

Routine EEG examination used in this study (without feedback).

## Routine EEG Test

### Introduction

You are being invited to participate in an EEG education study led by Fabio Nascimento, Roy Strowd, Samantha Yap, Rebecca Fasano, Stefan Rampp, William Tatum, and Sandor Beniczky whose purpose is to obtain a baseline knowledge about routine EEG (rEEG) findings among trainees. All information will be collected anonymously and cannot be linked back to you.

This rEEG test comprises 30 multiple choice question and contains both normal and abnormal EEG findings.

Please note that you may zoom in and out EEGs by using zoom settings in your web browser.

1. By clicking "I agree" below you are indicating that you have read and understood the instructions above and agree to participate in this educational program, whose anonymized findings will be analyzed and subsequently published.

☐ I agree

☐ I disagree

## Routine EEG Test

\* 2. What country are you from?

\* 3. What is your profession?

☐ Medical student

☐ Adult neurology resident

☐ Pediatric neurology resident

☐ EEG/epilepsy clinical fellow

☐ Other (please specify)

## Routine EEG Test

### Medical Student Year

4. What year of training are you in?

- |                                      |  |
|--------------------------------------|--|
| <input type="radio"/> 1st year (MS1) | <input type="radio"/> 4th year (MS4)                     |
| <input type="radio"/> 2nd year (MS2) | <input type="radio"/> 5th year (MS5)                     |
| <input type="radio"/> 3rd year (MS3) | <input type="radio"/> 6th year and above (MS6 and above) |

## Routine EEG Test

### Adult or Pediatric Neurology Resident

5. What year of training are you in?

- |  |  |
|--|--|
| <input type="radio"/> Postgraduate year 1 (PGY1) | <input type="radio"/> Postgraduate year 4 (PGY4)                     |
| <input type="radio"/> Postgraduate year 2 (PGY2) | <input type="radio"/> Postgraduate year 5 (PGY5)                     |
| <input type="radio"/> Postgraduate year 3 (PGY3) | <input type="radio"/> Postgraduate year 6 and above (PGY6 and above) |

6. How many weeks dedicated to EEG learning have you undergone in your training?

- |                           |                            |
|---------------------------|----------------------------|
| <input type="radio"/> 0   | <input type="radio"/> 9-12 |
| <input type="radio"/> 1-4 | <input type="radio"/> >12  |
| <input type="radio"/> 5-8 |                            |

## Routine EEG Test

### Level of Confidence

\* 7. What is your level of confidence identifying each of the findings on EEG independently/without supervision?

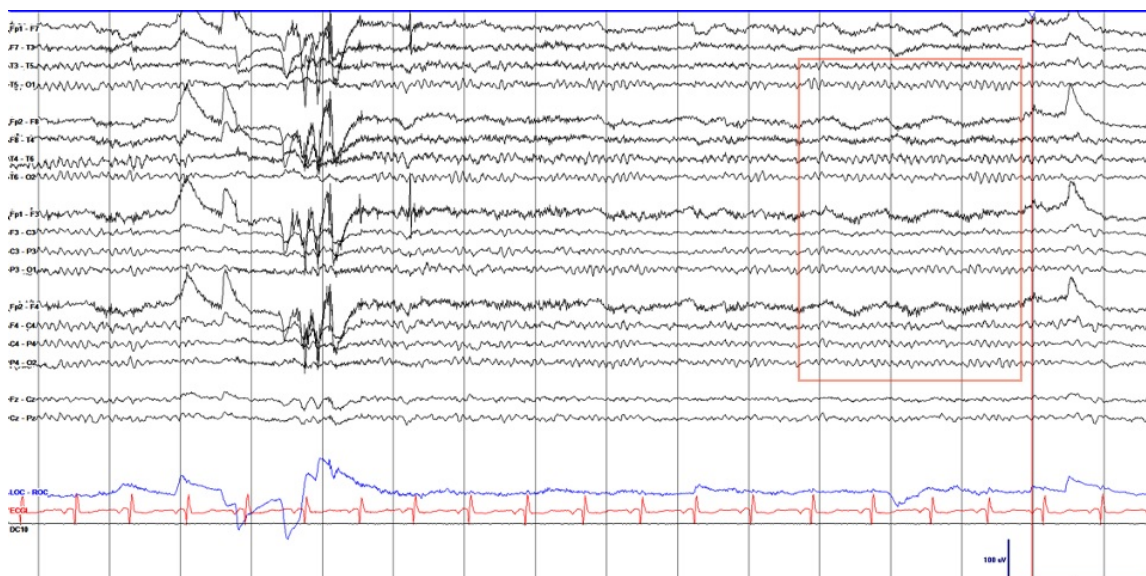
	Not at all confident	Only slightly confident	Somewhat confident	Moderately confident	Very confident
States of wakefulness and sleep	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sleep structures (such as vertex waves, sleep spindles, and K-complexes)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Normal variants (such as wickets, small sharp spikes, and posterior slow waves of youth)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Artifacts (such as EKG artifact, lateral rectus spikes, and electro pop)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Routine EEG Test

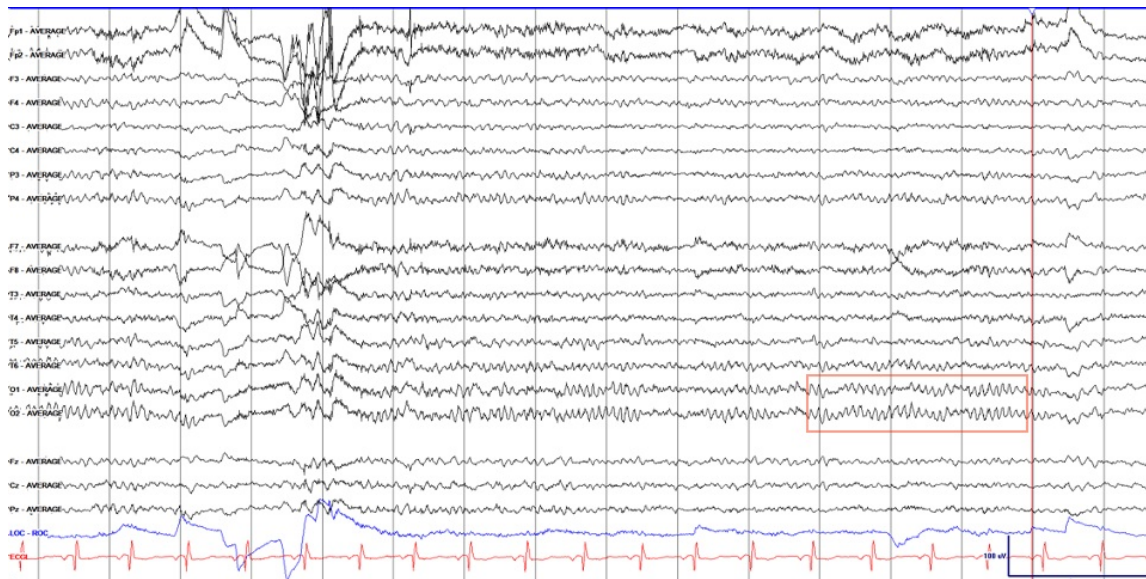
1) What finding/pattern is shown on the EEG below/within the red box?

This is an adult patient.

Bipolar



Average



\* 8. Please select correct answer.

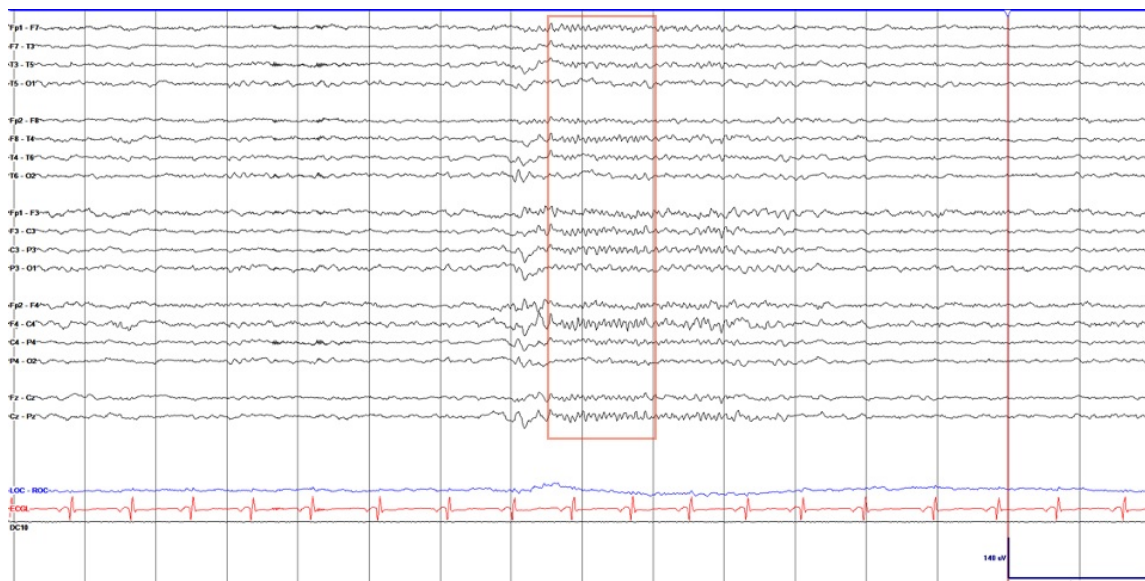
- ☐ Normal posterior dominant rhythm (PDR)
- ☐ Mu rhythm
- ☐ Posterior slow waves of youth
- ☐ Lambda waves
- ☐ Positive occipital sharp transients of sleep (POSTS)

## Routine EEG Test

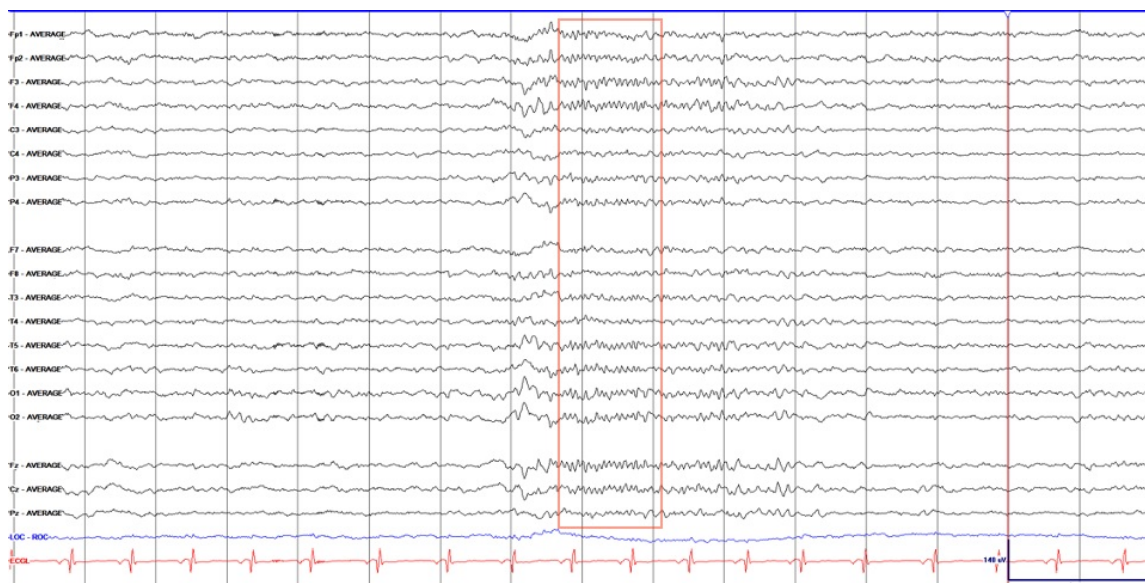
2) What finding/pattern is shown on the EEG below/within the red box?



Bipolar



Average



\* 9. Please select correct answer.

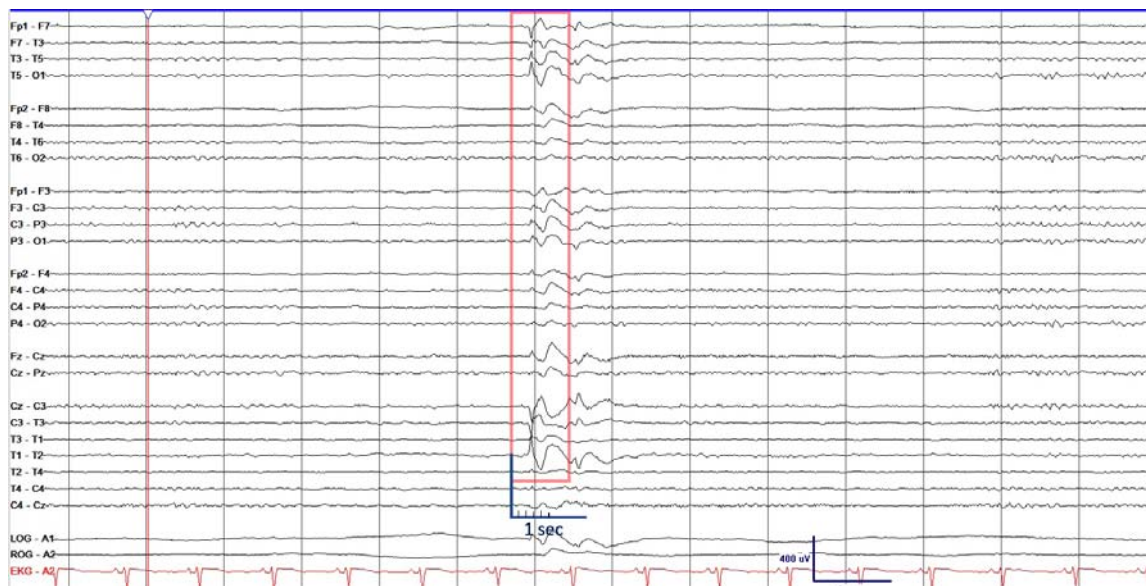
- ☐ Generalized seizure
- ☐ Sleep spindles
- ☐ Mu rhythm
- ☐ Breach rhyhtm
- ☐ Focal seizure

## Routine EEG Test

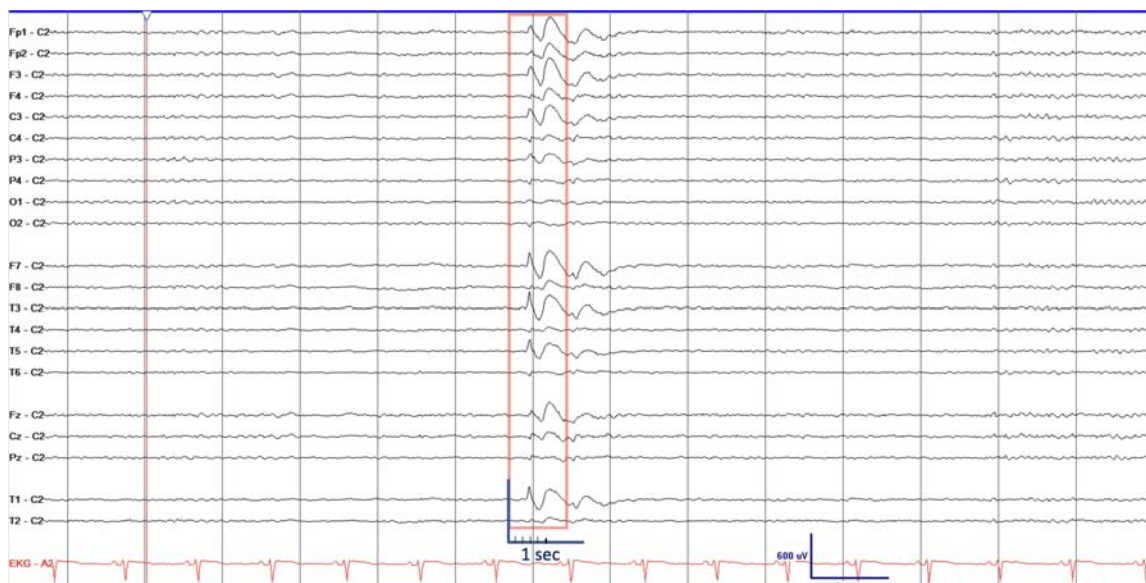
3) What finding/pattern is shown on the EEG below/within the red

box?

