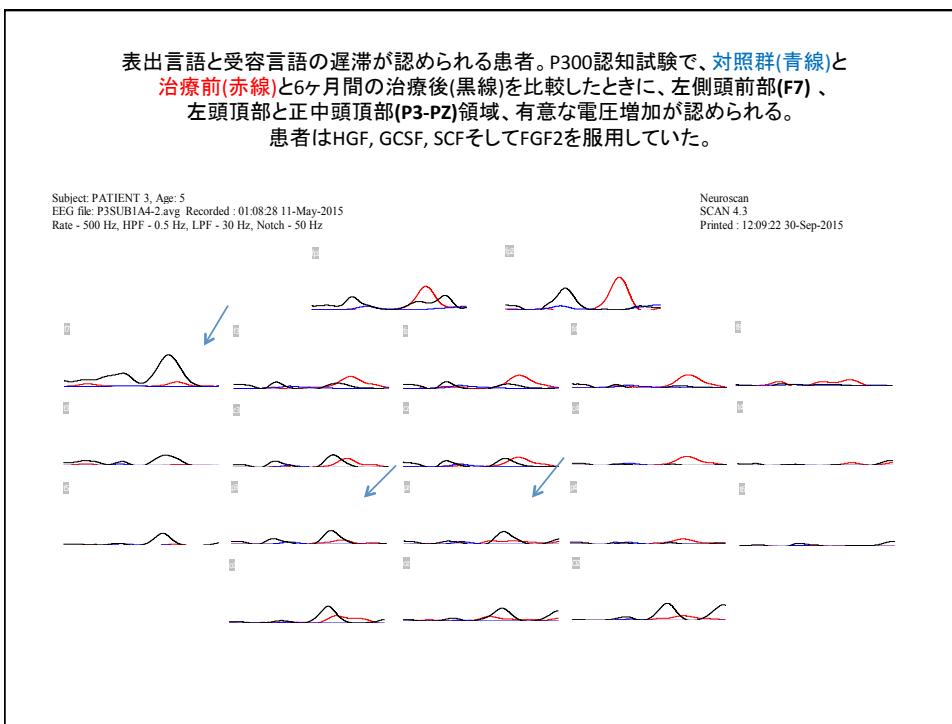
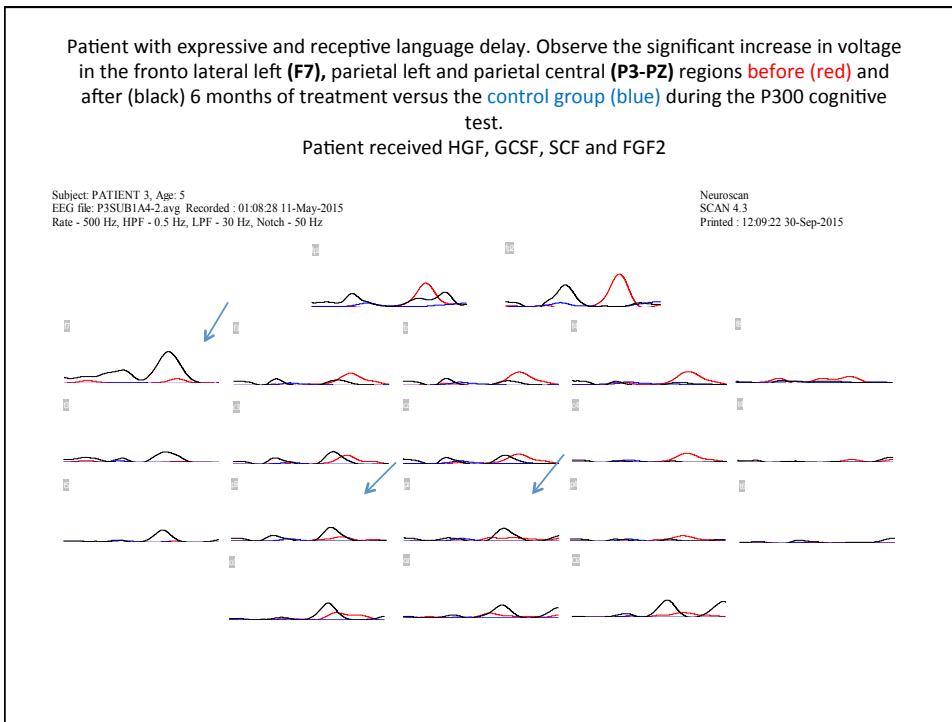


