

Limbic Encephalitis and Refractory Mesial Temporal Lobe Epilepsy: A Single Case Study of Neurosurgery and Medical Anthroposophic Therapies

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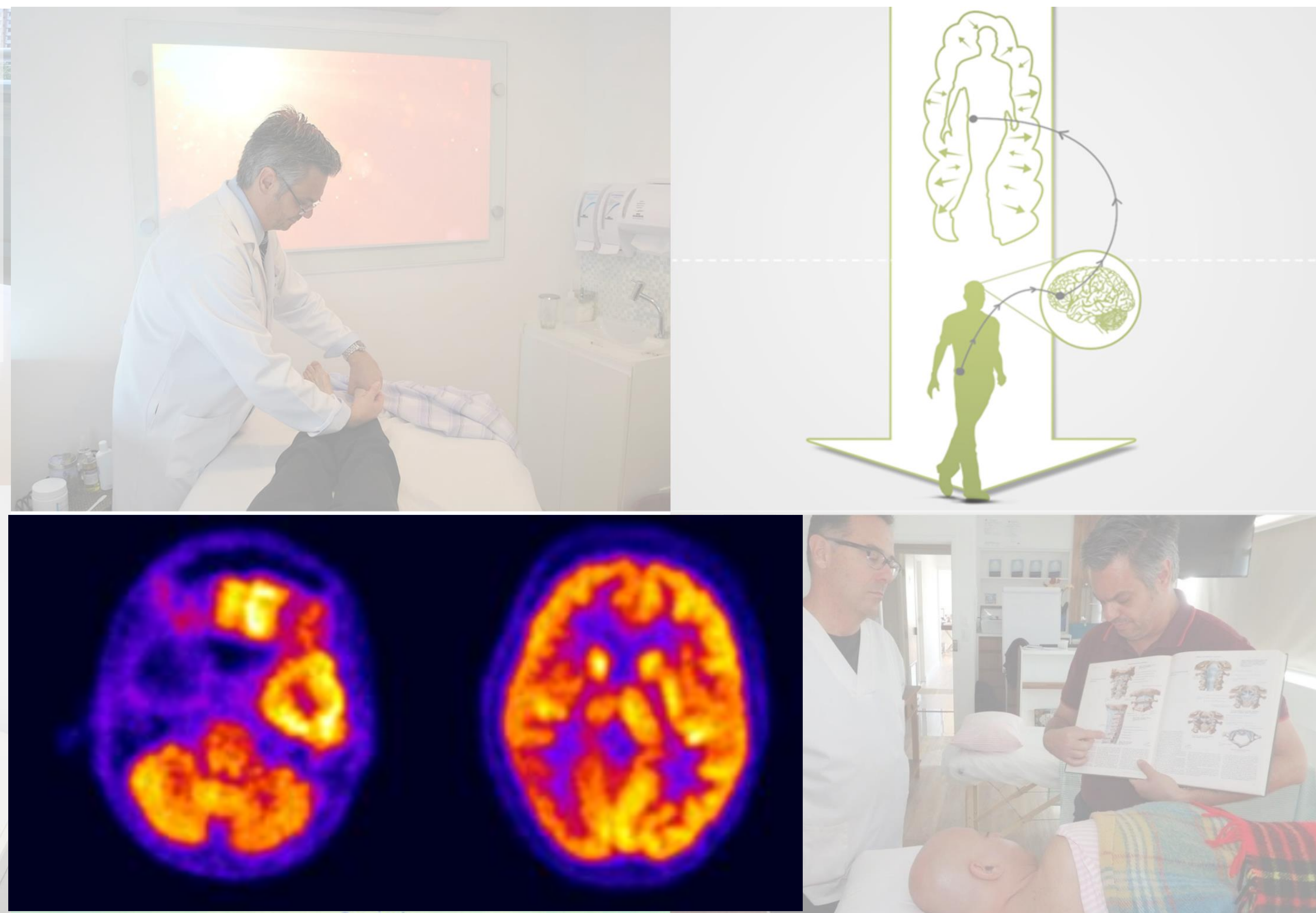
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Introduction