Bipolar



Average



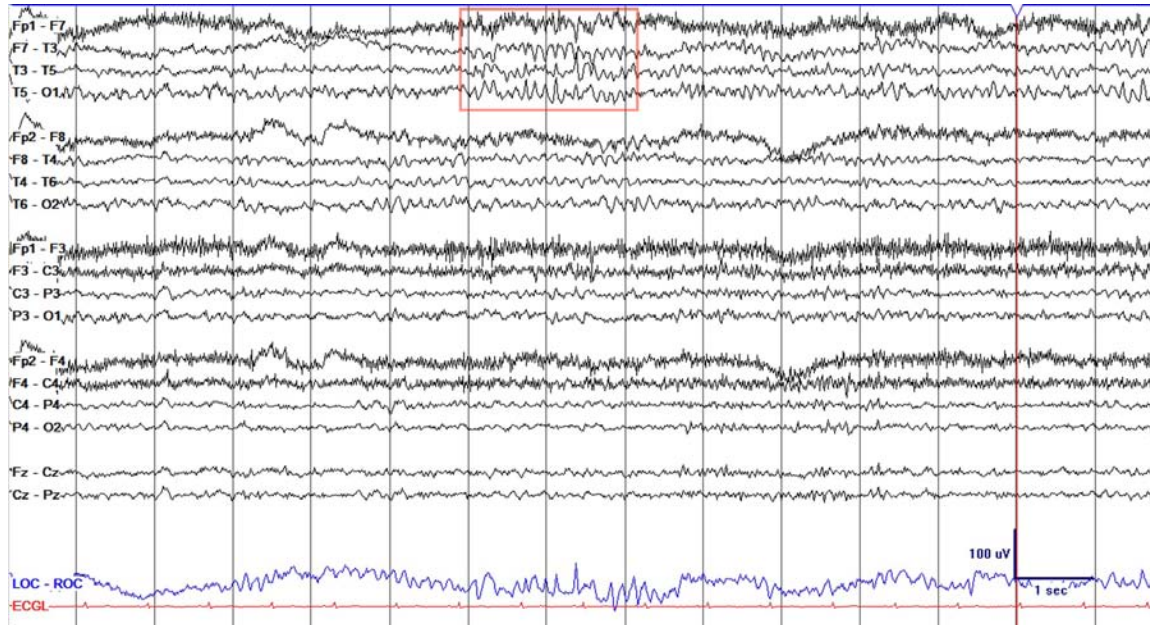
\* 10. Please select correct answer.

- ☐ Myogenic artifact
- ☐ Focal epileptiform discharges, spike
- ☐ Wicket
- ☐ Focal epileptiform discharges, sharp
- ☐ Sharp transient of the background/non-epileptiform

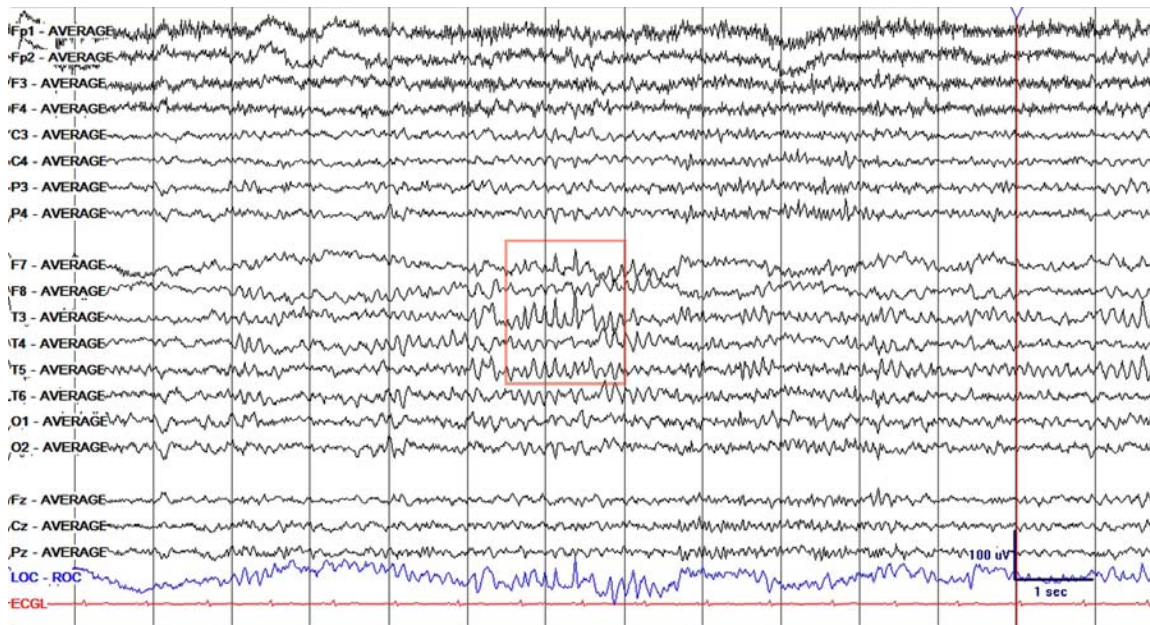
## Routine EEG Test

4) What finding/pattern is shown on the EEG below/within the red box?

Bipolar



Average





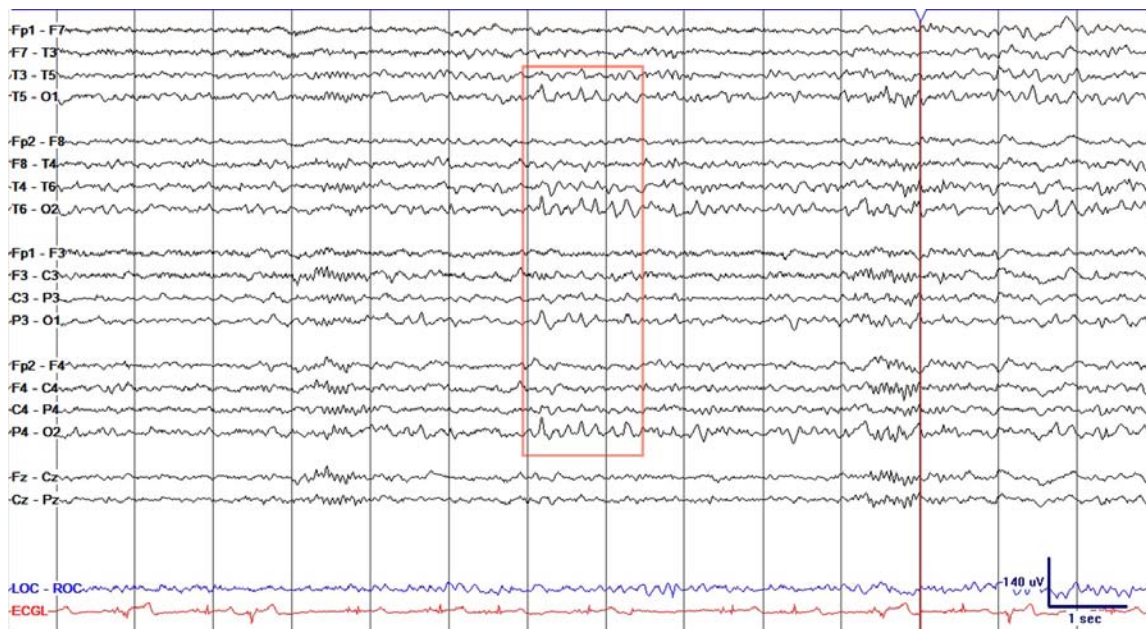
\* 11. Please select correct answer.

- ☐ Focal epileptiform discharges, sharps
- ☐ Focal epileptiform discharges, spikes
- ☐ Wickets
- ☐ Focal seizure
- ☐ Mu rhythm

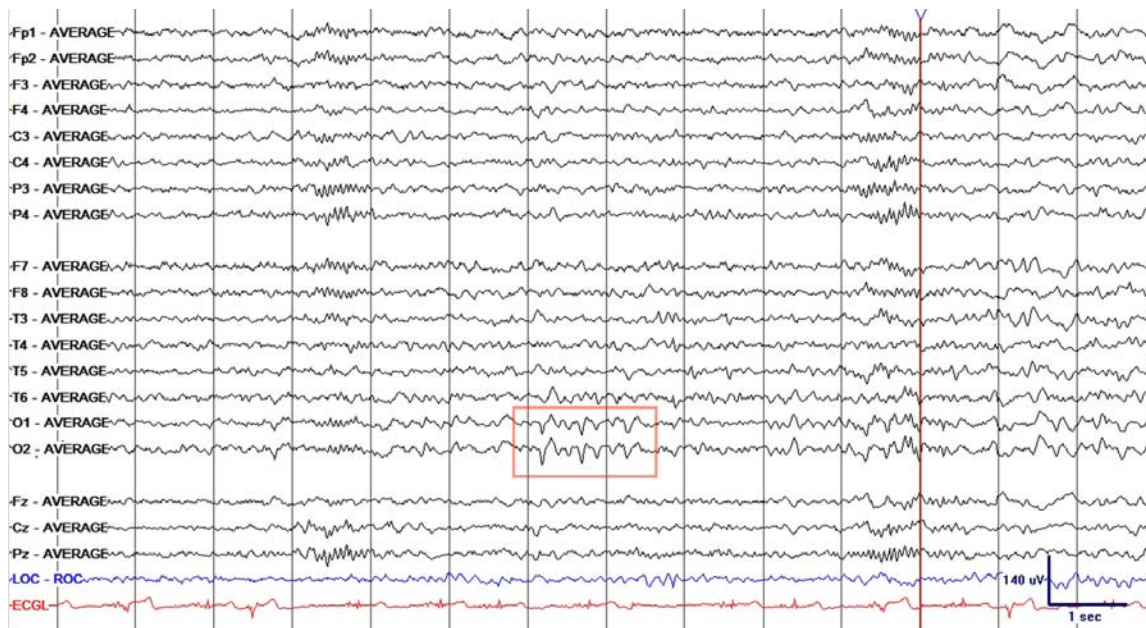
## Routine EEG Test

5) What finding/pattern is shown on the EEG below/within the red box?

Bipolar



## Average



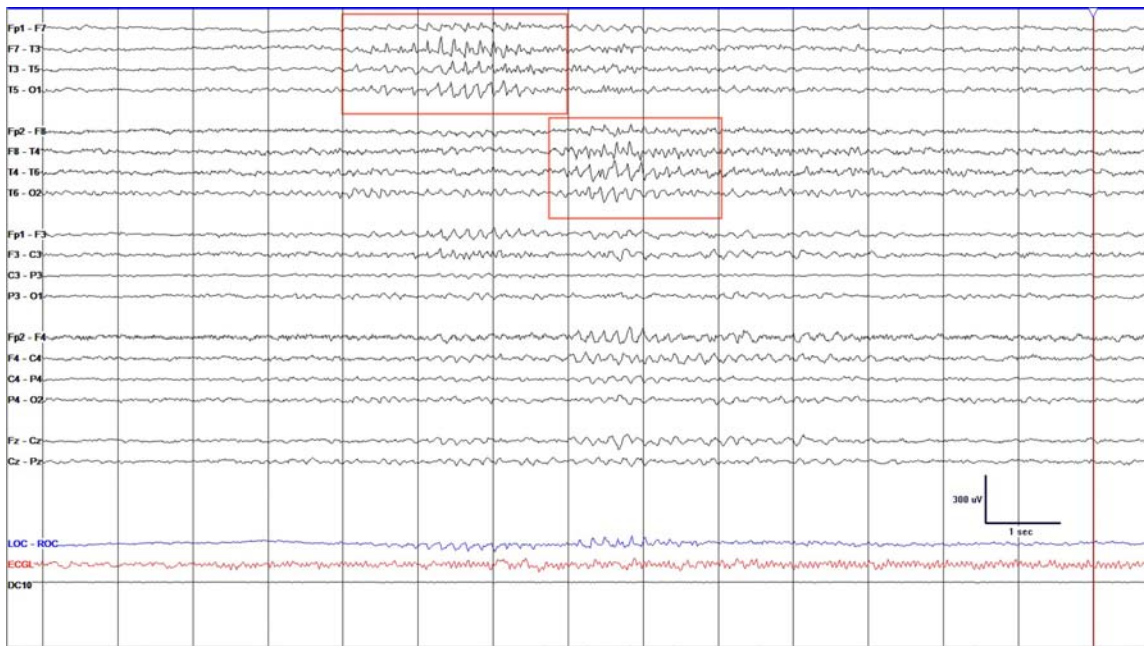
\* 12. Please select correct answer.

- ☐ Vertex waves
- ☐ Focal epileptiform discharges, spikes
- ☐ Occipital seizure
- ☐ Positive occipital sharp transients of sleep (POSTS)
- ☐ Lambda waves

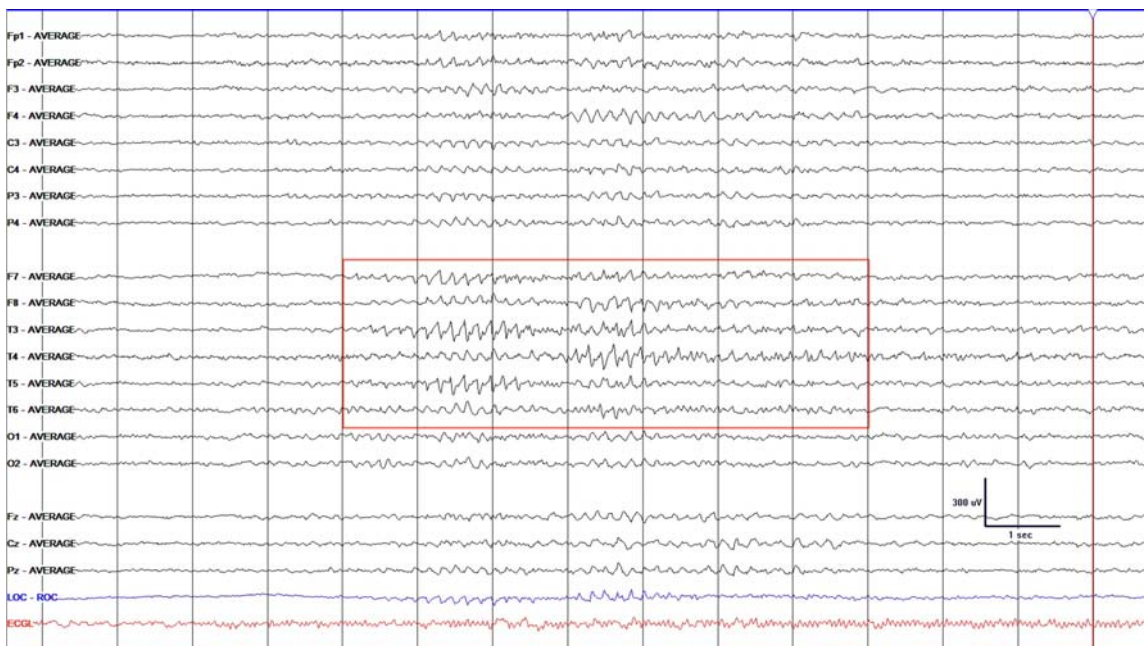
## Routine EEG Test

6) What finding/pattern is shown on the EEG below/within the red box?

Bipolar



Average



\* 13. Please select correct answer.