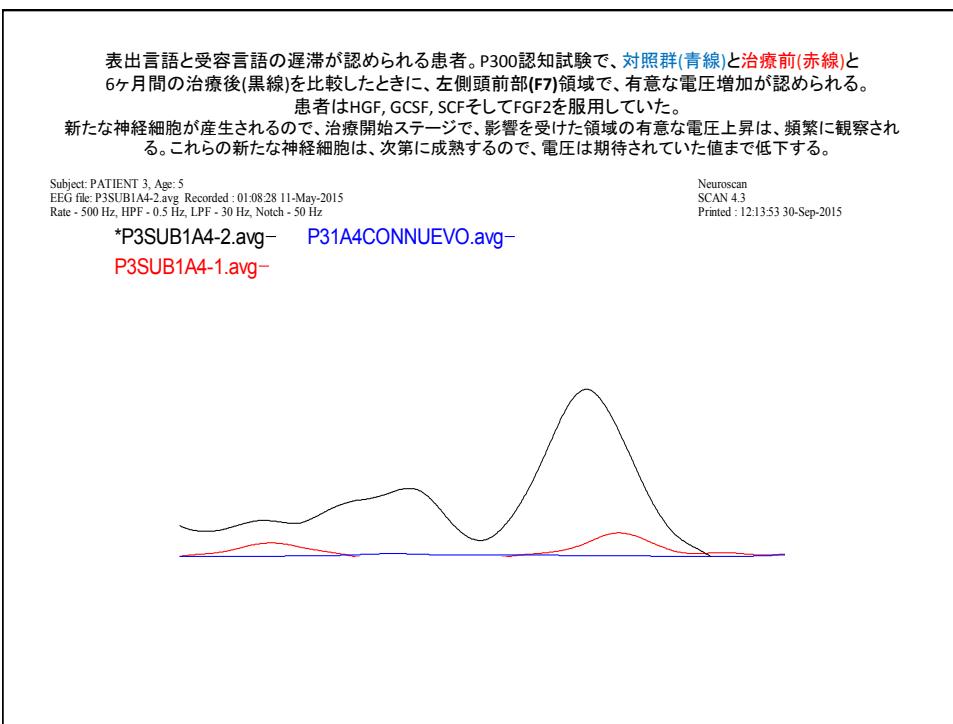
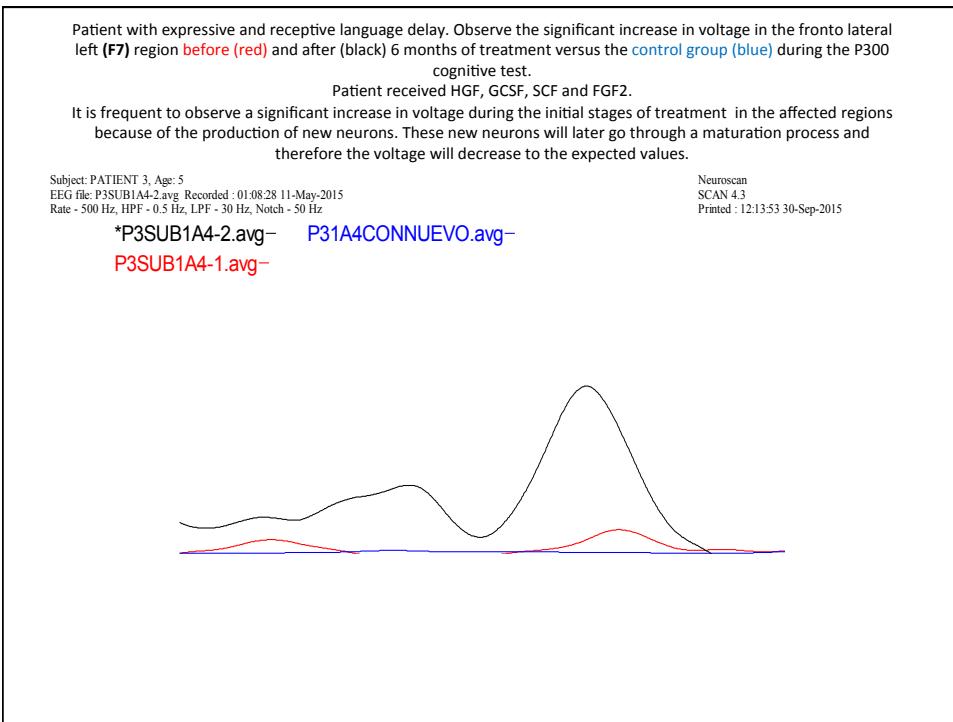
## Clinical case

- 5 year old patient with a clinical diagnosis of **expressive and receptive language delay**. The patient initially showed low voltage in the parietal regions as well as a delayed response in the parietal left (P3) region during the P300 cognitive test. The flash visual evoked potentials also showed asymmetries in wave form in the fronto lateral regions (F7-F8). After receiving 6 months of treatment with hepatocyte growth factor (HGF), granulocyte colony stimulating factor (GCSF), fibroblast growth factor (FGF2) and stem cell factor (SCF) the patient showed an increase in voltage in the parietal regions as well as a faster response in the parietal left region (P3). The expressive language region (F7) also showed a significant increase in voltage during the P300 cognitive test. The flash visual evoked potentials also showed an improvement in the symmetry of the fronto lateral regions.

## 臨床例

- 表出言語と受容言語の発達遅滞と診断された5歳児の患者。P300認知試験では、左頭頂領域(P3)の応答遅延ばかりでなく、頭頂領域の電圧低下が、初見で認められた。閃光性視覚誘発電位試験(フラッシュVEP)でも、側頭前部領域(F7-F8)で、非対称の波形が認められた。肝細胞増殖因子(HGF)、粒球コロニー刺激因子(GCSF)、纖維芽細胞増殖因子(FGF2)、そして幹細胞因子(SCF)による6ヶ月間の治療受診後、この患者では左頭頂領域(P3)の応答が早くなつたばかりでなく、頭頂領域の電圧上昇が認められた。P300認知試験では、表出言語領域(F7)でも、有意な電圧上昇が認められた。閃光性視覚誘発電位試験でも、側頭前部領域の対称性改善が認められた。





Patient with expressive and receptive language delay. Observe the significant increase in voltage in the parietal left region (**P3**) before (red) and after (black) 6 months of treatment versus the control group (blue) during the P300 cognitive test. Also observe the improvement in the time of response, which was previously delayed.

