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## A Controversy of EEG Loreta and NeuroGuide reports in Obsessive-Compulsive Disorder

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### Abstract

There is a Controversy of EEG Loreta and NeuroGuide reports in Obsessive-Compulsive Disorder. In OCD , Alpha at high Alpha group is more than low Alpha group.

The controversy is that Alpha power(especially 8 Hz) at Neuroguide low alpha group is unexpectedly more than high Alpha group but, result on the Loreta mean is opposite of Neuroguide .

**Keywords :** Controversy ; EEG; Loreta; NeuroGuide; Obsessive-Compulsive Disorder

## **Introduction**

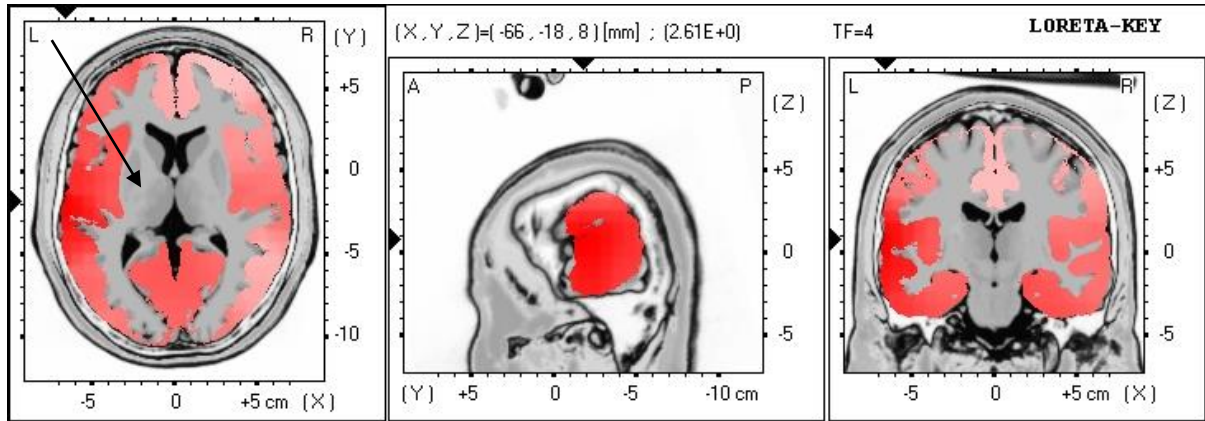
### **Case Presentation**

Two groups of 5 patients with a DSM IV diagnosis of Obsessive-compulsive disorder ( OCD ) were studied in a drug-free state. The patients comfortably were seated in a sound and light-attenuated room, while 10 minutes of eyes-closed resting EEG data using Mitsar system were collected from the 19 monopolar electrode sites of the International 10/20 system, referred to linked earlobes. Then 1 minutes of artifact-free data were extracted from the EEG record for quantitative analysis, while offline montage was Laplacian.

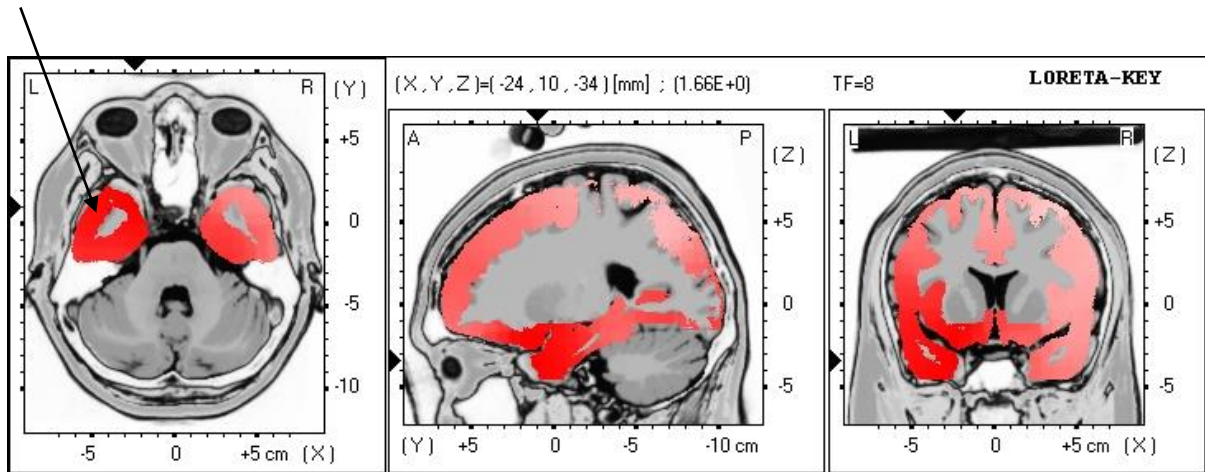
## **Results**

### **Panel A:**

Theta at high Alpha group has been enhanced



Alpha at high Alpha group is more than low Alpha group (expected)