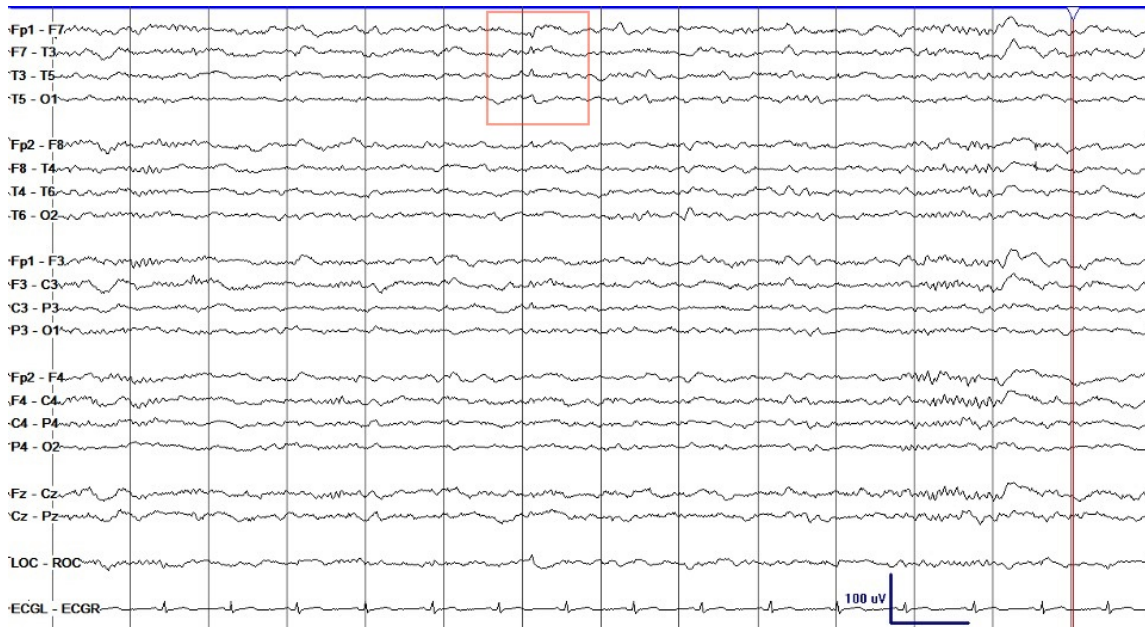
- ☐ Midline theta rhythm (Ciganek rhythm)
- ☐ Mu rhythm
- ☐ Focal seizure
- ☐ Myogenic artifact
- ☐ Rhythmic mid-temporal theta of drowsiness (RMTD)



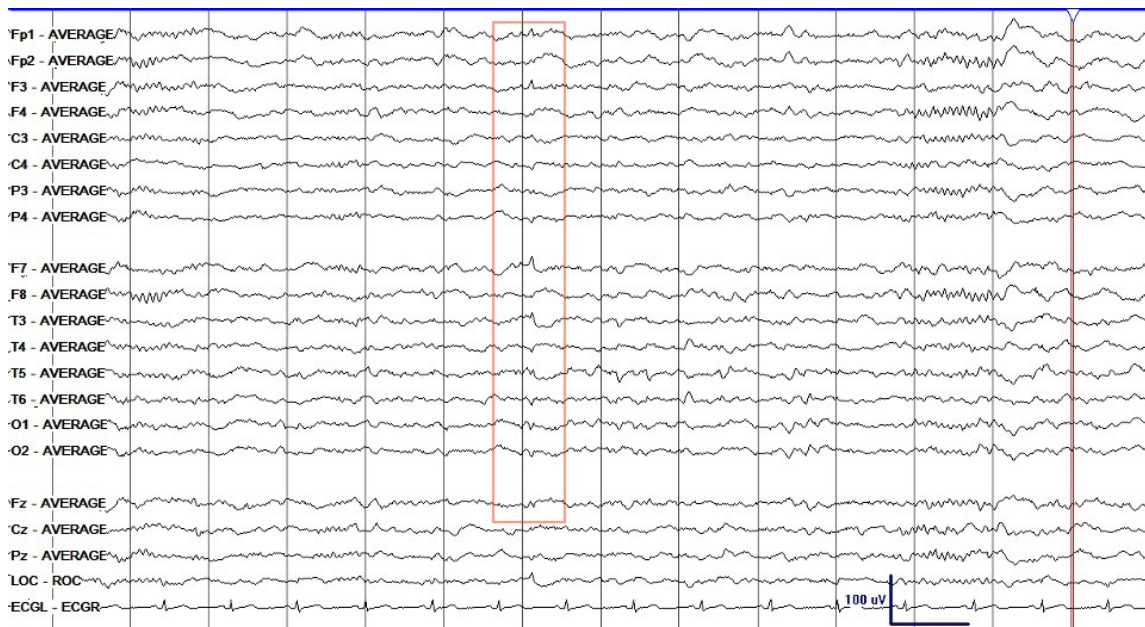
## Routine EEG Test

7) What finding/pattern is shown on the EEG below/within the red box?

Bipolar



Average





\* 14. Please select correct answer.

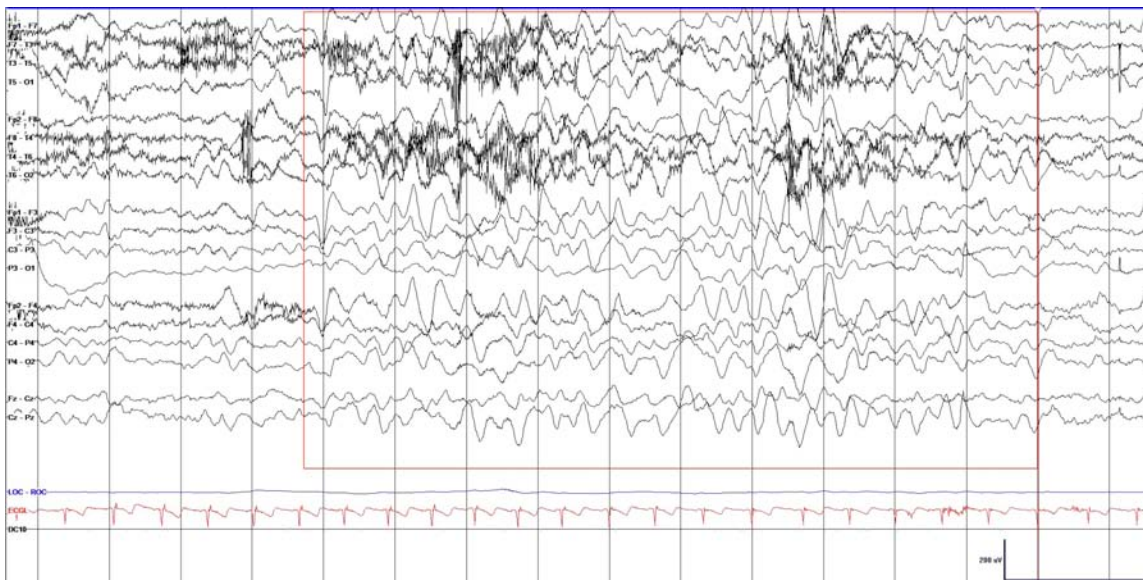
- ☐ Lambda wave
- ☐ Myogenic artifact
- ☐ Small sharp spike
- ☐ Wicket
- ☐ EKG artifact

## Routine EEG Test

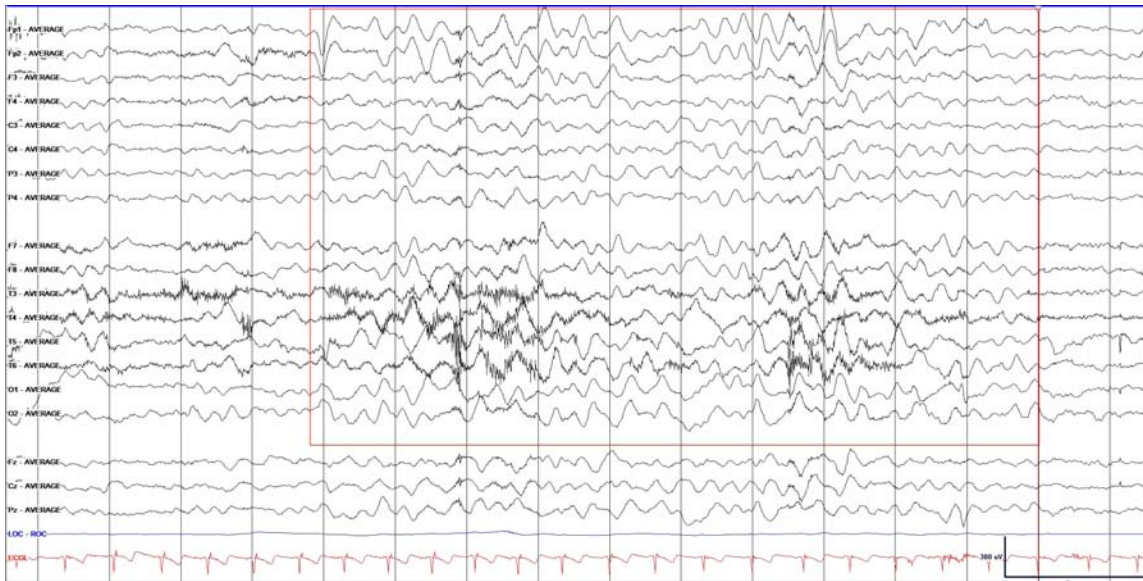
8) What finding/pattern is shown on the EEG below/within the red box?

Note: this pattern occurred 30-60 seconds after hyperventilation.

Bipolar



Average



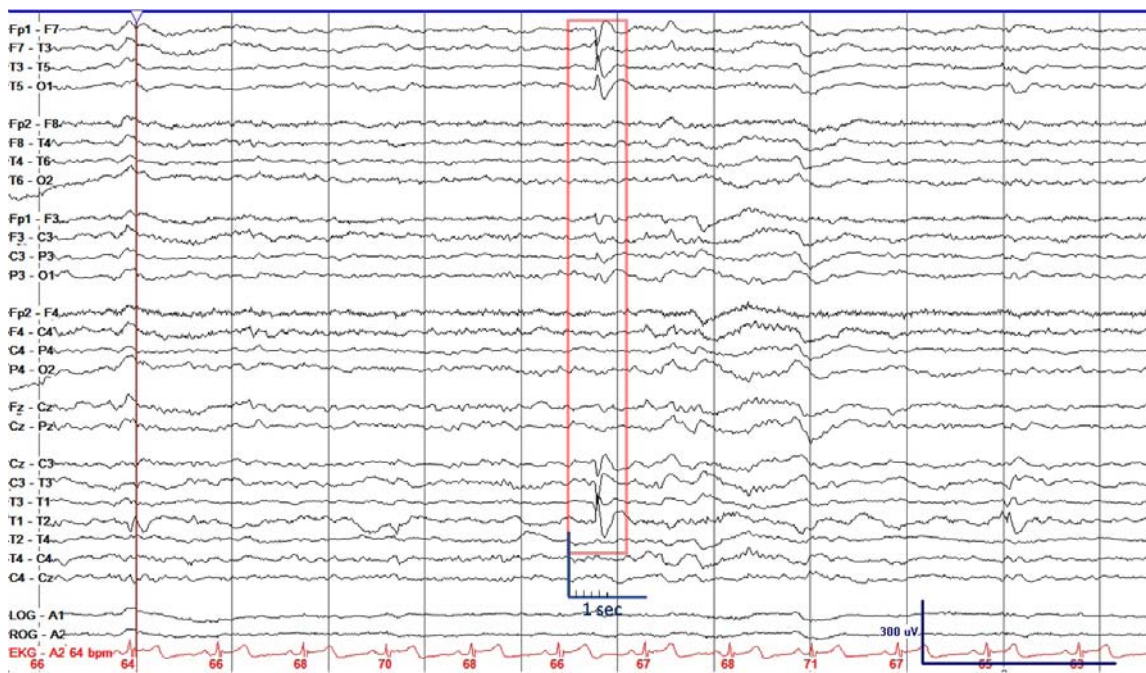
\* 15. Please select correct answer.

- ☐ Photoparoxysmal response
- ☐ K complexes
- ☐ Myogenic artifact
- ☐ Hyperventilation-induced generalized slowing (normal pattern)
- ☐ Sweat artifact

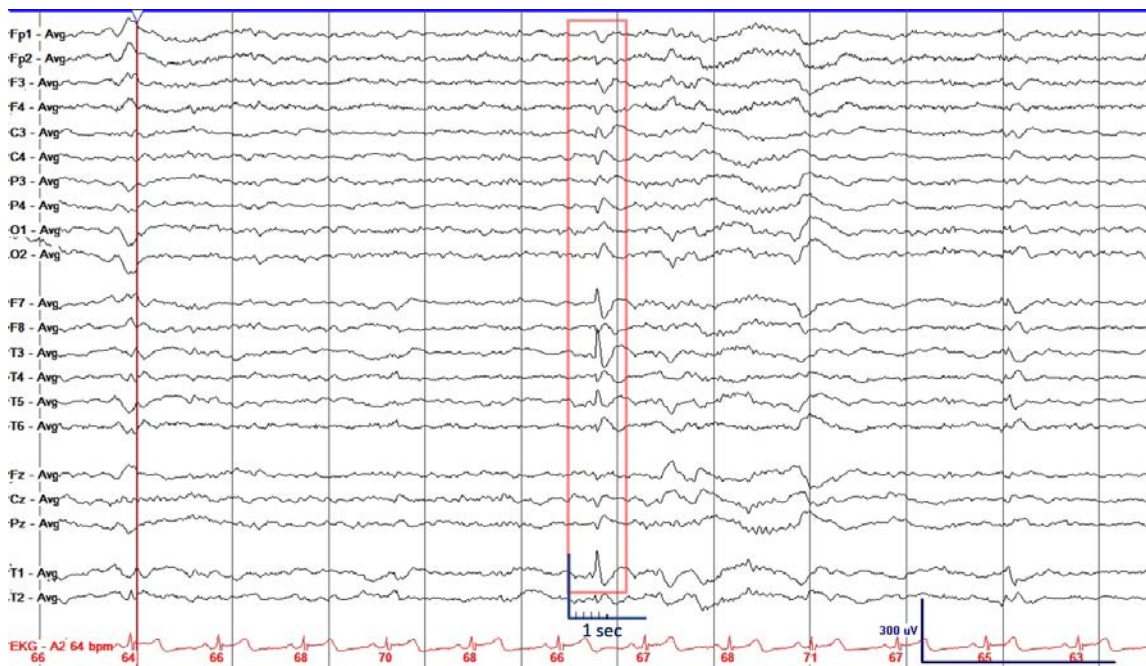
## Routine EEG Test

9) What finding/pattern is shown on the EEG below/within the red box?

Bipolar



Average



\* 16. Please select correct answer.

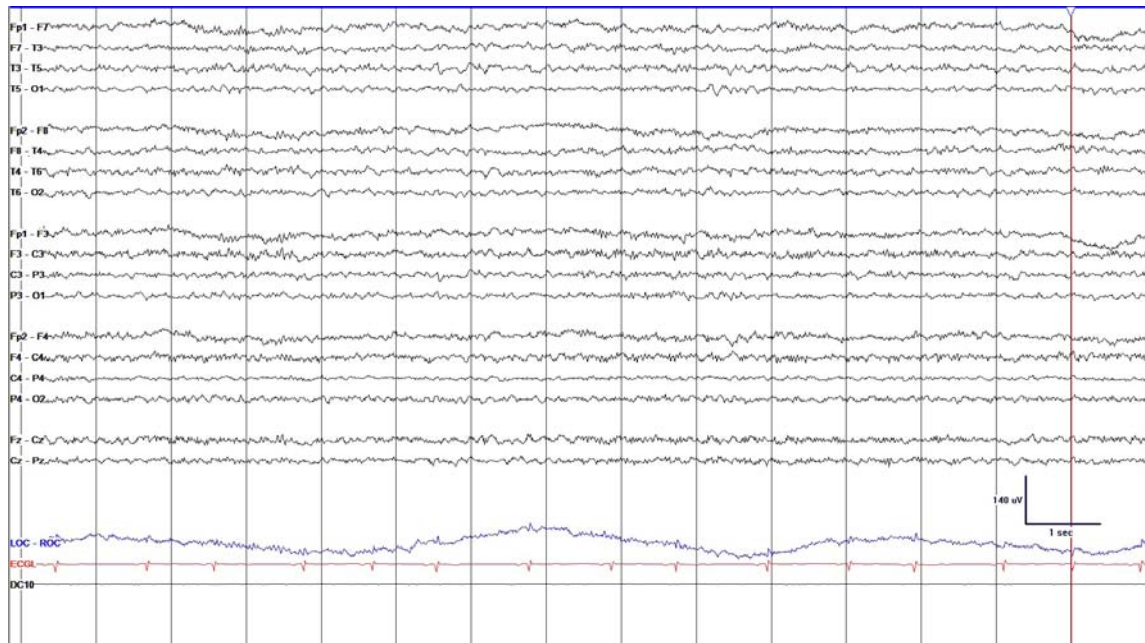
- ☐ Wicket
- ☐ Focal epileptiform discharge, sharp
- ☐ Focal epileptiform discharge, spike
- ☐ Myogenic artifact
- ☐ Sharp transient of the background/non-epileptiform



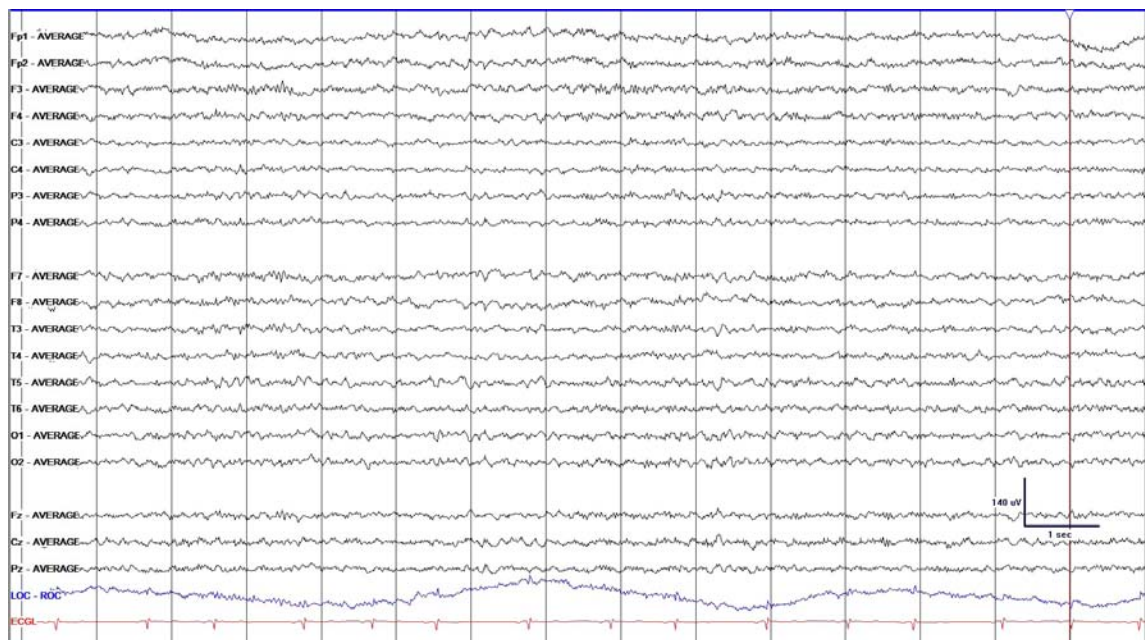
## Routine EEG Test

10) What finding/pattern is shown on the EEG below?