Patient received HGF, GCSF, SCF and FGF2

Subject: PATIENT 3, Age: 5

EEG file: P3SUB1A4-2.avg Recorded: 01:08:28 11-May-2015  
Rate - 500 Hz, HPF - 0.5 Hz, LPF - 30 Hz, Notch - 50 Hz

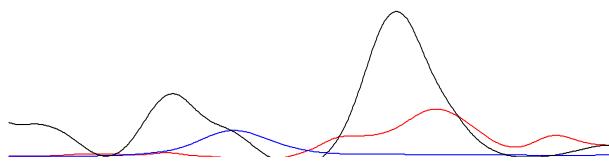
Neuroscan

SCAN 4.3

Printed : 12:16:01 30-Sep-2015

\*P3SUB1A4-2.avg- P31A4CONNUEVO.avg-

P3SUB1A4-1.avg-



表出言語と受容言語の遅滞が認められる患者。P300認知試験で、**対照群(青線)**と**治療前(赤線)**と6ヶ月間の治療後(黒線)を比較したときに、左頭頂部(**P3**)領域で、有意な電圧増加が認められる。また、以前は遅れていた、応答時間の改善も認められる。  
患者はHGF, GCSF, SCFそしてFGF2を服用していた。

Subject: PATIENT 3, Age: 5

EEG file: P3SUB1A4-2.avg Recorded: 01:08:28 11-May-2015  
Rate - 500 Hz, HPF - 0.5 Hz, LPF - 30 Hz, Notch - 50 Hz

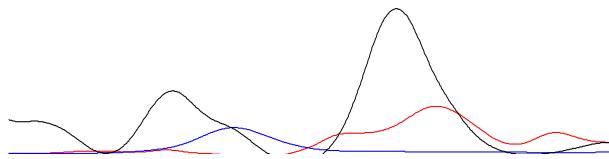
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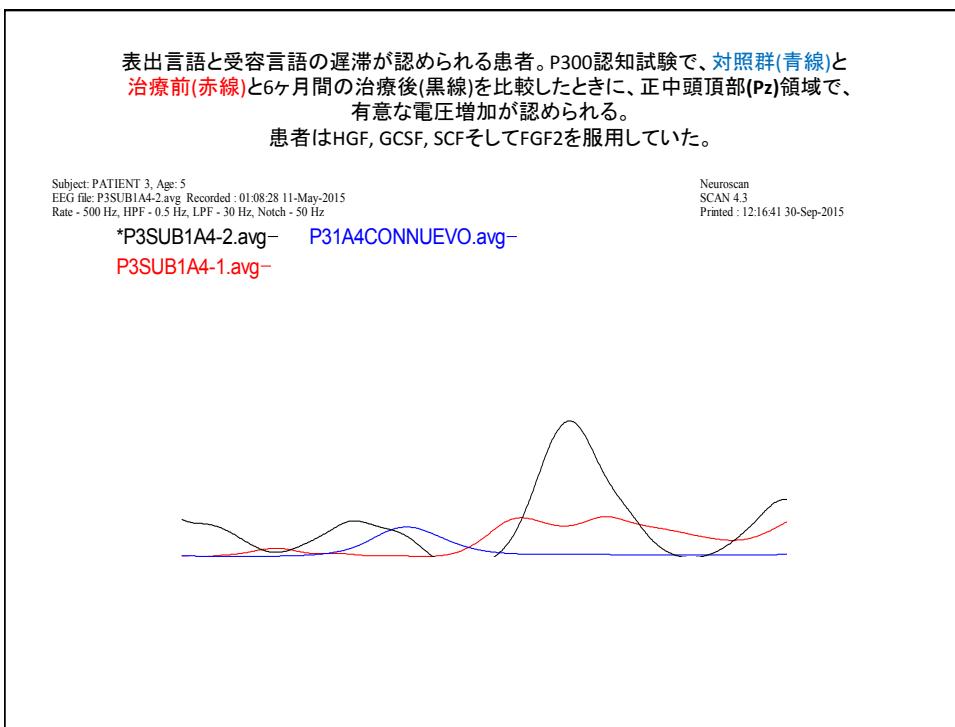
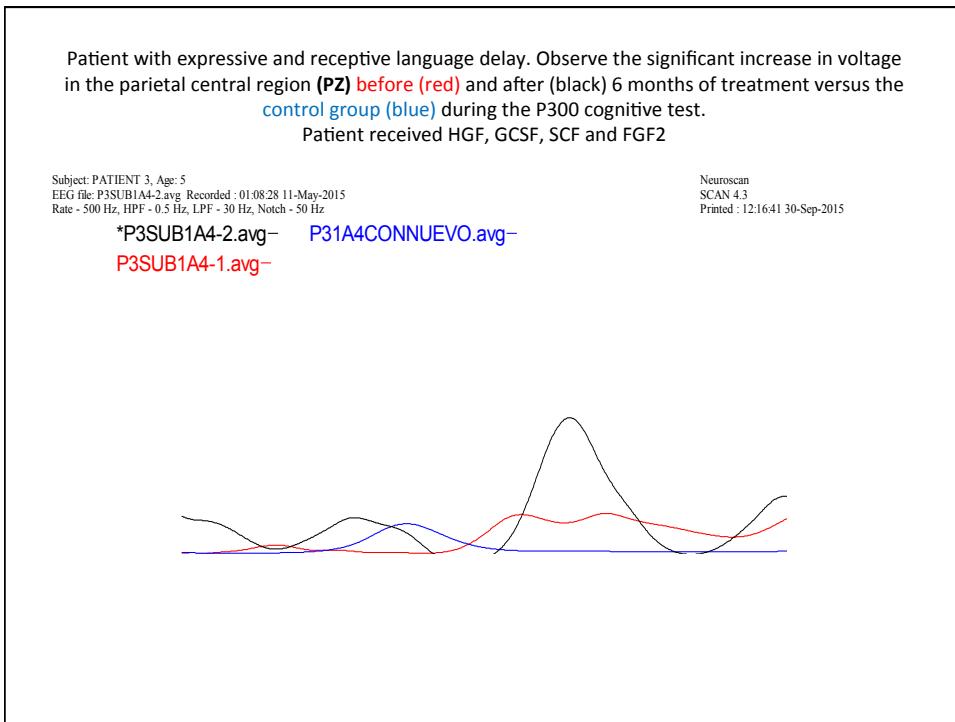
SCAN 4.3