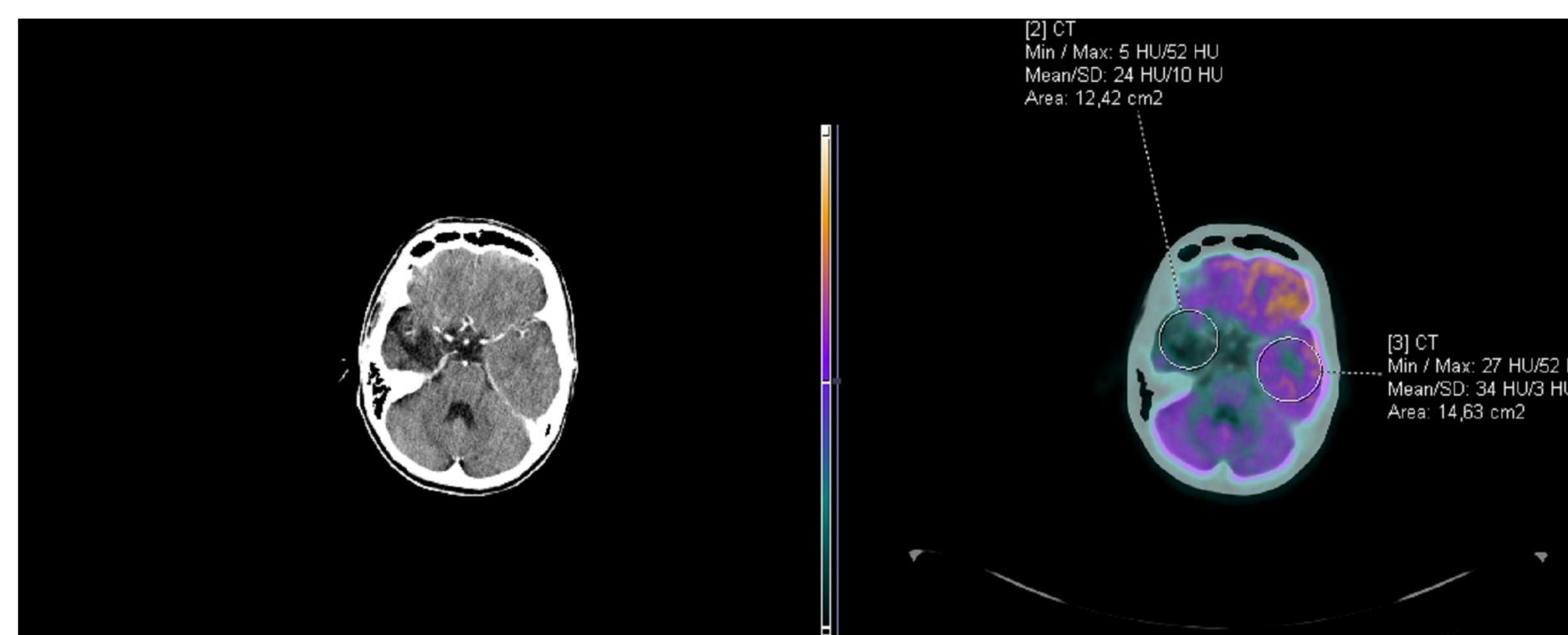
The Anthroposophic Medicine shows how perceptual development contributes towards the individual's maturing. Neuroscience and neuroimaging techniques describe the perceptual phenomenon, mapping its processes in the human body regarding evolutionary neurological marks learning and memory. In this context, we present a case report of a child with limbic encephalitis secondary to group B streptococcus infection with refractory mesial temporal lobe epilepsy [1,2], who was treated with neurosurgery intervention and anthroposophic therapies [3,4]. The informed consent was obtained from the patient parents.

Materials and Methods

A six-year-old female who presented fever and cough, received antibiotic therapy (amoxicillin-sulbactam). A week later, she manifested drowsiness and loss of consciousness, having a febrile convulsion, culminating in a status epilepticus that led her to remain four months in an intensive care unit, with assisted ventilation and monitoring. After discharge, she had multiple daily seizures (around fifty per day), refractory to the association of the antiepileptic drugs (AED): levetiracetam 1500 mg/day, topiramate 300 mg/day, phenobarbital 300 mg/day, clobazam 80 mg/day, vigabatrin 750 mg/day. The seizures and the side-effects of the drugs did not allow her to have a normal life, needing a constantly nursing care. MRI showed unilateral mesial sclerosis with hyperintense lesions in T2 images, suggesting the presence of the limbic encephalitis. Two years later, she underwent right hippocampectomy [5], which did not reduce the seizures frequency or intensity, even in association with AED. The disease evolution was monitored with MRI, CSF analysis, FDG-PET/CT images, EEG and neurological evaluations. Due to the constantly seizures, she broke most of her teeth and had facial fractures. Five years later, in 2016, she started the anthroposophic therapies associated to AED, based on the following medicines (oral and injectable): *Helleborus niger* D6, *Cuprum aceticum* D4, *Zincum valeriana* D6, *Bryophyllum argentum cultum* D5, *Bryophyllum calycinum* D5, *Calcarea carbonica* D6, *Rhus toxicodendron* D4 + *Hypericum* D5 + *Bryonia* D5, *Chelidonium* D5 + *Carduus marianus* D5 and *Viscum P* (Iscador).



PET images of the patient after the hippocampectomy, with hypometabolism in the right temporal lobe.