Bipolar



Average



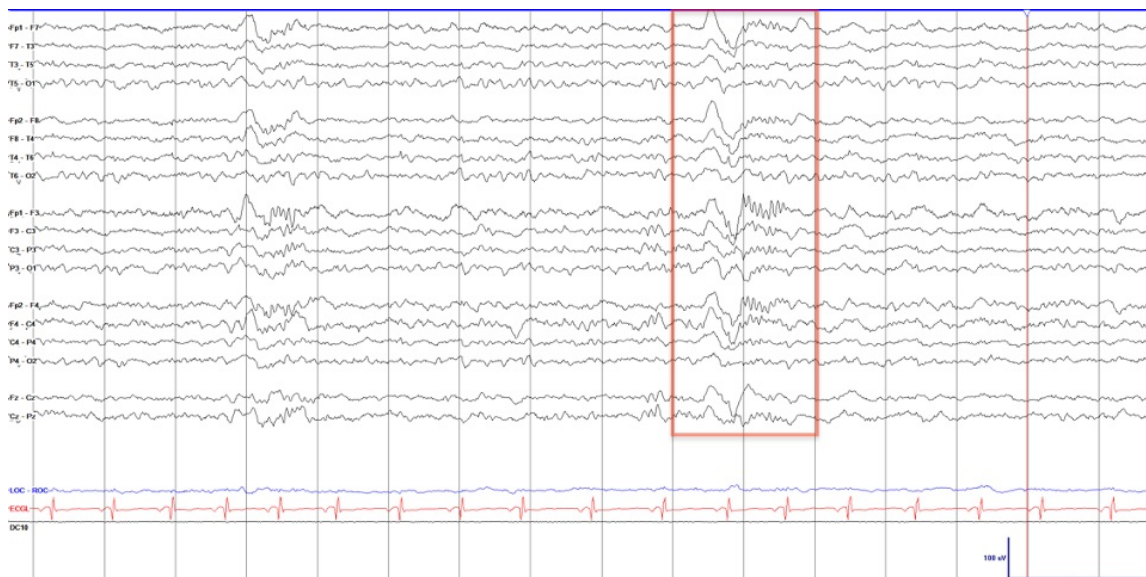
\* 17. Please select correct answer.

- ☐ Stage 3 sleep (NREM)
- ☐ Drowsiness
- ☐ Rapid eye movement (REM) sleep
- ☐ Wakefulness
- ☐ Stage 2 sleep (NREM)

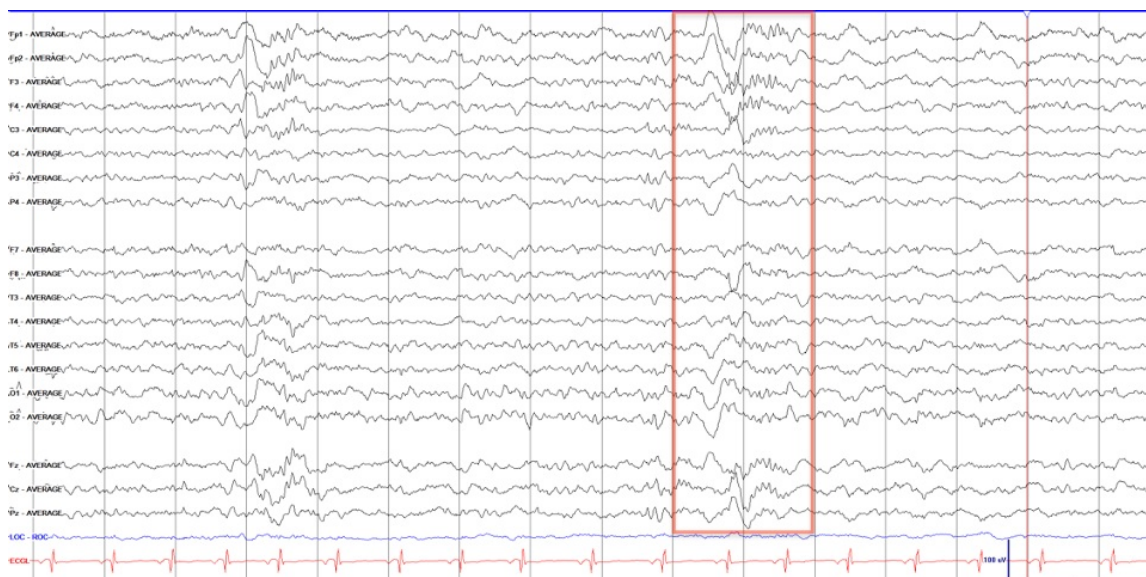
## Routine EEG Test

11) What finding/pattern is shown on the EEG below/within the red box?

Bipolar



Average



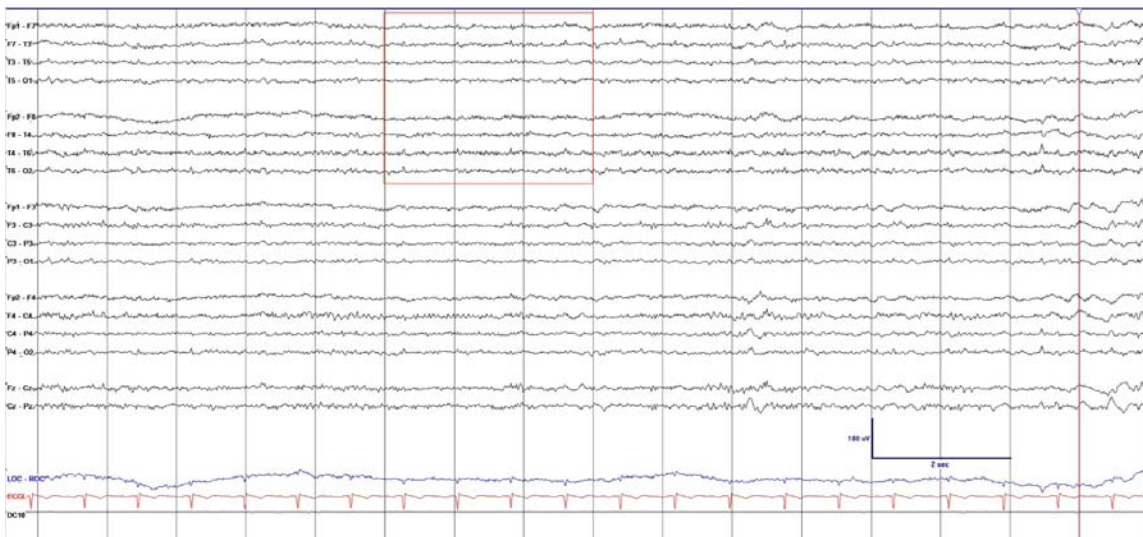
\* 18. Please select correct answer.

- ☐ Generalized epileptiform discharge
- ☐ Vertex wave
- ☐ K complex
- ☐ Positive occipital sharp transient of sleep (POSTS)
- ☐ Generalized delta slowing

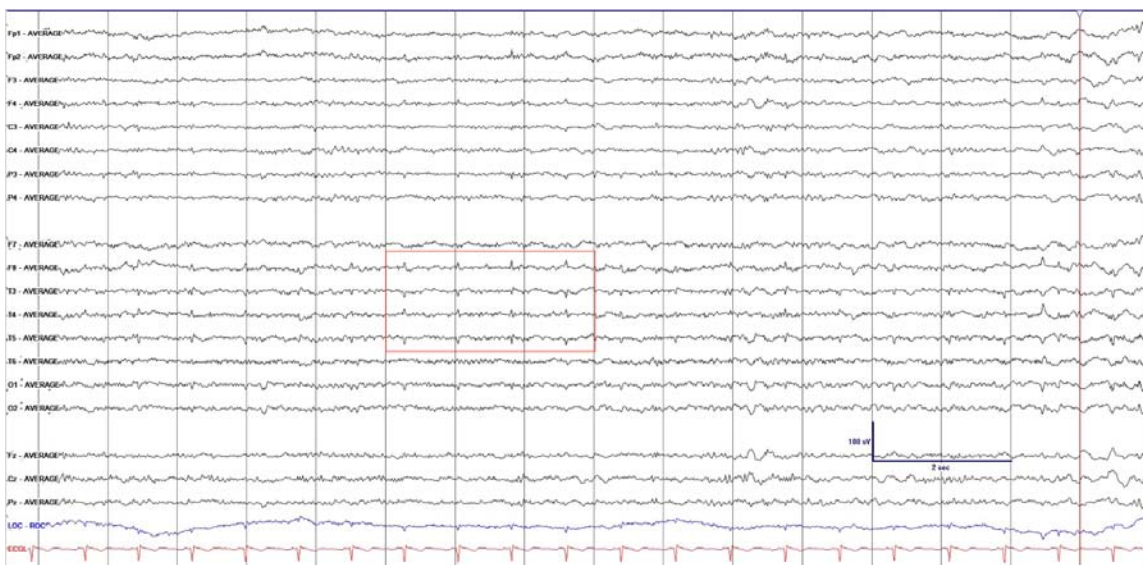
## Routine EEG Test

12) What finding/pattern is shown on the EEG below/within the red box?

Bipolar



Average





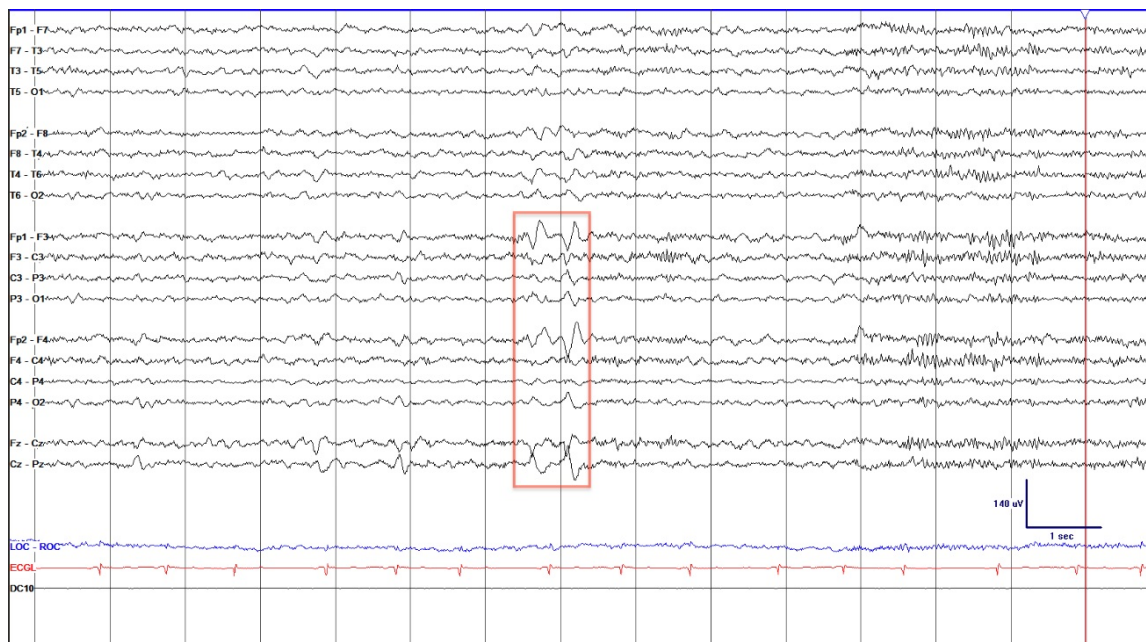
\* 19. Please select correct answer.

- ☐ EKG artifact
- ☐ Focal seizure
- ☐ Focal epileptiform discharges, spikes
- ☐ Small sharp spikes
- ☐ Wickets

## Routine EEG Test

13) What finding/pattern is shown on the EEG below/within the red box?

Bipolar





Average



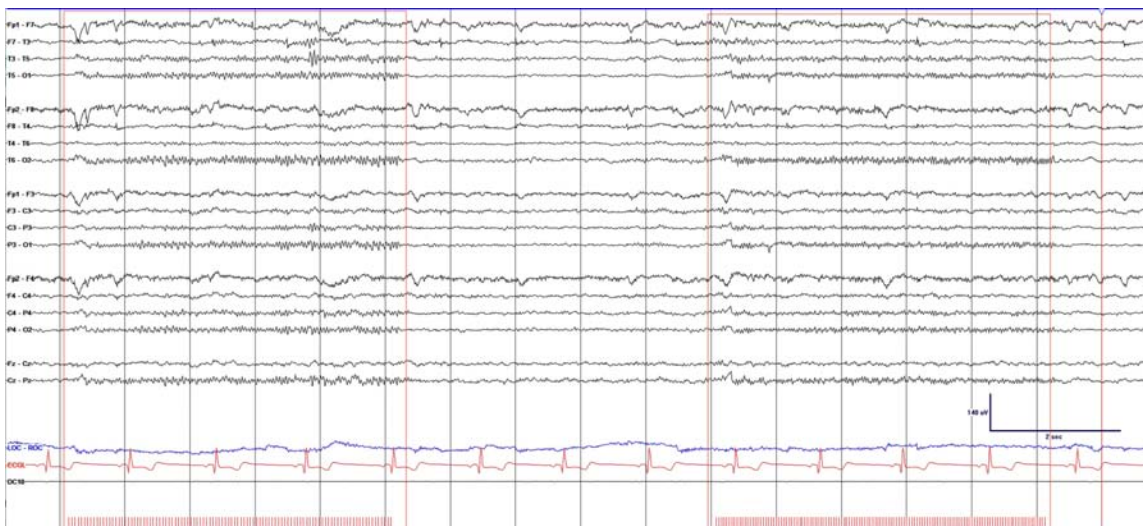
\* 20. Please select correct answer.

- ☐ Vertex wave
- ☐ Generalized epileptiform discharge
- ☐ EKG artifact
- ☐ Focal epileptiform discharge, sharp
- ☐ K complex

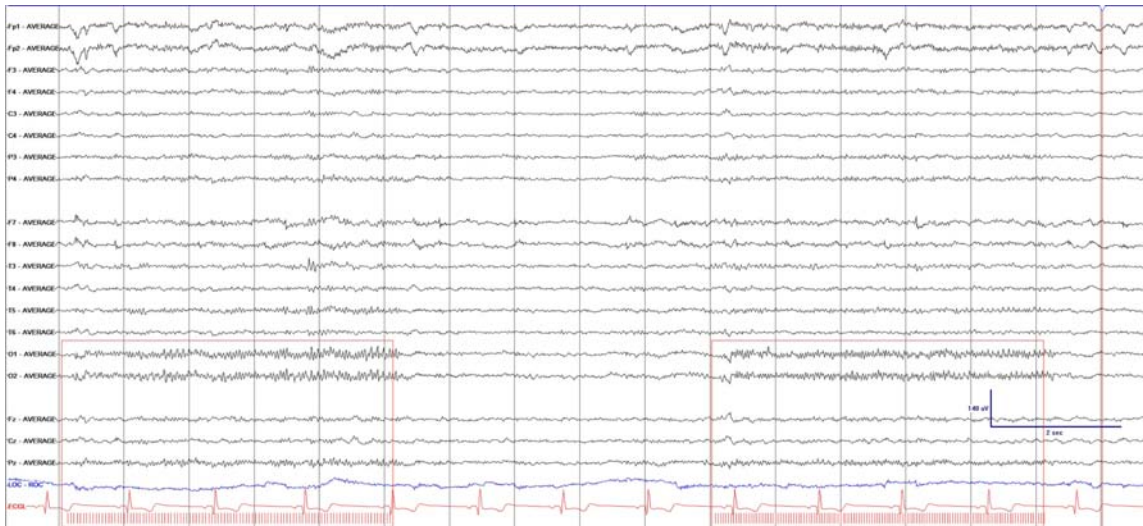
## Routine EEG Test

14) What finding/pattern is shown on the EEG below/within the red box?

Bipolar



Average



\* 21. Please select correct answer.