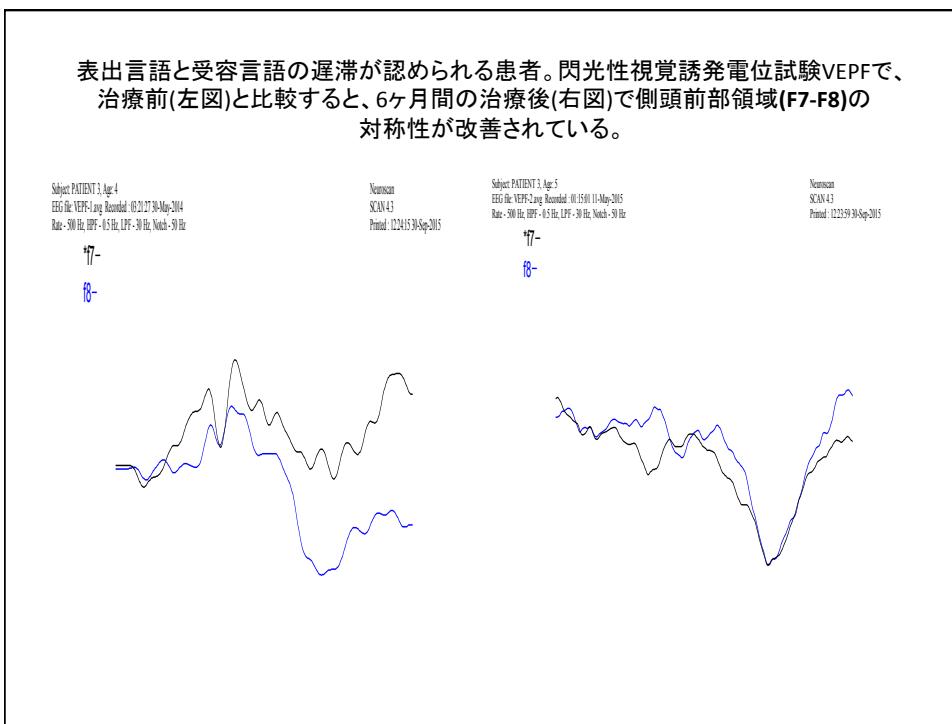
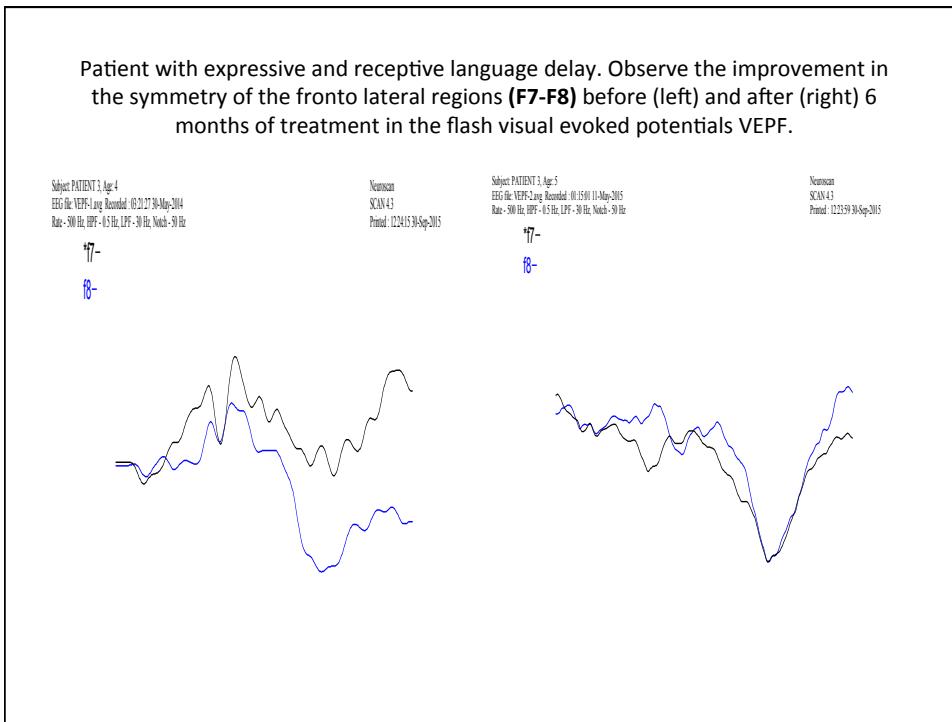
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\*P3SUB1A4-2.avg- P31A4CONNUEVO.avg-

