

Dyslexia and Emotional Instability; A Case Study

History.

A nine year old boy presenting with dyslexia, poor concentration, poor motor skills and co-ordination. He also presented with an inability to control his emotions or watch 3D movies, photophobia and phonophobia.

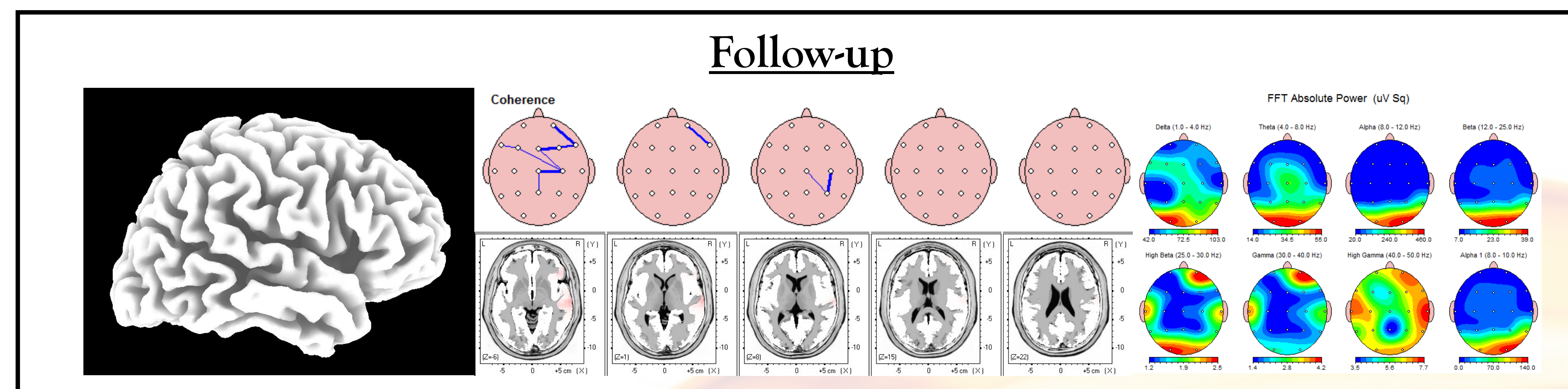
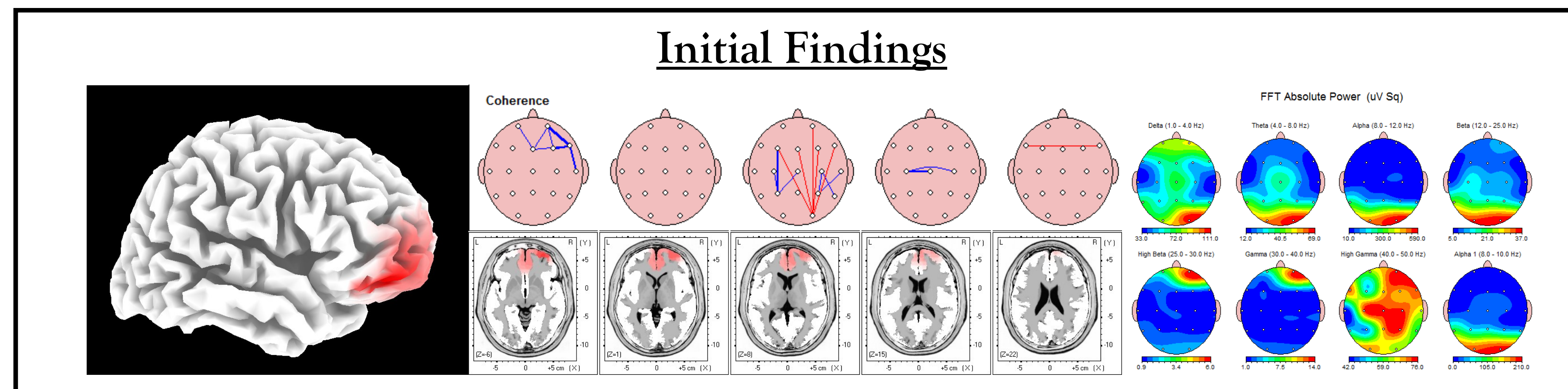
The patient had a traumatic birth, he was born tongue tied and this was surgically corrected. At 2 years old he fell and suffered a loss of consciousness and two broken ribs. He was involved in a major MVA at the age of 7 when he lost consciousness and has suffered from headaches since. He feels dizzy in the mornings, has frequent paraesthesias in both

feet, is often anxious and a constant worrier. He has poor social skills and is withdrawn having difficulty comprehending social cues. The patient also demonstrates trouble with perceiving letters, letter reversal (dyslexia) and is a slow reader. Repetition and short term memory are also impaired and he often confuses words and is easily distracted. He is unable to run or jump and demonstrates fine motor dysfunction and dyscalculia. Sequential planning is impaired and he suffers from low self-esteem and depression. He reports being bullied at school.

The patient has had speech therapy since kindergarten and still has trouble with word pronunciation and long sentences. He presented at a Year three reading level and is failing all subjects at school.

Physical Exam

90 degrees left rotation on Fakuda's test, Right dysmetria (with mild intention tremor), Right dysdiadochokinesia, Right lower limb hyper-reflexia (3+) Demonstrates poor pursuit tracking, left worse than right, increased tone in left lower limb extensors, left upper limb weakness and bilateral lower limb clonus.



Initial Finding

Initial Quantitative electroencephalographic (qEEG) examination and LORETA analysis showed hyper-coherence over the right cortex in the alpha and high beta frequency.

There was also a hypo-coherence in the delta frequency over the right frontal cortex. Primary findings include a decrease in activity in most frequencies apart from the delta and high gamma frequencies. In addition there was hyper-activation in the occipital cortex in most frequencies and right frontal and central regions in the high beta and gamma frequencies. The LORETA analysis showing the

frontal cortex hypo-activation was specifically located in Brodmann areas 10 & 11.

Follow up Findings

Follow up qEEG and LORETA analysis demonstrated a return to near normal coherence apart from some mild hypo-coherence in the right frontal cortex in the delta range. The high gamma range showed a significant change toward normal range from the hyper-activation observed in the initial findings. Hypo-activity showed most significant improvement in the theta and gamma 1 frequencies. LORETA analysis showed a return to normal.

Conclusion:

The changes observed were achieved with 20 treatment sessions over approximately 7 weeks. A further 18 treatments were administered producing a dramatic change in the presenting complaint.

"I won 5 awards, one for each subject in my first week back at school." – Patient

"He placed first in his maths test this term – he was failing up until last term" - Teacher

"He is much happier, certainly not depressed and no longer hyper emotional. He can deal with situations a lot better now and is up to his age level in reading." - Mum



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