- ☐ 60 Hz artifact
- ☐ Generalized epileptiform discharges
- ☐ Generalized seizures
- ☐ Focal epileptiform discharges, spikes
- ☐ Photic driving

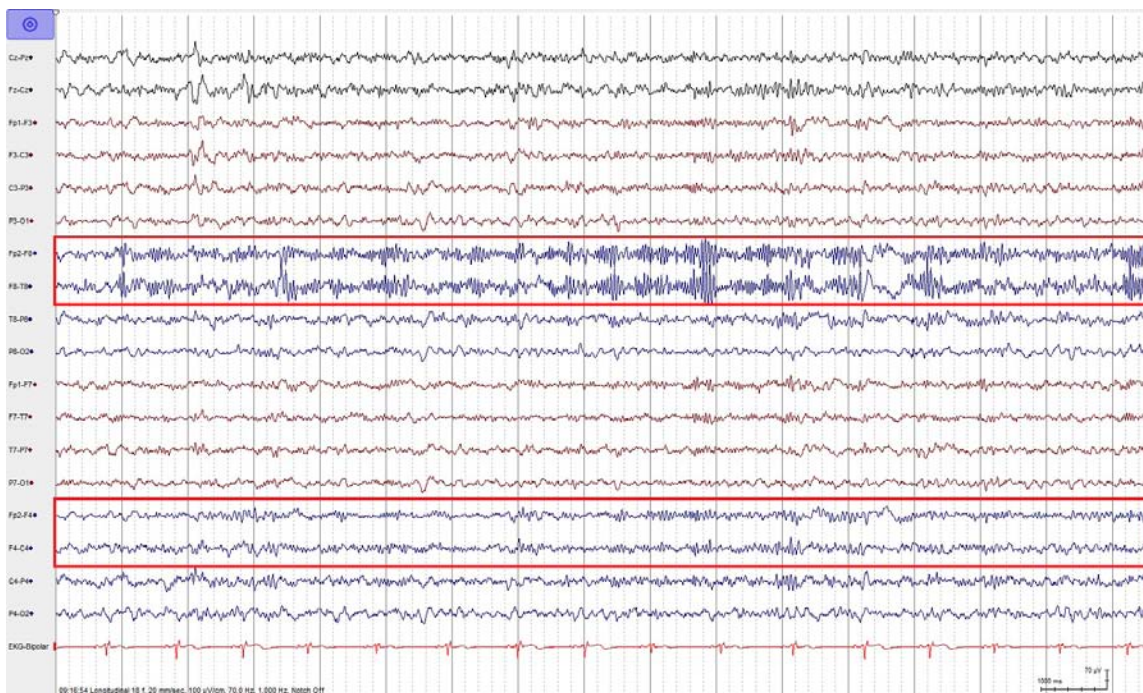
## Routine EEG Test

15) What finding/pattern is shown on the EEG below/within the red box?

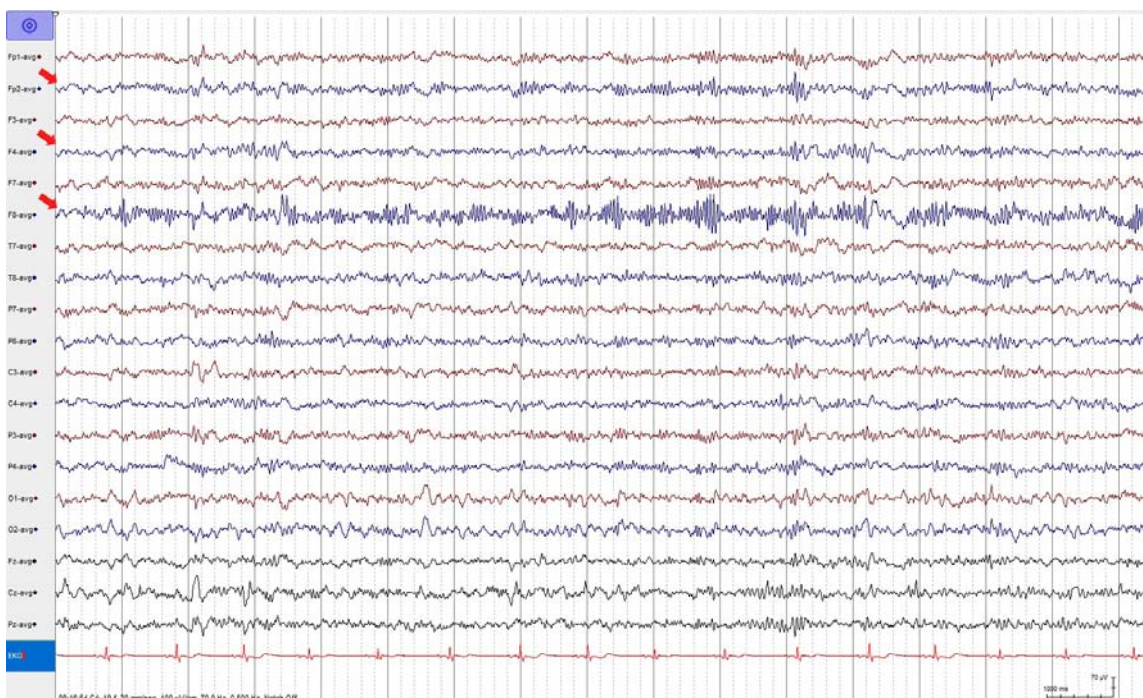
This patient has a history of a prior craniotomy in the right anterior quadrant.



## Bipolar



## Average



\* 22. Please select correct answer.

- ☐ Myogenic artifact
- ☐ Focal epileptiform discharges, spikes
- ☐ Focal seizure
- ☐ Breach
- ☐ Focal epileptiform discharges, sharps

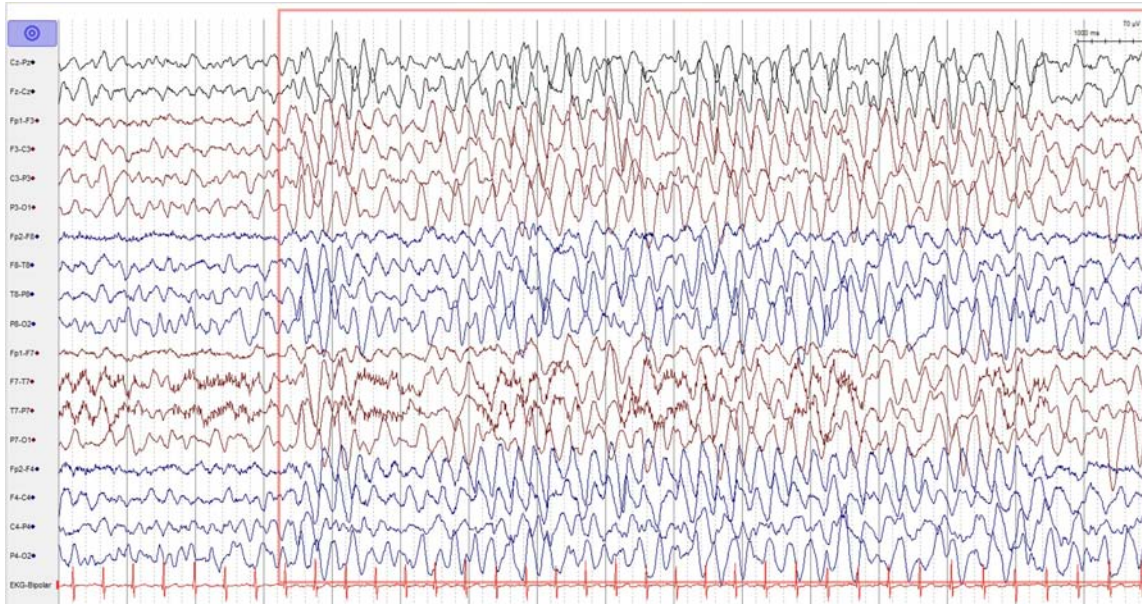


## Routine EEG Test

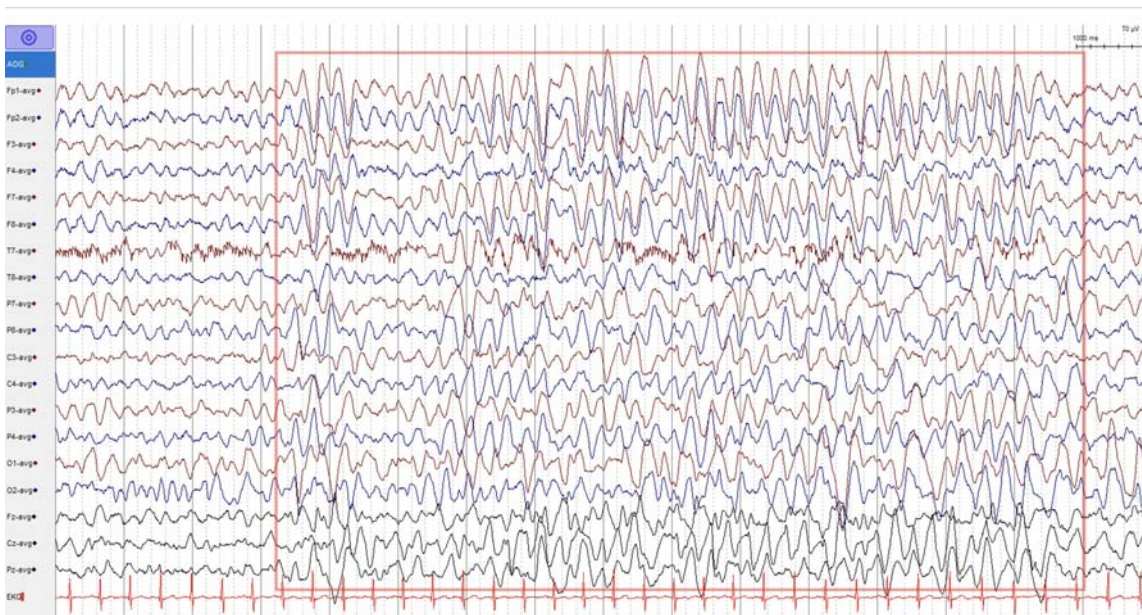
16) What finding/pattern is shown on the EEG below/within the red box?

This is a 6-year-old patient.

Bipolar



Average



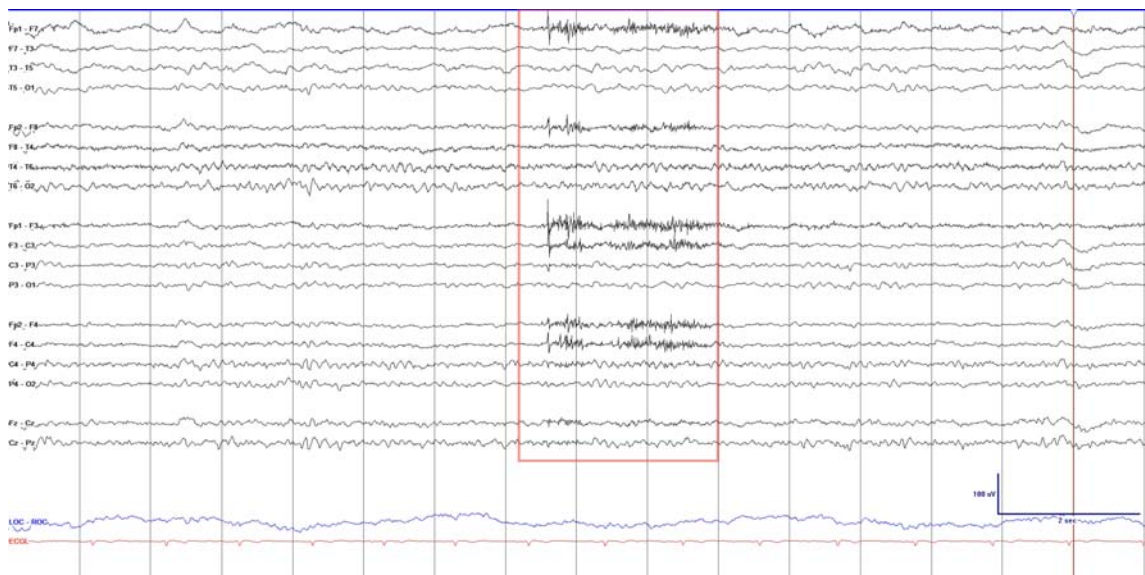
\* 23. Please select correct answer.

- ☐ Patting artifact
- ☐ Excessive beta frequency
- ☐ Generalized seizure
- ☐ Hypnagogic hypersynchrony
- ☐ Hypsarrhythmia

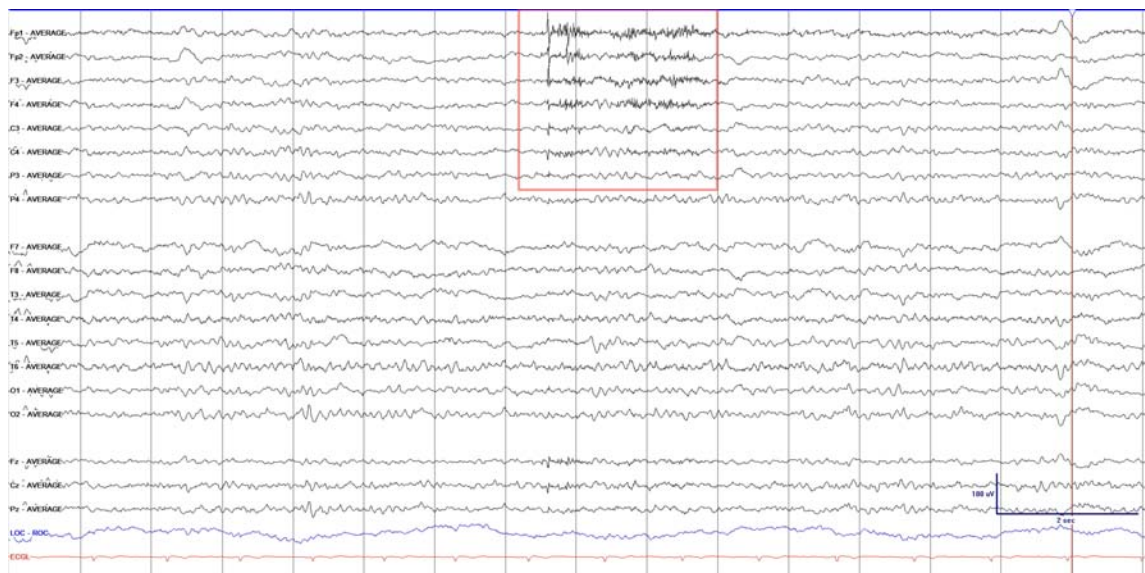
## Routine EEG Test

17) What finding/pattern is shown on the EEG below/within the red box?

Bipolar



Average





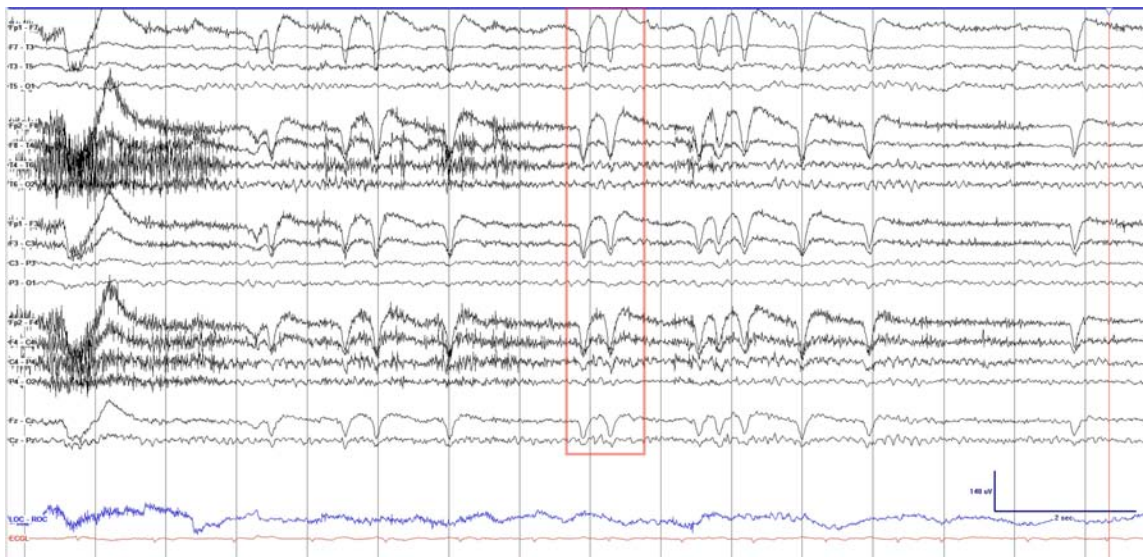
\* 24. Please select correct answer.