P3SUB1A4-1.avg-





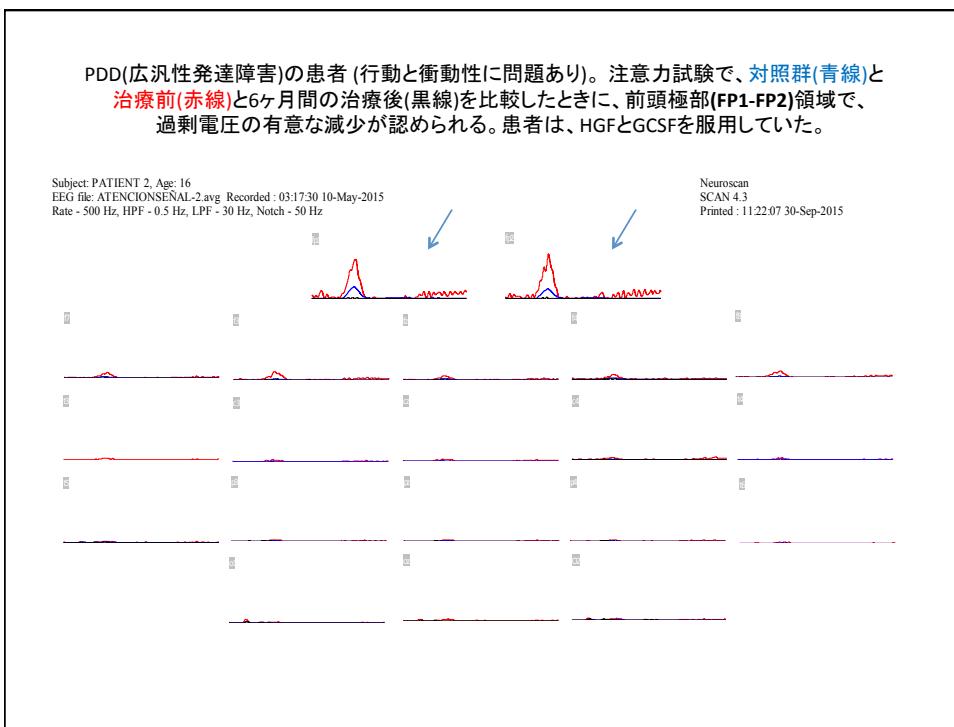
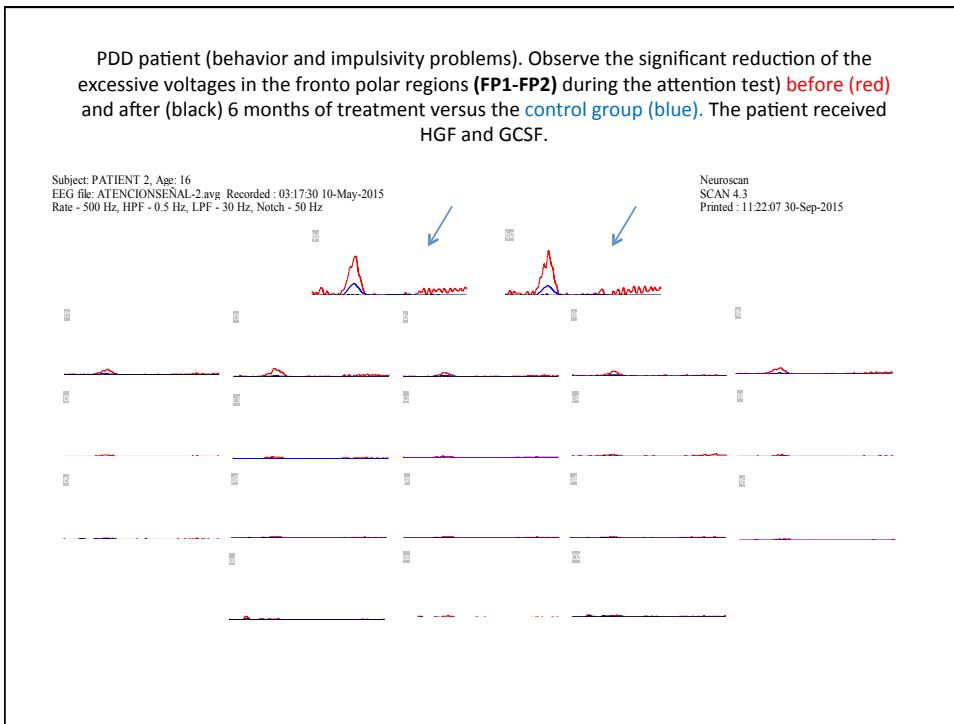


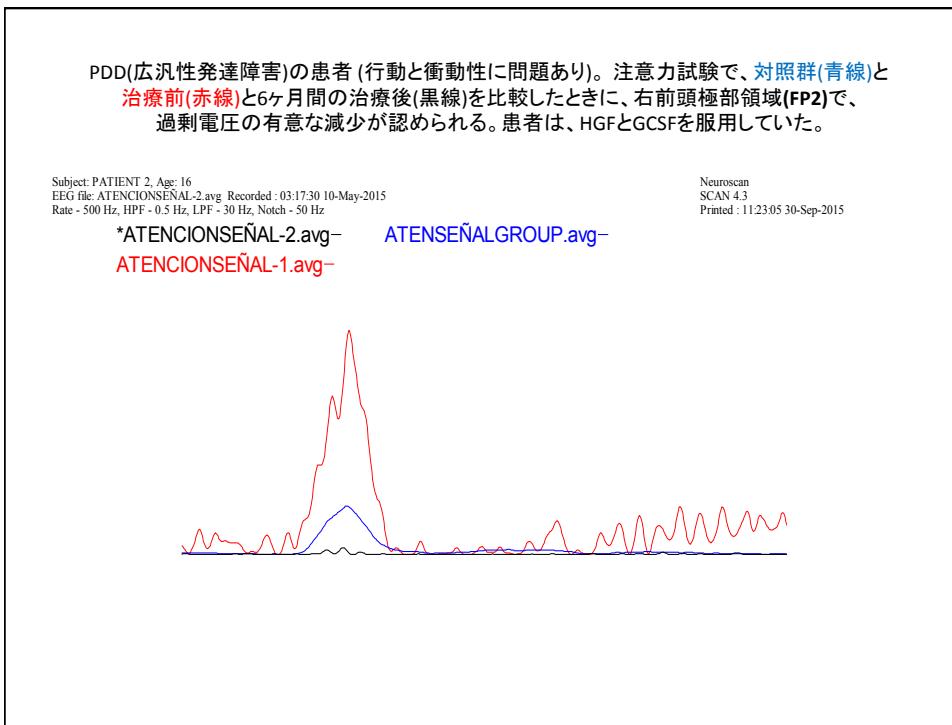
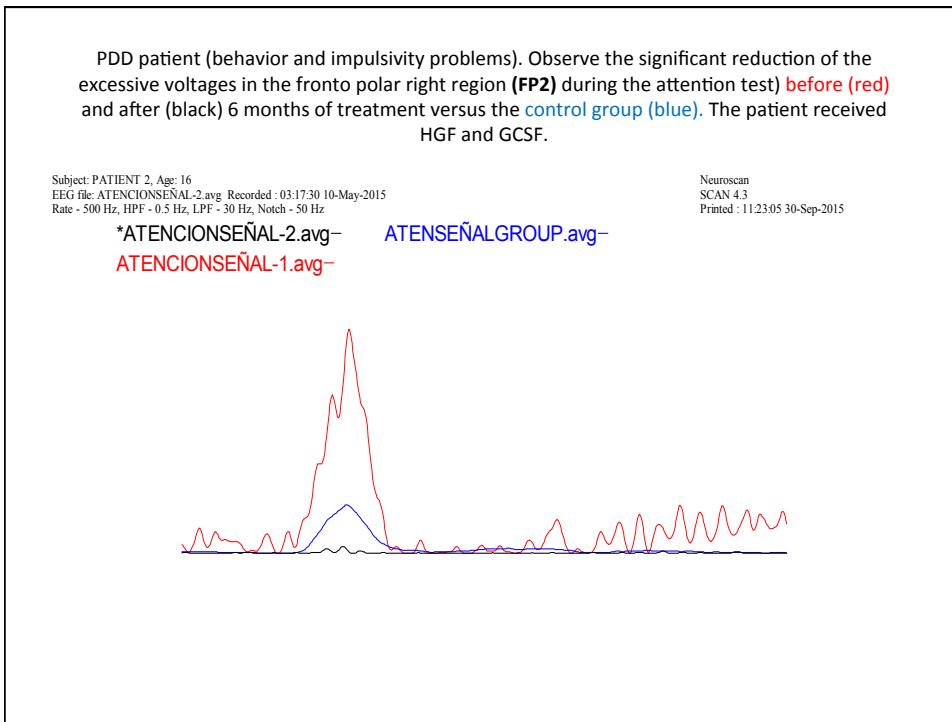
## Clinical case

