

EEG on the Subject of a Case, of a Patient with a History of Developmental Delay and with Social Adaptation Difficulties

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Abstract

Introduction: 23-year-old male patient with a history of psychomotor development of all developmental milestones: he walked at 24 months, language delay (at two years he only spoke 3 - 4 words).

Episodes have been repeated in July 2020 after family conflict.

Objective: Describe the findings of the electroencephalogram (EEG) of a clinical case that agrees with the characteristic pattern described in the bibliography.

Conclusion: EEG report: ECG record within normal limits for the patient's age.

Background ECG tracing devoid of specific anomalies assessable for epilepsy.

On this background trace an activity without epileptiform morphology is recorded, slow activity at a frequency of 7 Hz in the bi-frontal region with temporal irradiation, similar

Nonspecific activities are frequently seen in patients referred from Mental Health. In our hospital environment, it is relatively common to find nonspecific findings for epilepsy and slow dysfunctional activities at 6 - 7 Hz in frontal, bi-frontal and frontal temporal regions, as we have written in our other articles talking about the same issue [1-5] we have found nonspecific activities for epilepsy and dysfunctional characteristics in patients who use cocaine, in patients with behavioral disorders derived from Mental Health, in ADHD, ASD, with a high degree of impulsivity, this is important given that in this type of patients brain imaging tests are normal and we observe abnormalities in the EEG. Hence the importance of ordering EEG on an outpatient basis in patients derived from mental health, with problems of toxic consumption, ADHD, ASD, etc.

The recognition of typical EEG findings, but not pathognomonic, can guide the early diagnosis and treatment of patients derived from Mental Health, with behavioral alterations, violent behavior, and drug use.

Keywords: *Electroencephalogram (EEG); Epilepsy; Psychomotor Development*

Introduction

23-year-old male patient with a history of psychomotor development of all developmental milestones: he walked at 24 months, language delay (at two years he only spoke 3 - 4 words).

In November 2019, he presented a picture of nervousness and then they describe that he lost consciousness, became rigid and had clonic movements of all 4 limbs. No sphincter release or tongue bite. He recovered in about a minute with confusion for several hours and subsequent headache.

Episodes have been repeated in July 2020 after family conflict.

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Objective of the Study

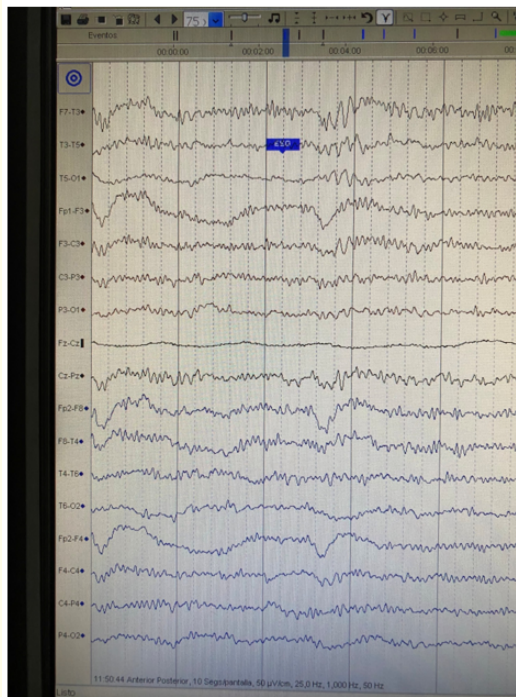
Describe the findings of the electroencephalogram (EEG) of a clinical case that agrees with the characteristic pattern described in the bibliography.

Clinical Case

EEG is performed (10/06/2020) while awake. The duration of the registration was 25 minutes. Performed while awake, with acceptable collaboration from the patient.

The waking background trace is basically constituted by non-fusiform, irregular, disorganized, parieto-occipital alpha rhythms, with acceptable reactivity to ocular opening and closing, at a frequency of the alpha rhythm of 9 - 10 Hz and moderate voltage, of 20 - 50 microvolts of amplitude and diffuse beta rhythms, of low voltage and predominance in previous areas.