- ☐ EKG artifact
- ☐ Generalized seizure
- ☐ Generalized polyspikes
- ☐ Wickets
- ☐ Myogenic artifact

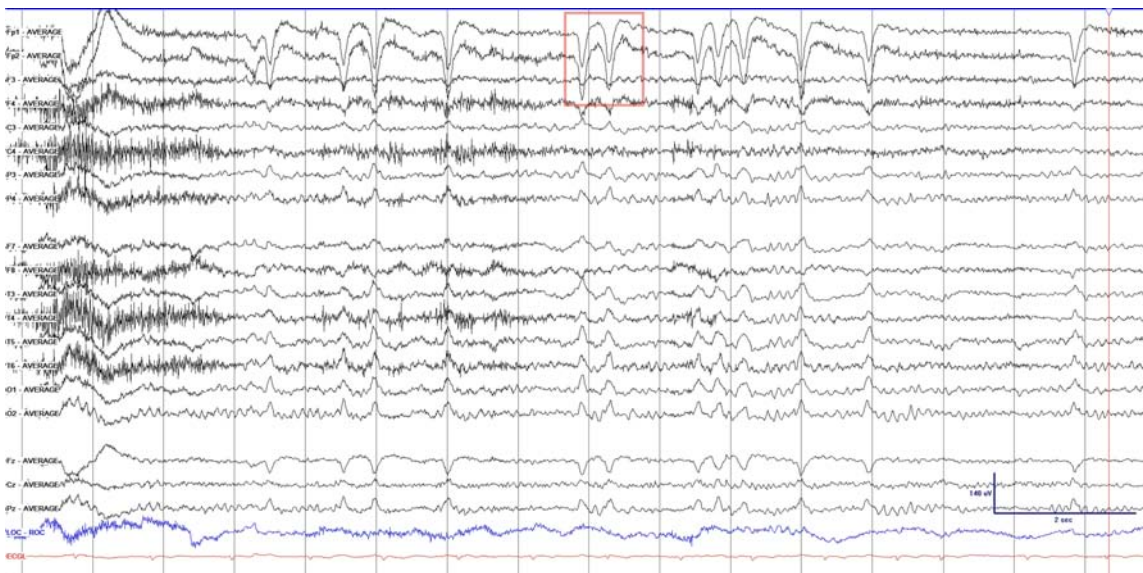
## Routine EEG Test

18) What finding/pattern is shown on the EEG below/within the red box?

Bipolar



Average



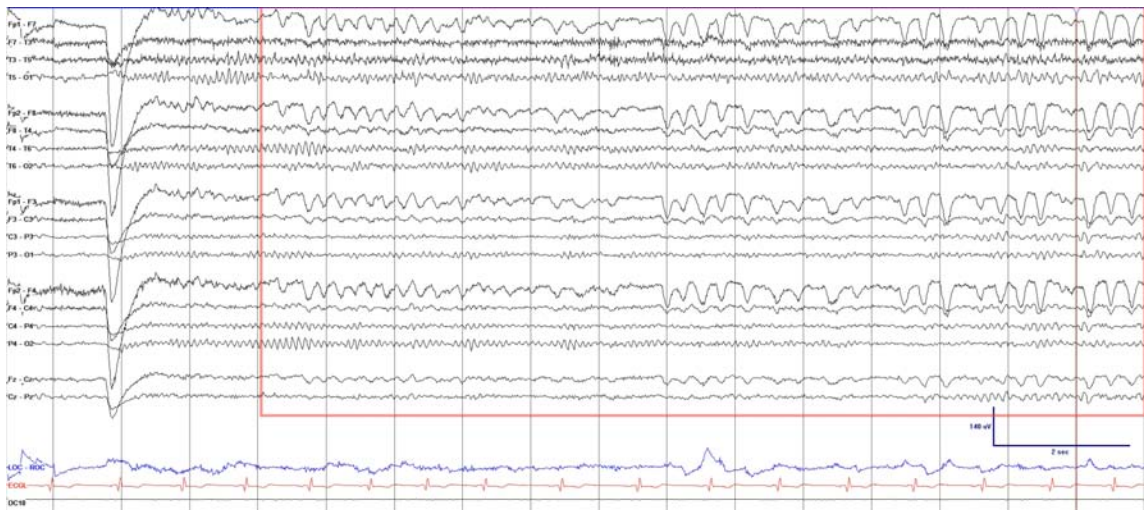
\* 25. Please select correct answer.

- ☐ Eye blinks
- ☐ K complexes
- ☐ Generalized epileptiform discharges
- ☐ Vertex waves
- ☐ Generalized irregular delta slowing

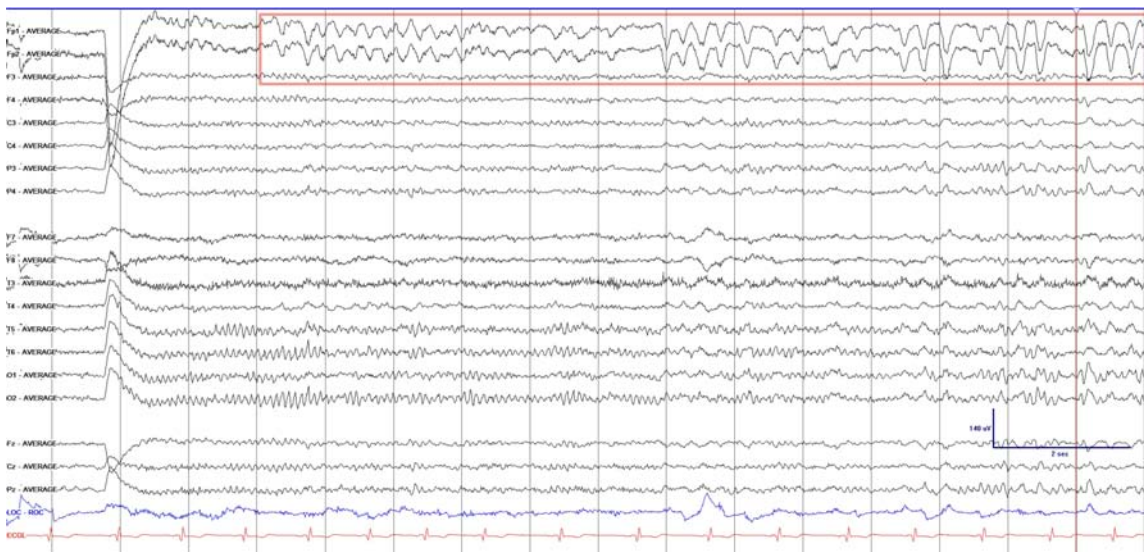
## Routine EEG Test

19) What finding/pattern is shown on the EEG below/within the red box?

Bipolar



Average





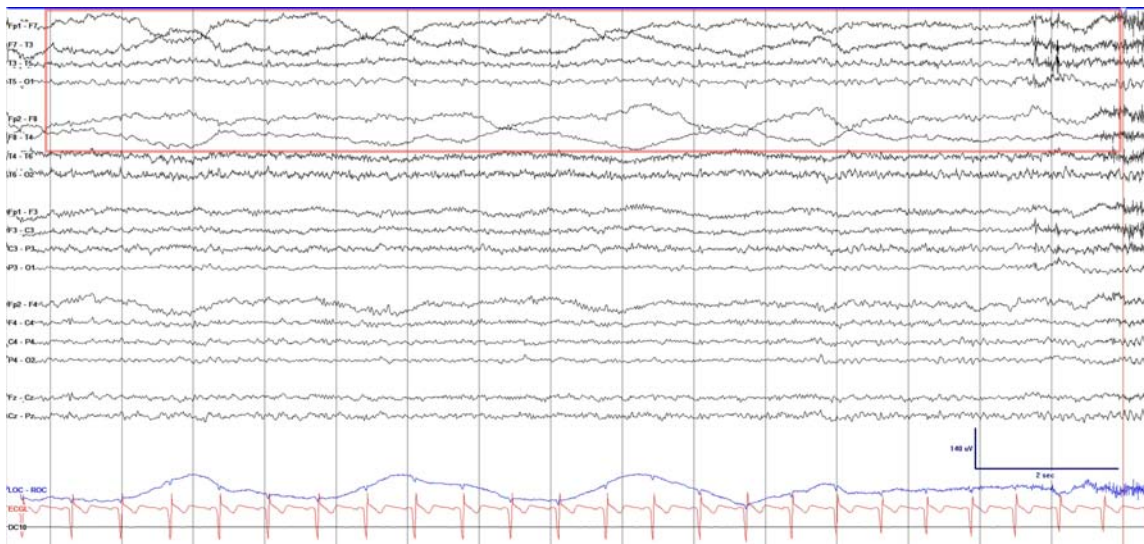
\* 26. Please select correct answer.

- ☐ Eye fluttering
 ☐ Generalized seizure
- ☐ Photic driving
 ☐ Sweat artifact
- ☐ Generalized irregular delta slowing

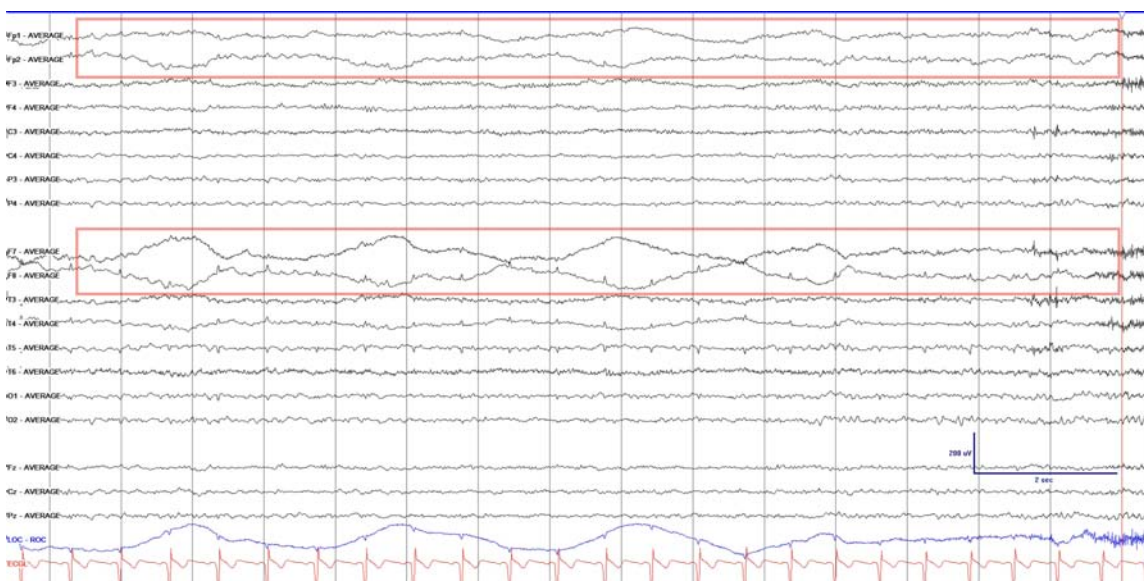
## Routine EEG Test

20) What finding/pattern is shown on the EEG below/within the red box?

Bipolar



Average



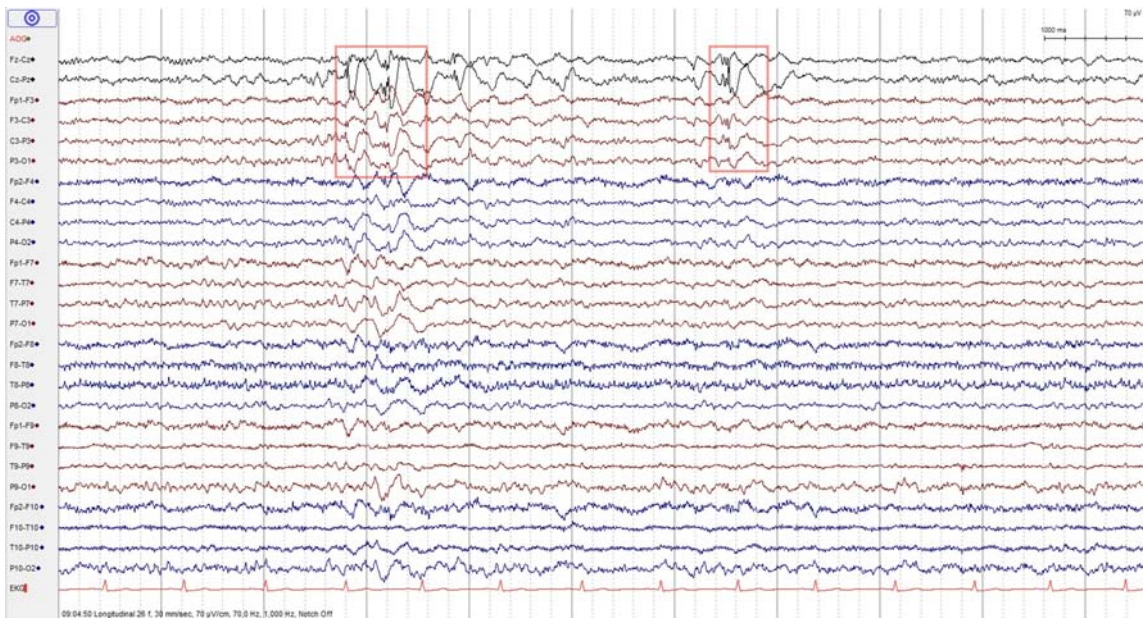
\* 27. Please select correct answer.

- ☐ Sweat artifact
- ☐ Generalized irregular delta slowing
- ☐ Eye fluttering
- ☐ Eye blinks
- ☐ Lateral eye movements

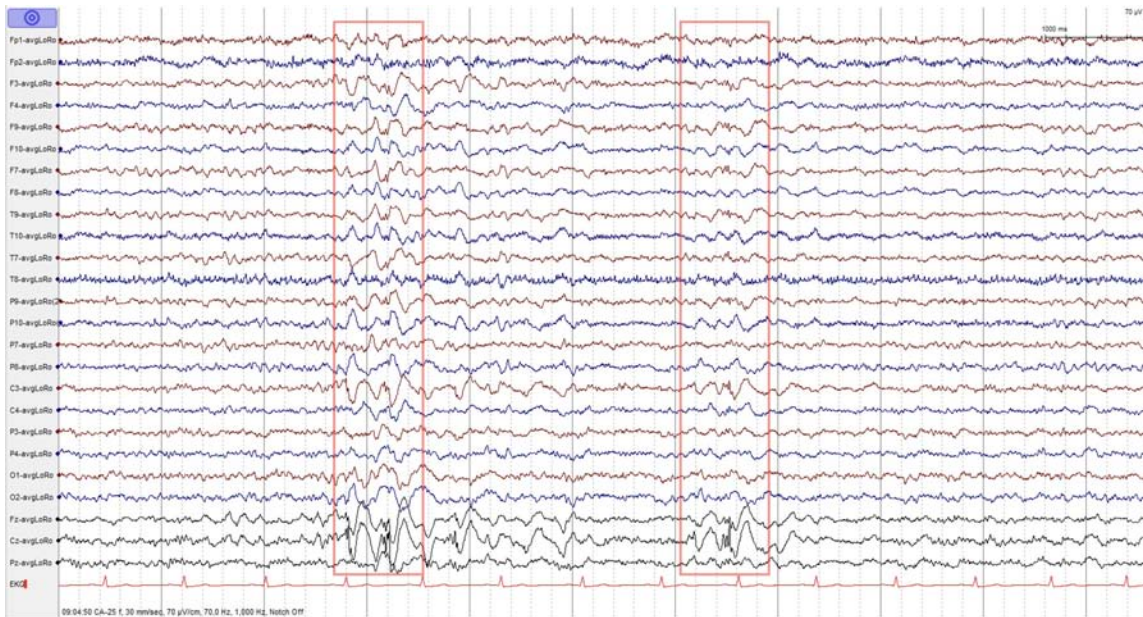
## Routine EEG Test

21) What finding/pattern is shown on the EEG below/within the red box?

Bipolar



Average



\* 28. Please select correct answer.

- ☐ EKG artifact
- ☐ Focal epileptiform discharges, sharps
- ☐ Focal epileptiform discharges, polyspikes
- ☐ Eye blinks
- ☐ Wicket spikes

## Routine EEG Test

22) What finding/pattern is shown on the EEG below/within the red box?