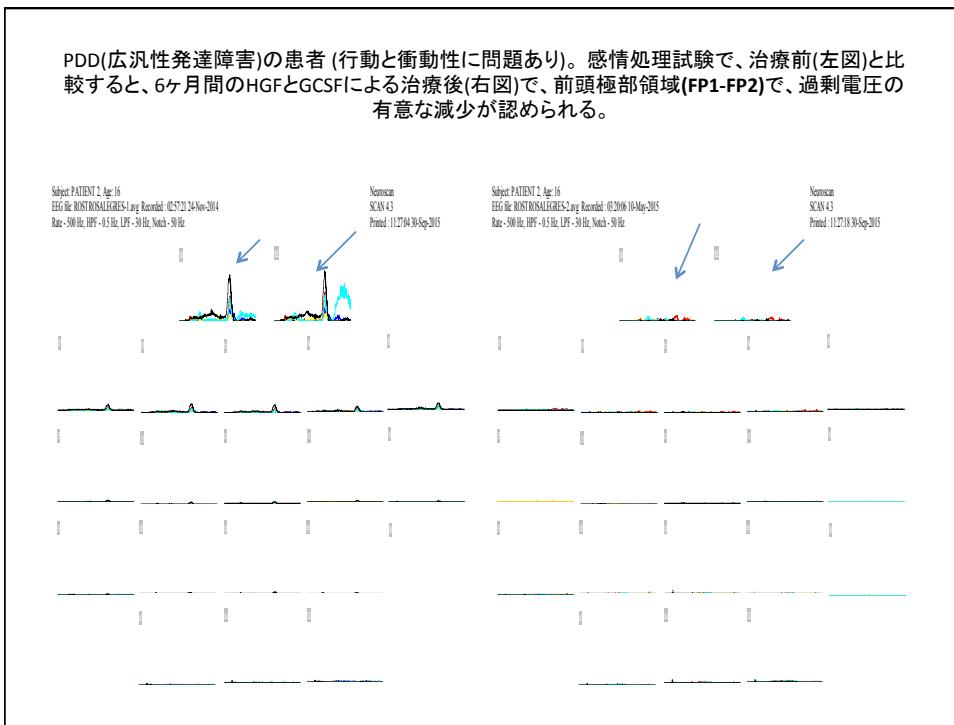
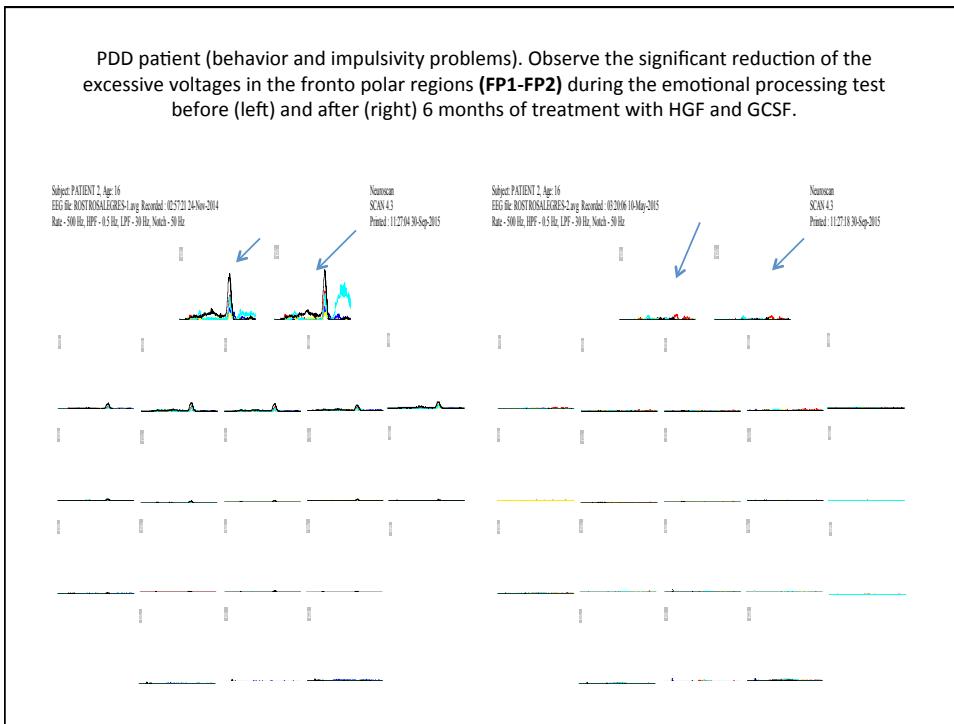
- 15 year old patient with a clinical diagnosis of PDD that produced behavior and impulsivity problems. The patient initially showed excessive voltages in the fronto polar regions during the attention task, emotional processing test and the P300 cognitive test. The patient also showed high values and low fluctuation in the parietal and central regions during the coherence analysis of the P300 test.
- The patient showed a significant reduction of the excessive voltages in the fronto polar regions in the above mentioned tests as well as an improvement in the dynamic interaction of the parietal and central regions in the coherence analysis after receiving 6 months of treatment with hepatocyte growth factor (HGF) and granulocyte colony stimulating factor (GCSF).