On this background trace an activity without epileptiform morphology is recorded, slow activity at a frequency of 7 Hz in the bifrontal region with temporal irradiation.



High filter: 30 Hz.

Low filter: 0.5 Hz.

Sweep: 10 milliseconds. 10 seconds per screen.

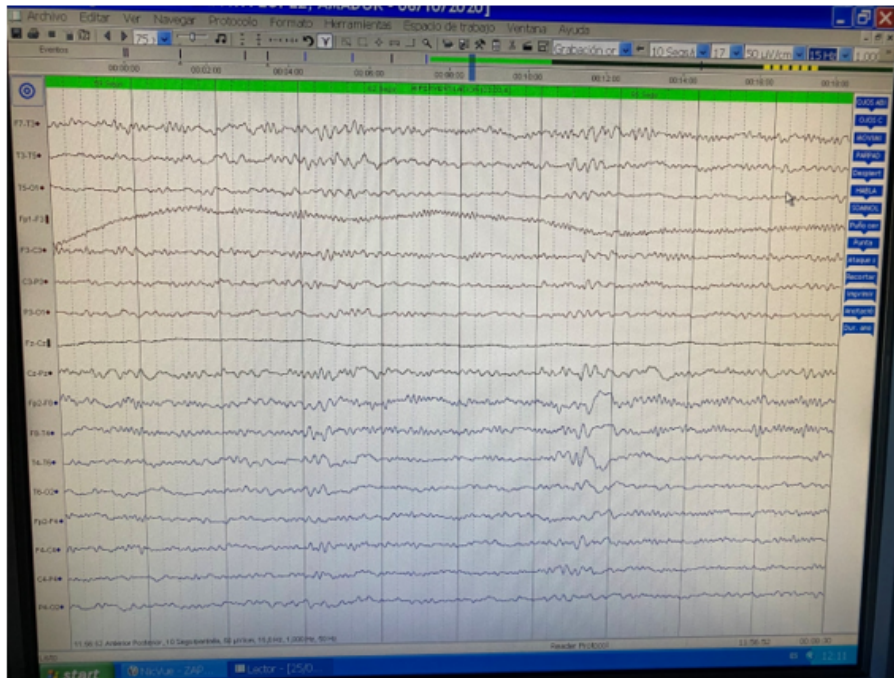
Sensitivity: 7 microvolts.

High filter: 30 Hz.

Low filter: 0.5 Hz.

Sweep: 10 milliseconds. 10 seconds per screen.

Sensitivity: 7 microvolts.



High filter: 30 Hz.

Low filter: 0.5 Hz.

Sweep: 10 milliseconds. 10 seconds per screen.

Sensitivity: 7 microvolts.

High filter: 30 Hz.

Low filter: 0.5 Hz.

Sweep: 10 milliseconds. 10 seconds per screen.

Sensitivity: 7 microvolts.

Conclusion

EEG report: ECG record within normal limits for the patient’s age.

Background ECG tracing devoid of specific anomalies assessable for epilepsy.

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Nonspecific activities are frequently seen in patients referred from Mental Health.

In our hospital environment, it is relatively common to find nonspecific findings for epilepsy and slow dysfunctional activities at 6 - 7 Hz in frontal, bi-frontal and frontal temporal regions, as we have written in our other articles talking about the same issue [1-5] we have found nonspecific activities for epilepsy and dysfunctional characteristics in patients who use cocaine, in patients with behavioral disorders derived from Mental Health, in ADHD, ASD, with a high degree of impulsivity, this is important given that in this type of patients

brain imaging tests are normal and we observe abnormalities in the EEG. Hence the importance of ordering EEG on an outpatient basis in patients derived from mental health, with problems of toxic consumption, ADHD, ASD, etc.

The recognition of typical EEG findings, but not pathognomonic, can guide the early diagnosis and treatment of patients derived from Mental Health, with behavioral alterations, violent behavior, and drug use.

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