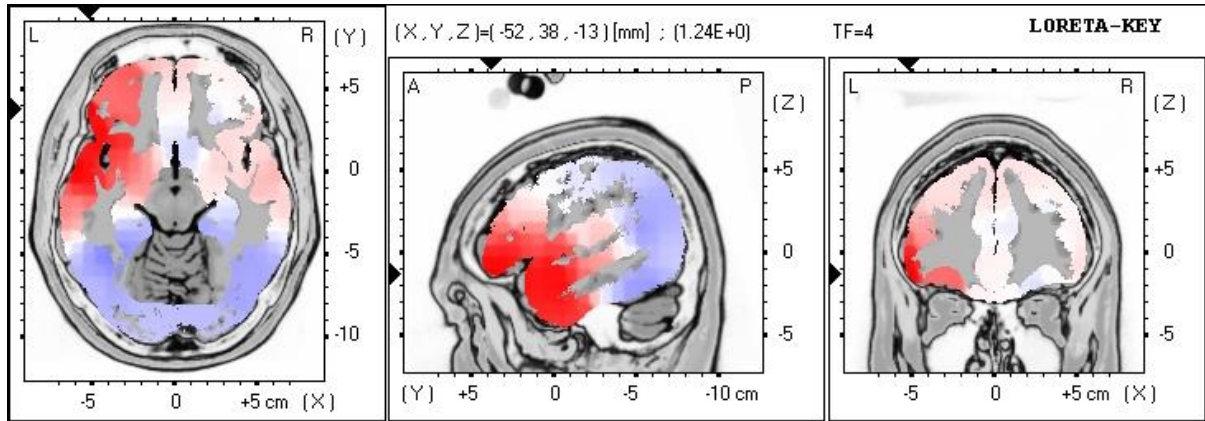


*Loreta average of high Alpha group*

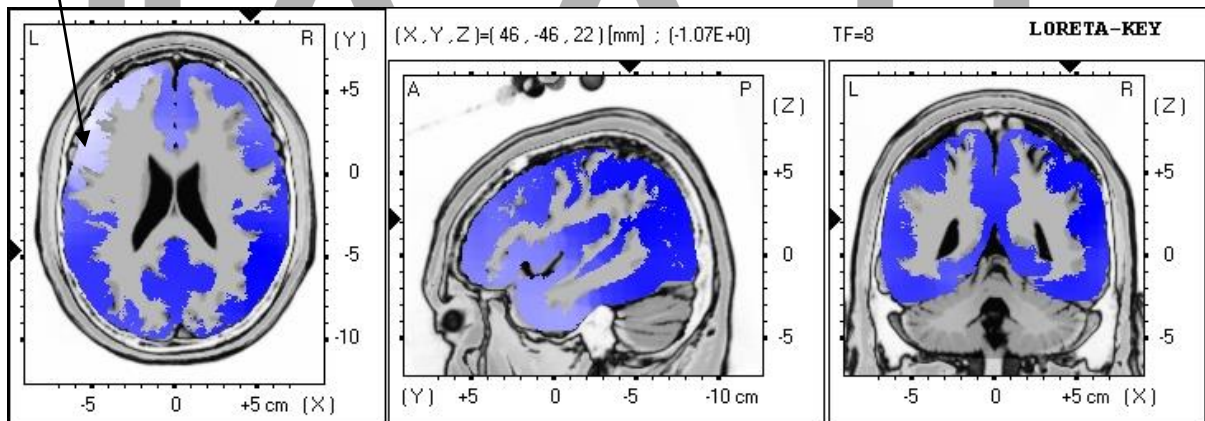
**Panel B:**

Theta at low Alpha group is within normal range





Alpha at low Alpha group is less than high Alpha group (expected)