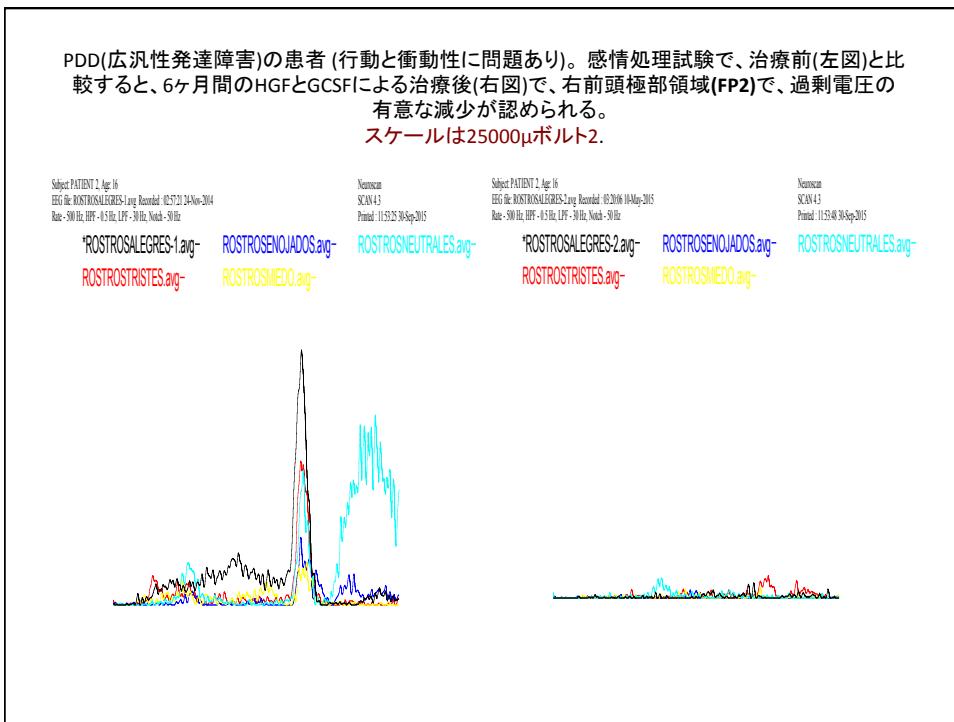
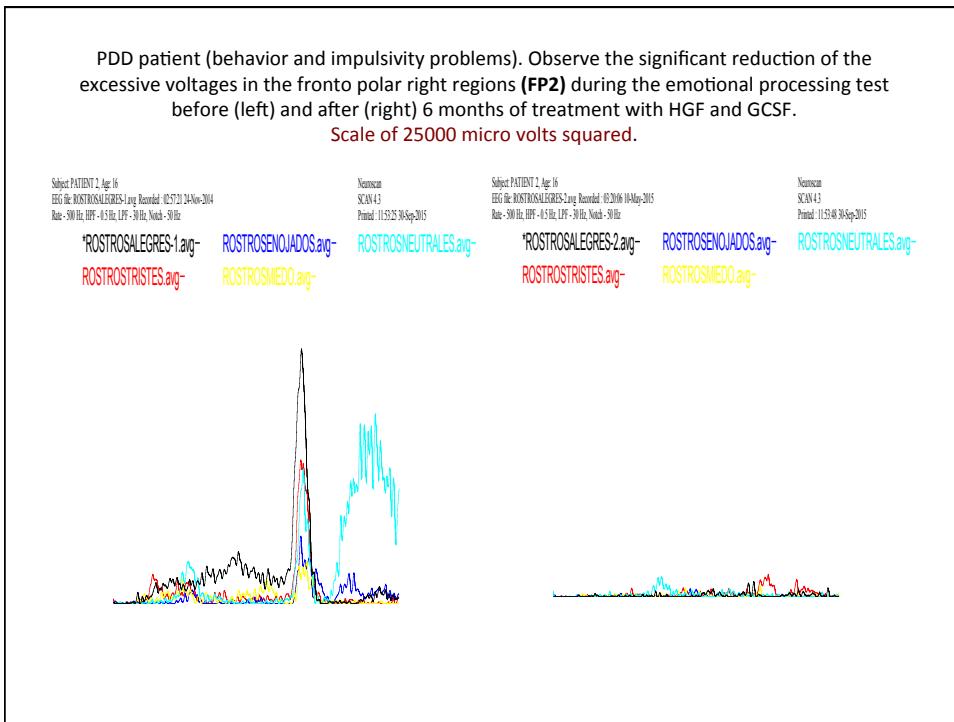
## 臨床例