- ☐ Generalized regular/rhythmic delta slowing
- ☐ Generalized epileptiform discharges, 3 Hz, polyspike-wave
- ☐ Generalized paroxysmal fast activity
- ☐ Eye fluttering
- ☐ Generalized epileptiform discharges, 3 Hz, spike-wave

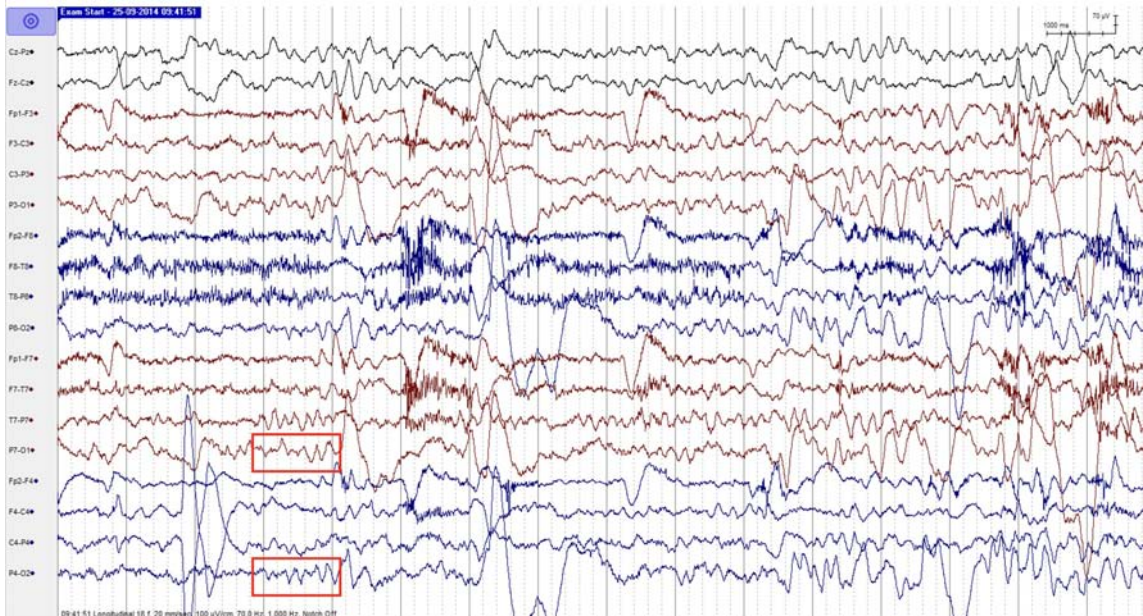


## Routine EEG Test

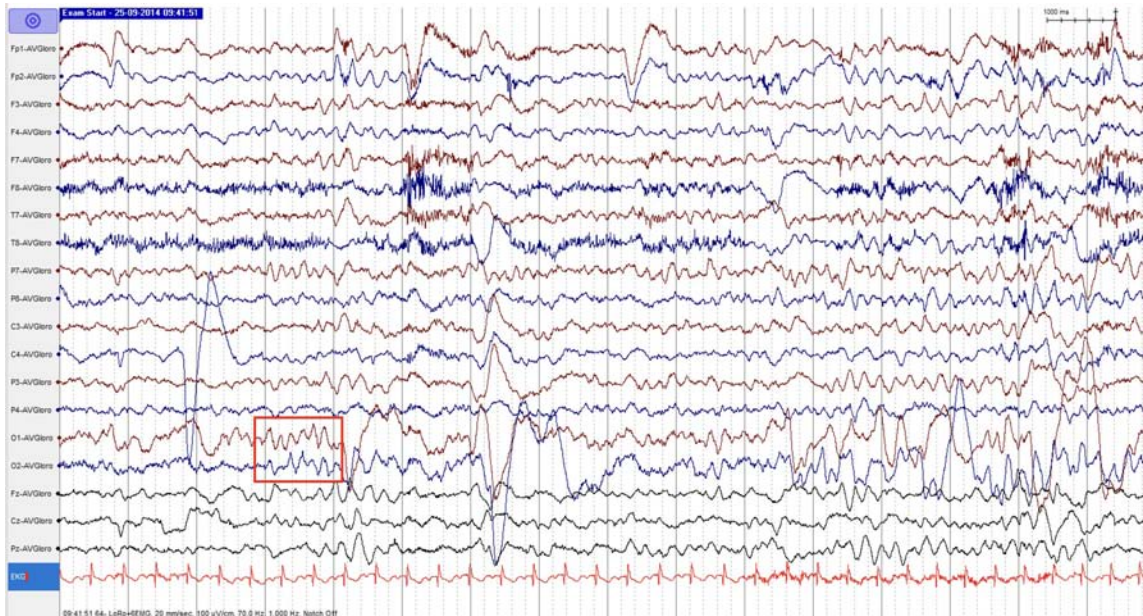
23) What finding/pattern is shown on the EEG below/within the red box?

This is a 6-year-old patient.

Bipolar



Average



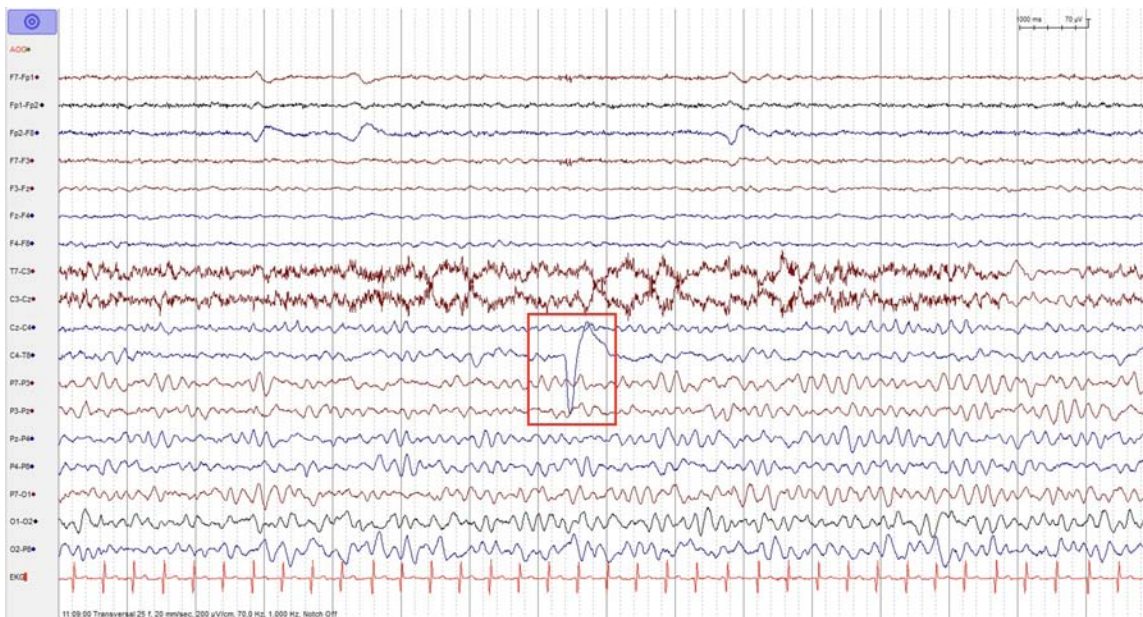
\* 30. Please select correct answer.

- ☐ Normal posterior dominant rhythm (PDR)
- ☐ Mu rhythm
- ☐ Generalized irregular theta slowing
- ☐ Lambda waves
- ☐ Positive occipital sharp transients of sleep (POSTS)

## Routine EEG Test

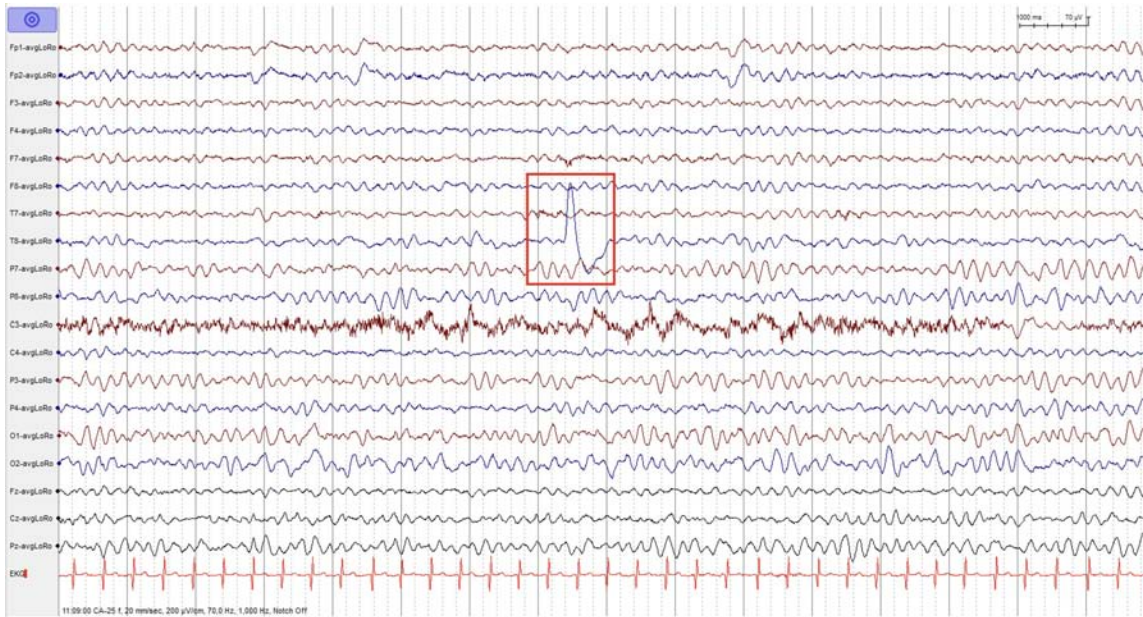
24) What finding/pattern is shown on the EEG below/within the red box?

Bipolar





Average



\* 31. Please select correct answer.

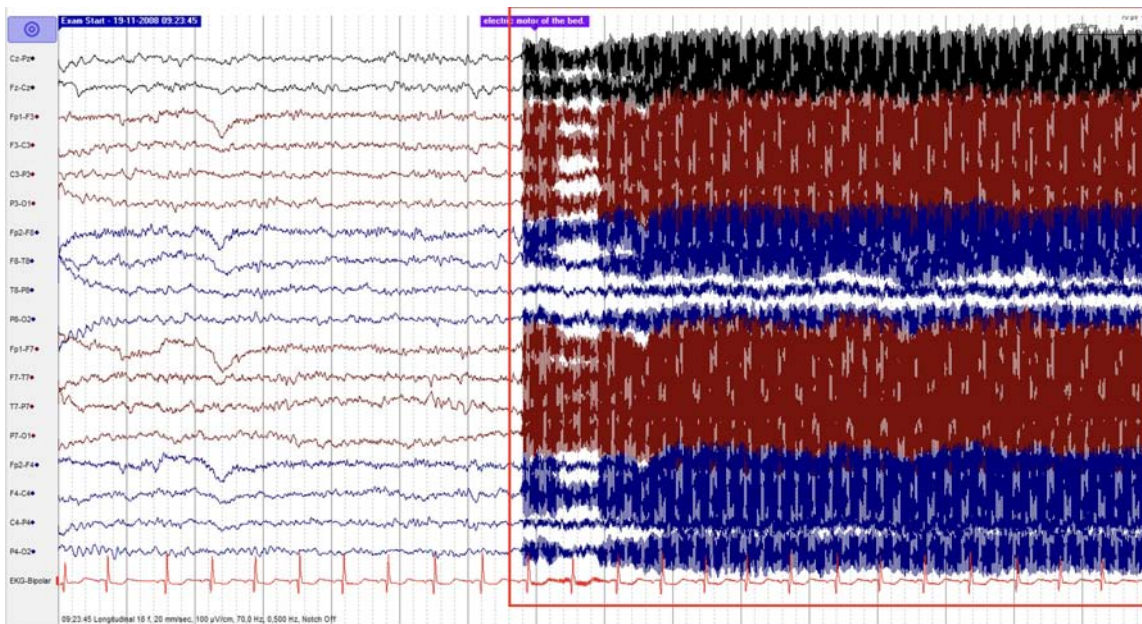
- ☐ Focal irregular delta slowing
- ☐ Focal epileptiform discharge, sharp
- ☐ Focal epileptiform discharge, polyspike
- ☐ Electrode pop
- ☐ Focal epileptiform discharge, spike

## Routine EEG Test

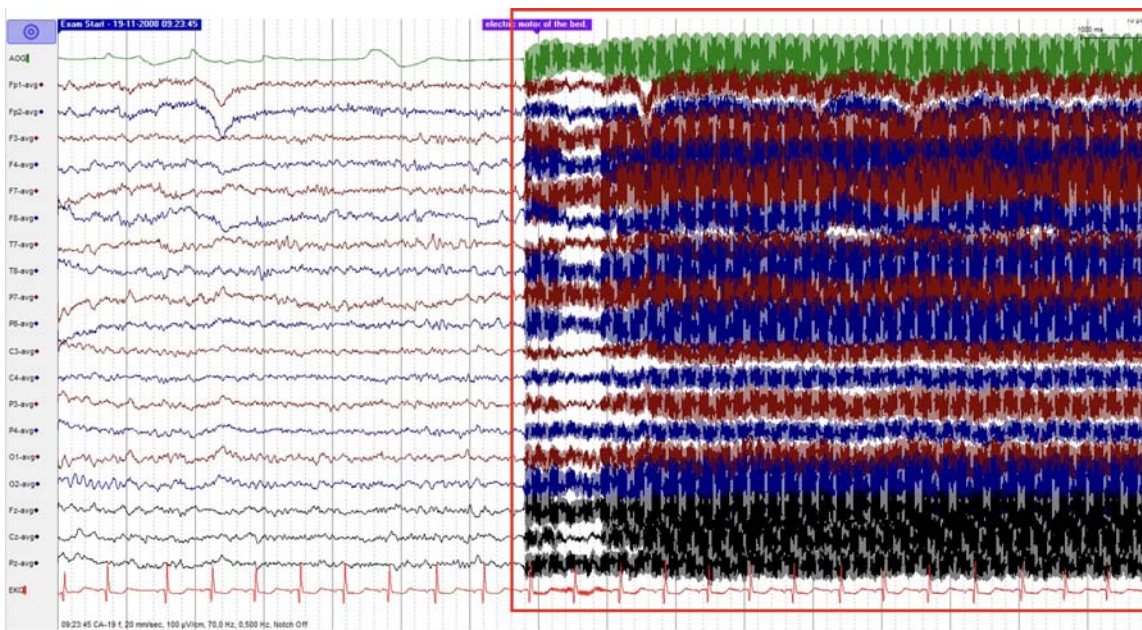
25) What finding/pattern is shown on the EEG below/within the red box?



Bipolar



Average



\* 32. Please select correct answer.

- ☐ Generalized seizure
- ☐ 50 Hz artifact
- ☐ Musce artifact
- ☐ Electrode pop
- ☐ Focal seizure



## Routine EEG Test

26) What finding/pattern is shown on the EEG below/within the red box?

Bipolar



Average



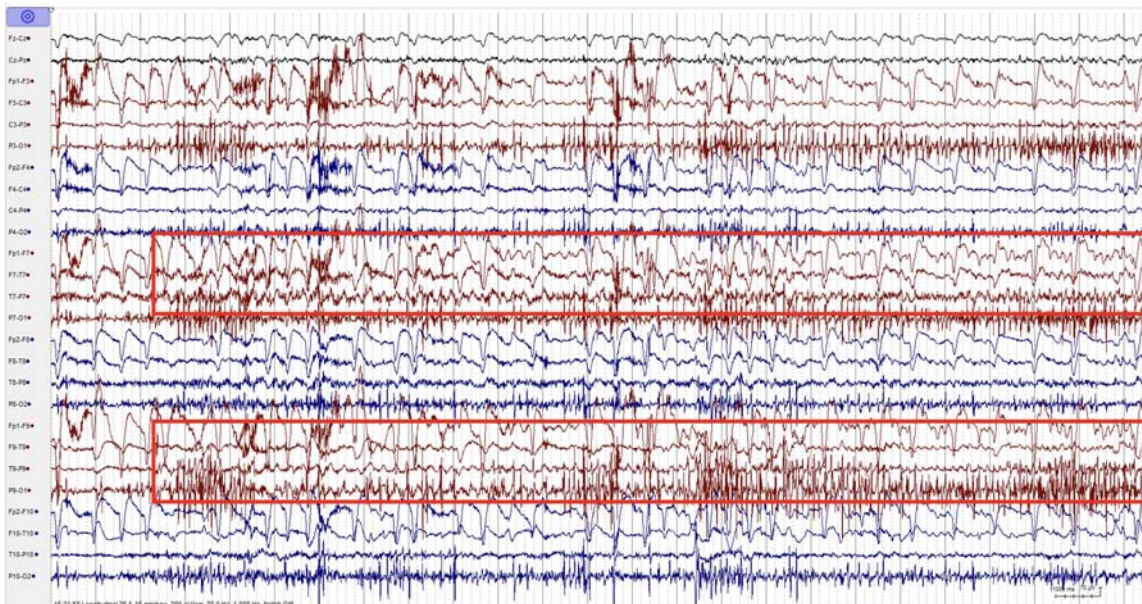
\* 33. Please select correct answer.