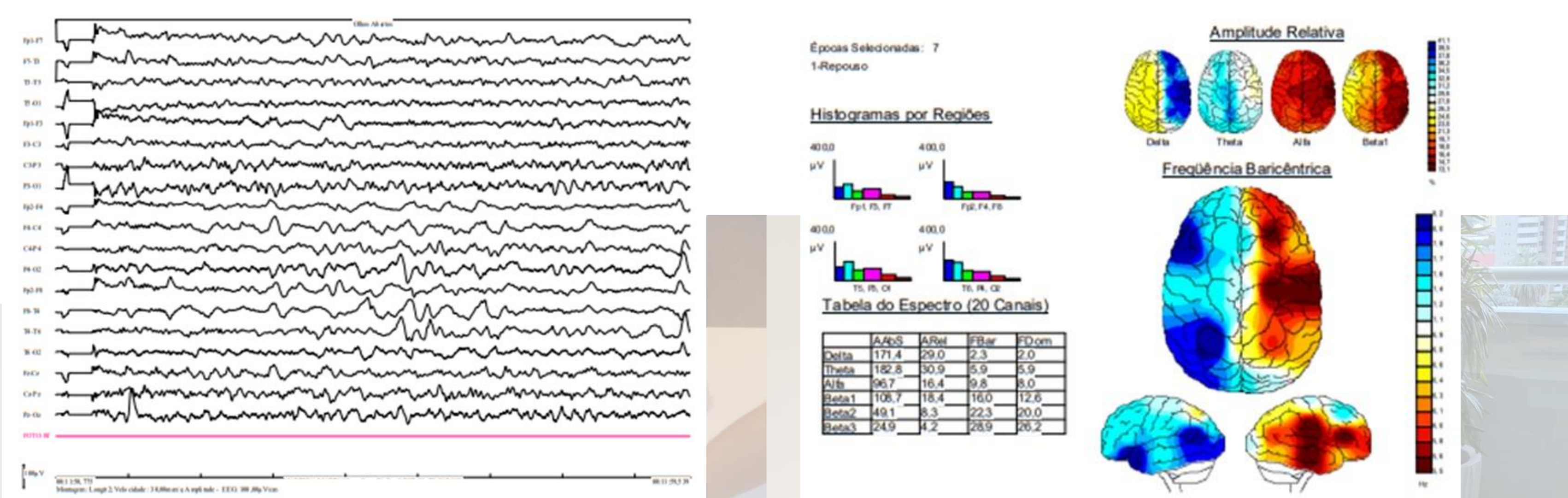


CT and PET/CT images of the patient after the hippocampectomy, with hypometabolism in the right temporal lobe. The HU values of both temporal lobes are displayed.

Medicines (Injectable/Oral)	Indications	Multimodal Therapies
<i>Helleborus niger</i> D6/ <i>Calcarea Carbonica</i> D6	Harmonize the brain measurement of the organ superficial tension, simultaneously reducing this tension (act directly controlling the seizures)	
<i>Cuprum Aceticum</i> D4/ <i>Bryophyllum Argentum Cultum</i> D5/ <i>Bryophyllum Calycinum</i> D5	Strengthening of the regenerative processes and circadian rhythms (nocturnal seizures)	<ul style="list-style-type: none"> ➢ Pressel massage ➢ Craniosacral therapy ➢ Anthroposophic external therapies
<i>Zincum Valeriana</i> D6	Stimulation of the rhythmically mediated processes in terms of sensorial harmonization	<ul style="list-style-type: none"> ➢ Biographic work with pedagogical medicine
<i>Rhus toxicodendron</i> D4 + <i>Hypericum</i> D5 + <i>Bryonia</i> D5/ <i>Chelidonium</i> D5 + <i>Carduus</i> D5	Protection and shield of the vitality and strengthening of the immunological defense	<ul style="list-style-type: none"> ➢ Medical care focused on "neuro-anthroposophic" approach in all sessions
<i>Viscum P</i> (Iscador)	Encephalitis, gliosis, hippocampal sclerosis	

Results

Previously to the anthroposophic approach, the exam of the CSF detected an increased number of lymphocytes, and proteins, which is seen in encephalitis. The antibodies tests were not available. The FDG-PET/CT image after the surgery revealed right temporal hypometabolism due to surgery resection (Figure), and CT showed moderated frontal and parietal edema possibly related to pos-surgical edema. Post-surgically, the MRI showed reactionary gliosis in the right temporal region, with mesial unilateral sclerosis. The EEG findings highlighted the high intensity spikes and electrical brain rhythm disorganization in the right cerebral hemisphere. Eight months after starting treatment with anthroposophic therapies, the pattern of seizures began to change appreciably. Two years after the beginning of the anthroposophic approach, the seizures frequency decreased expressively (mean = 5 seizures/day), being the patient free of seizures for until 60 days. The treatment made possible her return to school and reestablishment of her other life activities.



EEG with map showing the focal paroxysm spike with low voltage projection edges of the right temporal, parietal and occipital lobes. The map highlights the asymmetry of the diffusion potency in theta.

Conclusion

The anthroposophic therapy resulted in the control of epilepsy seizures and recovery of the patient's life quality. Nowadays, the patient maintains the treatment, starting to reduce the AED without increasing the seizure's frequency.

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