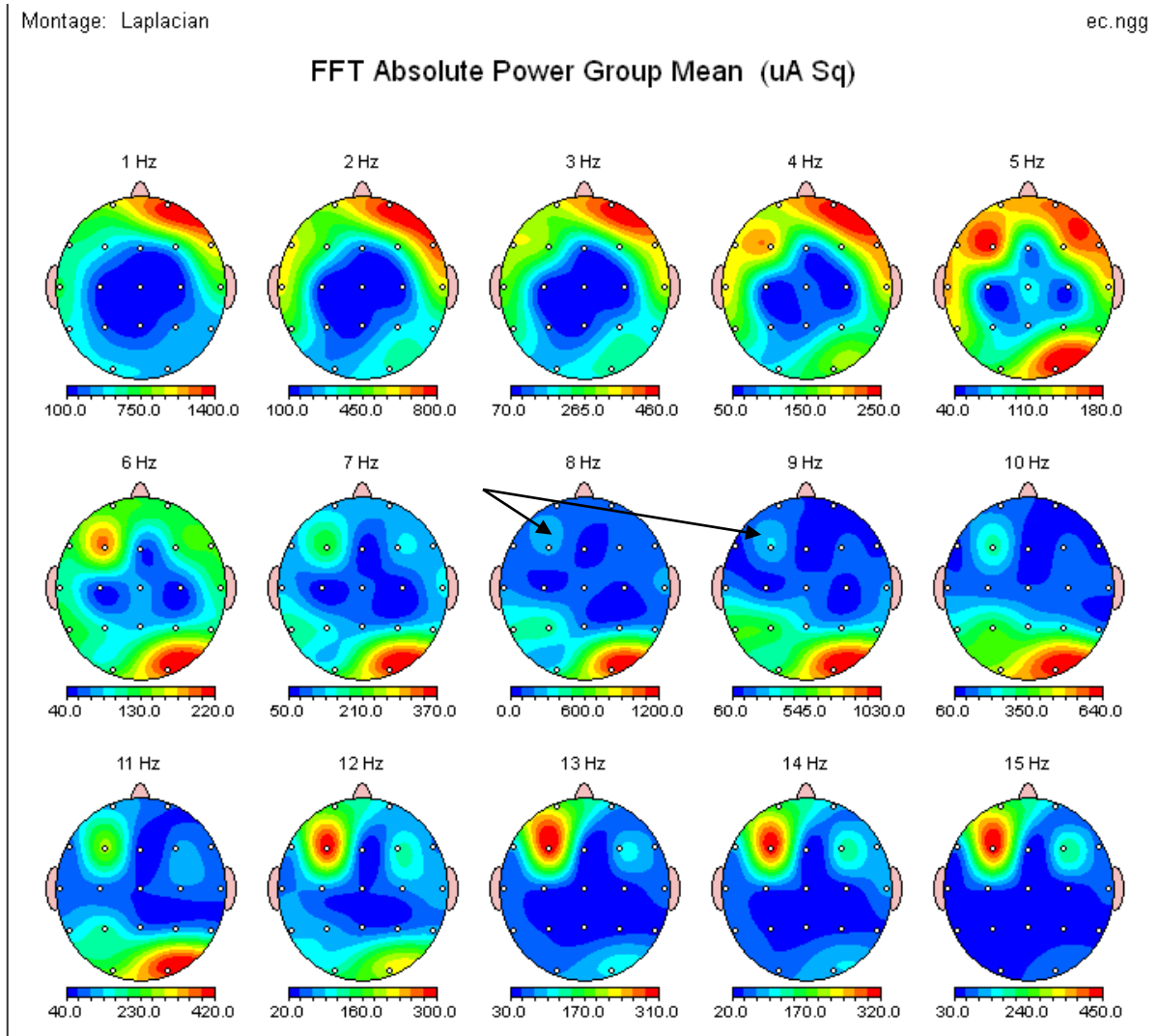


*Loreta average of low Alpha group*

**Panel C:**

According to Neuroguide report, Theta at both groups has been enhanced

Alpha at high Alpha group



*NeuroGuide average of high Alpha group*

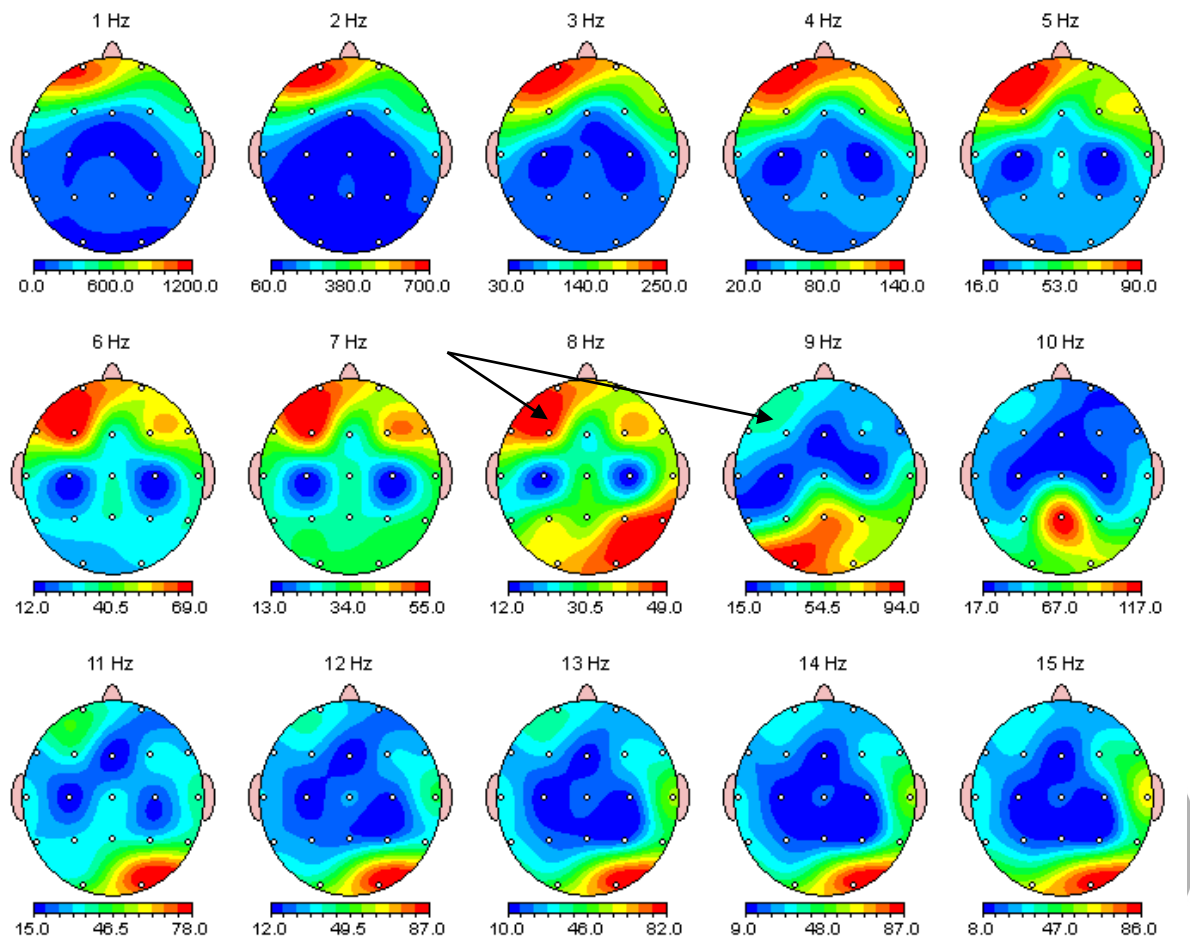
**Panel D:**

**Alpha at low Alpha group (an unexpected Alpha power)**

Montage: Laplacian

ec low.ngc

**FFT Absolute Power Group Mean (uA Sq)**



*NeuroGuide average of low Alpha group*

**Discussion**

The EEG pattern of OCD patients sometimes may not be consistent with which seems in the literature so, further caution with all type of treatments (especially Neuro therapy) is necessary (1, 2) . There is a Controversy of EEG Loreta and NeuroGuide reports in Obsessive-Compulsive Disorder.

.It is concordance with our study.

## Conclusion

The controversy is that Alpha power(especially 8 Hz) at Neuroguide low Alpha group is unexpectly more than high Alpha group but, result on the Loreta mean is opposite of Neuroguide .

## REFERENCES

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