accessibility to the EEG examination, poor patient compliance, and interpretation results, which do not always correspond to the final diagnosis.

Nonconvulsive status epilepticus NCSE can have a variety of clinical presentations. It can appear asthe form of confusion with a floating pattern difficult to distinguish from other causes of delirium, and it is possible to have episodes of cognitive impairment interspersed with periods of functioning almost normal, like a persistent confusional state [8], [9].

Ideally, medications should be administered during continuous EEG recording to facilitate diagnosis. An alternative would be to repeat an EEG after treatment to demonstrate resolution of epileptic activity. There may be clinical situations in which an EEG during clinical manifestations is not possible and empirical treatment with monitoring of clinical response may be justified [7]. Clinical and/or EEG improvement after treatment makes the diagnosis of nonconvulsive status epilepticus NCSE more likely. In some situations this will be a valuable diagnostic test. To make a diagnosis, specialized interpretation of the EEG trace is necessary [7].

IV. Conclusion

Temporal complex partial status epilepticus TCPSE is an electroclinical syndrome, consisting of partial temporal epileptic seizures, recurrent enough to cause a confusional status epilepticus. EEG examination is a valuable tool in the diagnostic management and monitoring of progress under treatment. The combination of benzodiazepine and carbamazepine proves effective in the treatment of Temporal complex partial status epilepticus TCPSE.

References

[1]. Shorvon S. Status Epilepticus, Its Clinical Features And Treatment In Children And Adults. Cambridge: Cambridge University Press; 1994.
[2]. Treiman Dm, Delgado-Escueta Av. Complex Partial Status Epilepticus. In: Delgado-Escueta Av, Wasterlain Cg, Treiman Dm,
[3]. Porter Rj, Editors. Status Epilepticus (Advances In Neurology, Volume 34). New York: Raven Press; 1983. P. 69—81.
[4]. Williamson Pd, Spencer Dd, Spencer Ss, Mattson Ra. Complex Partial Status Epilepticus: A Depth Electrode Study. Ann Neurol 1985;18:647—54.
[5]. Rohr-Le Floch J, Gauthier G, Beaumanoir A. États Confusionnels D'origine Epileptique : Intérêt De L'eeg Fait En Urgence. Rev Neurol (Paris) 1988;144:425—36.
[6]. Henry Tr, Drury I, Brunberg Ja, Pennell Pb, Mckeever Pe, Beydoun A. Focal Cerebral Magnetic Resonance Changes Associated With Partial Status Epilepticus. Epilepsia 1994;35:35— 41.
[7]. R. Sutter, P.W. Kaplan.The Neurophysiologic Types Of Nonconvulsive Status Epilepticus: Eeg Patterns Of Different Phenotypes Epilepsia, 54 (Suppl 6) (2013), Pp. 23-27
[8]. Woodford Hj, George J, Jackson M. Non-Convulsive Status Epilepticus: A Practical Approach To Diagnosis In Confused Older People.
[9]. Postgrad Med J 2015;91:655-1. Doi: 10.1136/Postgradmedj-2015-133537
[10]. Walker Mc, Cockerell Oc, Sander J. Non-Convulsive Status Epilepticus Presenting As A Psychiatric Condition. J. R. Soc. Med 89(2), 91-92 (1996).
[11]. Haffey S, Mckernan A, Pang K. Non-Convulsive Status Epilepticus: A Profile Of Patients Diagnosed Within A Tertiary Referral Centre. J. Neurol. Neurosurg. Psychiatry 75(7), 1043-1044 (2004).