- ☐ Focal seizure
- ☐ Generalized epileptiform discharges, 3 Hz
- ☐ Eye fluttering
- ☐ Generalized epileptiform discharges, <2.5 Hz
- ☐ EKG artifact

## Routine EEG Test

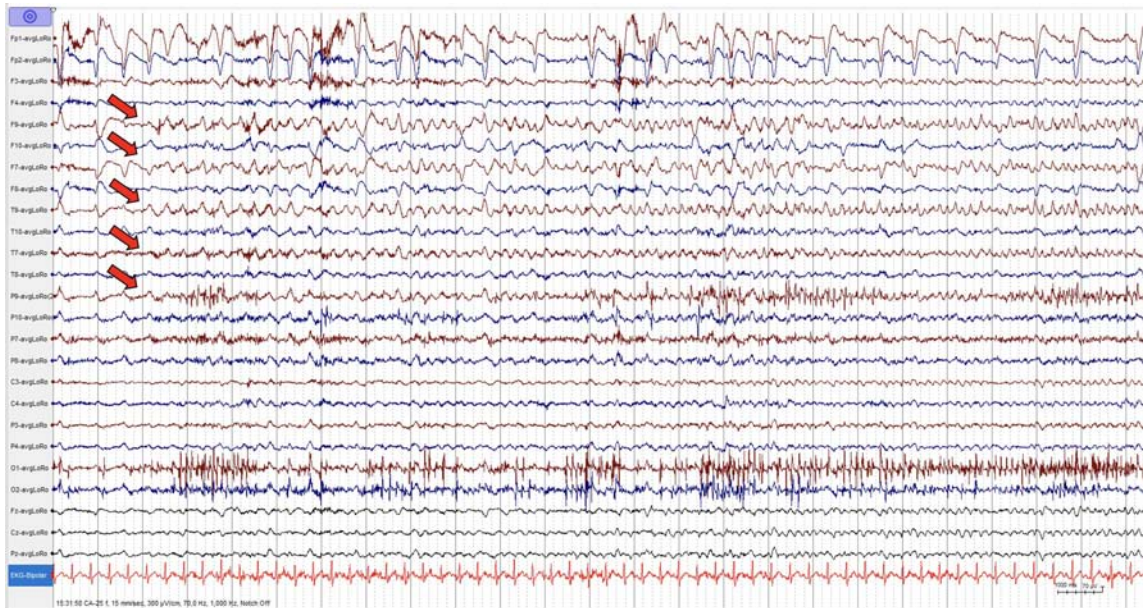
27) What finding/pattern is shown on the EEG below/within the red box?

Bipolar





Average



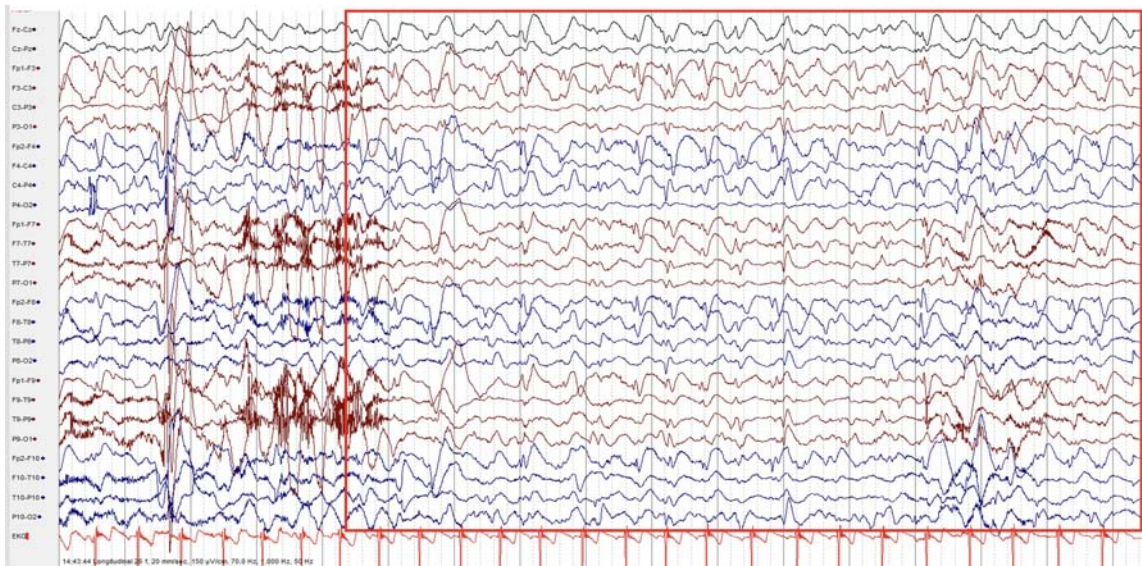
\* 34. Please select correct answer.

- ☐ Focal seizure
- ☐ Generalized seizure
- ☐ Posterior dominant rhythm (PDR), asymmetric
- ☐ EKG artifact
- ☐ Breach rhythm

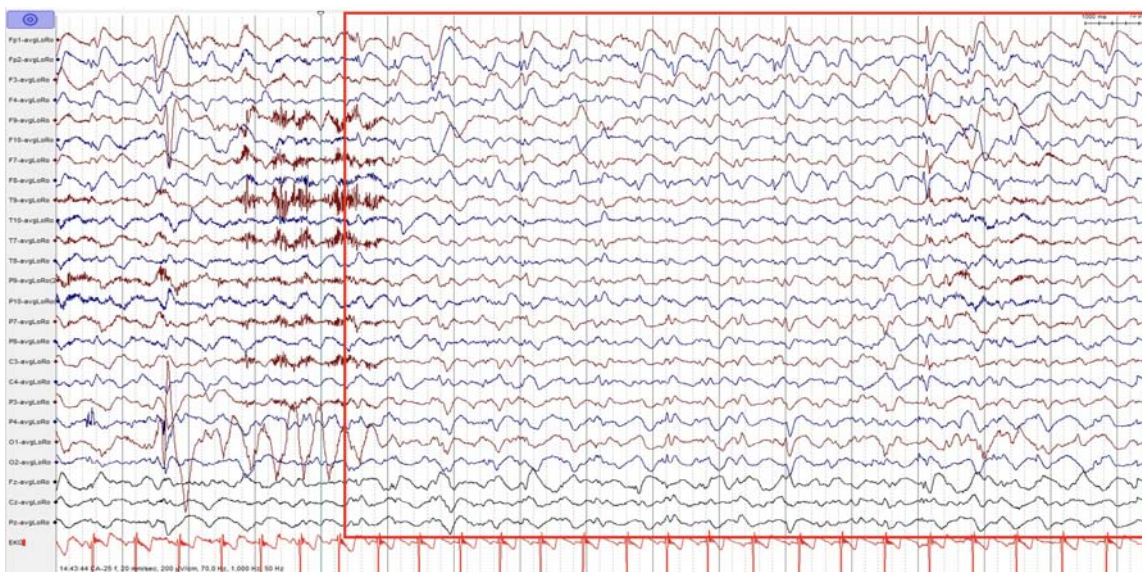
## Routine EEG Test

28) What finding/pattern is shown on the EEG below/within the red box?

Bipolar



Average



\* 35. Please select correct answer.

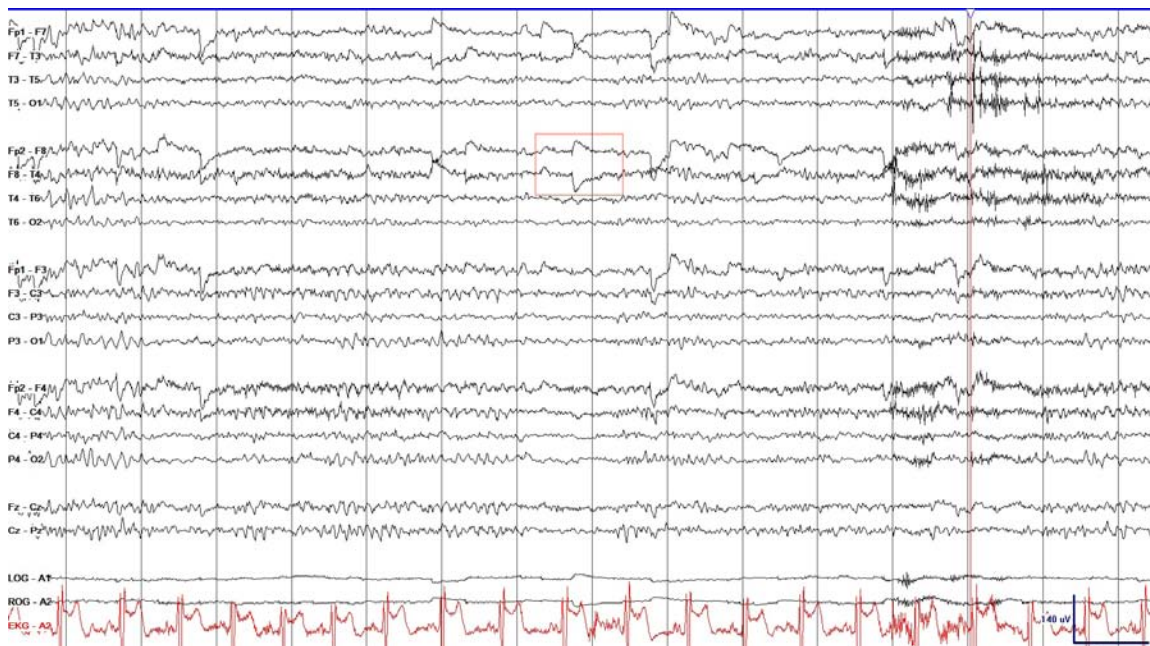
- ☐ Generalized epileptiform discharges, 3-5 Hz
- ☐ Focal seizure
- ☐ Focal epileptiform discharges, 3-5 Hz
- ☐ EKG artifact
- ☐ Generalized epileptiform discharges,  $\leq 2.5$  Hz

**Routine EEG Test**

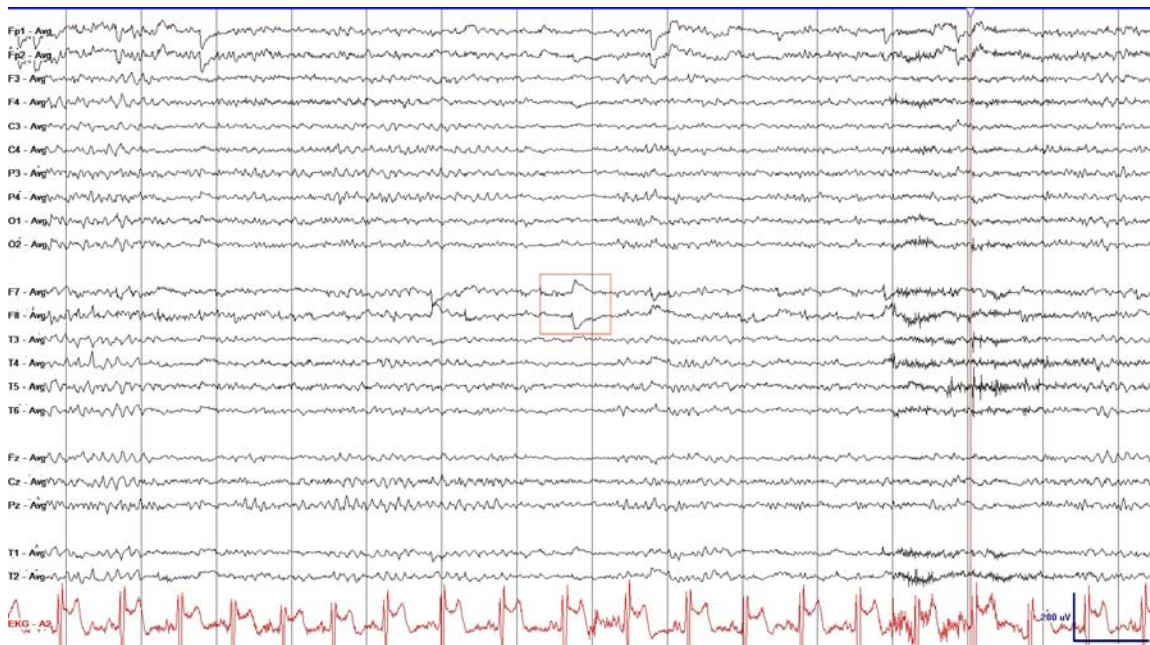


29) What finding/pattern is shown on the EEG below/within the red box?

Bipolar



Average





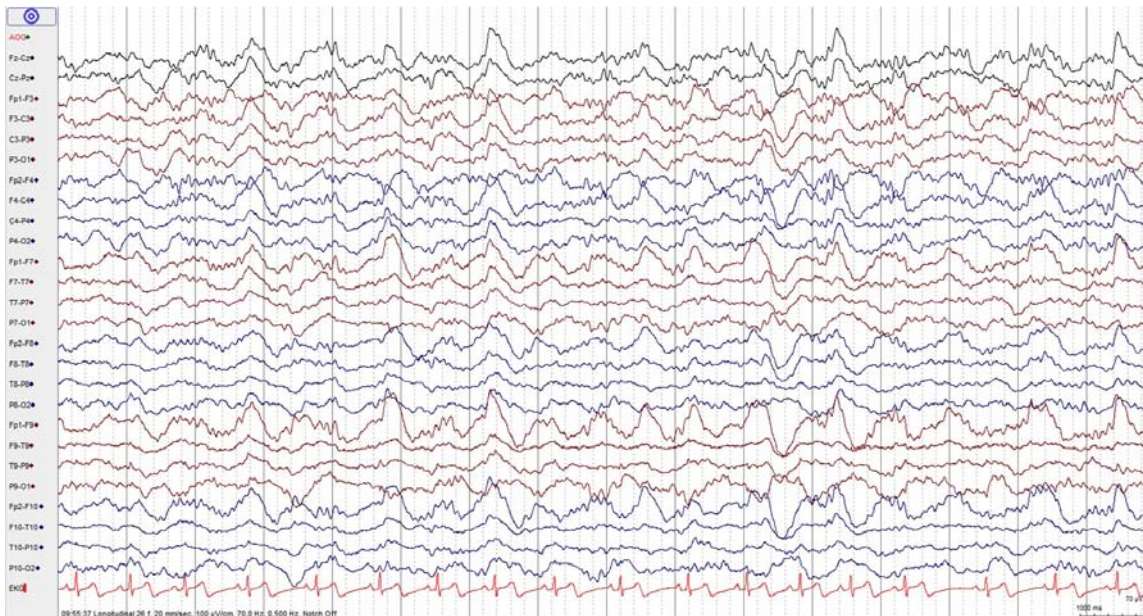
\* 36. Please select correct answer.

- ☐ Electrode pop
 ☐ Lateral rectus spike
- ☐ Focal epileptiform discharge, spike
 ☐ EKG artifact
- ☐ Focal epileptiform discharge, sharp

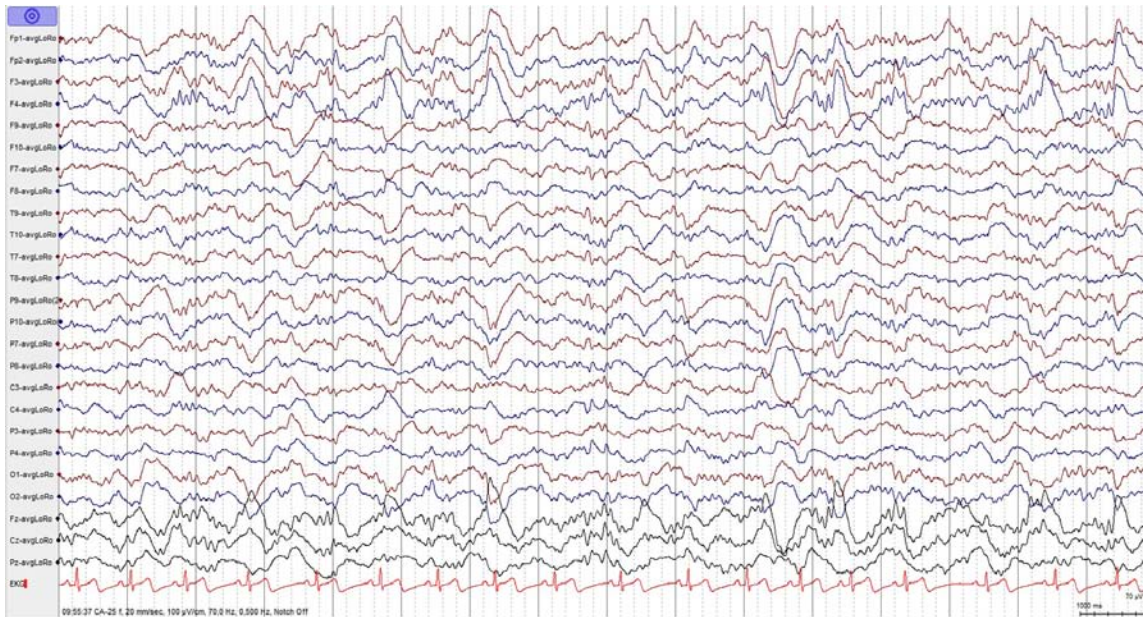
## Routine EEG Test

30) What finding/pattern is shown on the EEG below?

Bipolar



Average



\* 37. Please select correct answer.

- ☐ Generalized seizure
- ☐ Generalized regular/rhythmic delta slowing
- ☐ Sweat artifact
- ☐ Focal regular/rhythmic delta slowing
- ☐ Stage 3 sleep (NREM)