- 行動と衝動性に問題があり、PDD(広汎性発達障害)と診断された15歳の患者。患者は、初見のアテンションタスク、感情処理試験、そしてP300認知試験で、前頭極部に過剰電圧を認めた。この患者はまた、P300試験でのコヒーレンス分析で、頭頂領域と中心領域間で高振幅かつ低振動の電位が認められた。
- 肝細胞増殖因子(HGF)と粒球コロニー刺激因子(GCSF)による6ヶ月間の治療後、コヒーレンス分析で頭頂領域と中心領域間の動的相互作用が改善されたばかりでなく、上述の試験での、前頭極部の過剰電圧が有意に減少するのが認められた。





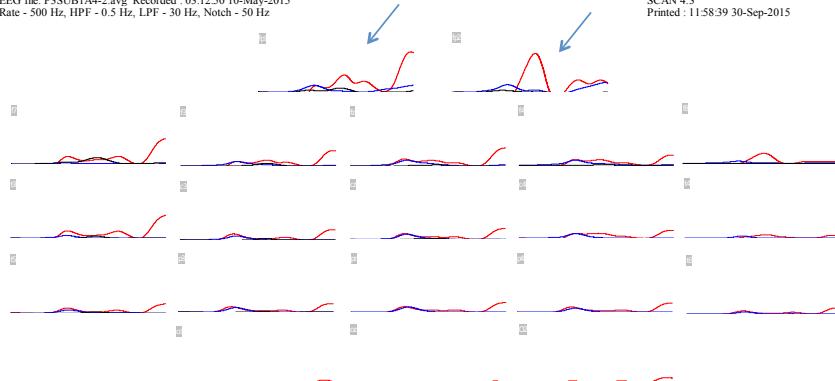




PDD patient (behavior and impulsivity problems). Observe the significant reduction of the excessive voltages in the fronto polar regions (**FP1-FP2**) during the P300 cognitive test **before** (red) and after (black) 6 months of treatment versus the **control group (blue)**. The patient received HGF and GCSF.

Subject: PATIENT 2, Age: 16  
EEG file: P3S1B1A4-2.ave Recorded : 03:12:50 10-May-2015  
Rate - 500 Hz, HPF - 0.5 Hz, LPF - 30 Hz, Notch - 50 Hz

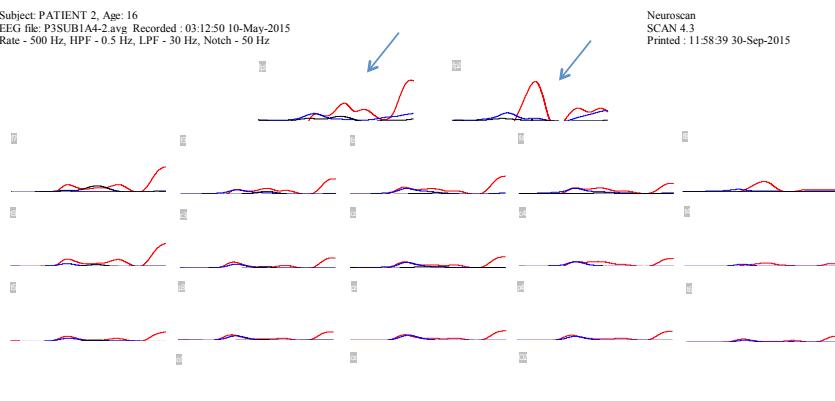
Neuroscan  
SCAN 4.3  
Printed : 11:58:39 30-Sep-2015



PDD(広汎性発達障害)の患者(行動と衝動性に問題あり)。P300認知試験で、**対照群(青線)**と**治療前(赤線)**と6ヶ月間の治療後(黒線)を比較したときに、前頭極部領域(**FP1-FP2**)で、過剰電圧の有意な減少が認められる。患者は、HGFとGCSFを服用していた。

Subject: PATIENT 2, Age: 16  
EEG file: P3S1B1A4-2.ave Recorded : 03:12:50 10-May-2015  
Rate - 500 Hz, HPF - 0.5 Hz, LPF - 30 Hz, Notch - 50 Hz

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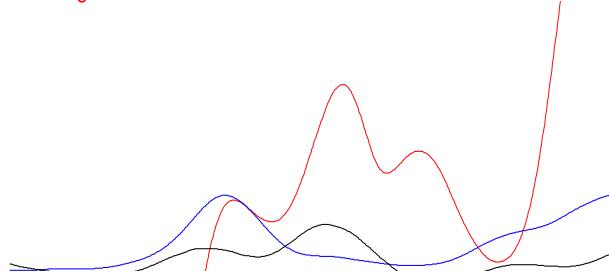
PDD patient (behavior and impulsivity problems). Observe the significant reduction of the excessive voltages in the fronto polar regions (**FP1-FP2**) during the P300 cognitive test **before** (red) and after (black) 6 months of treatment versus the **control group (blue)**. The patient received HGF and GCSF.

FP1

Subject: PATIENT 2, Age: 16  
 EEG file: P3SUB1A4-2.avg Recorded : 03:12:50 10-May-2015  
 Rate - 500 Hz, HPF - 0.5 Hz, LPF - 30 Hz, Notch - 50 Hz

Neuroscan  
 SCAN 4.3  
 Printed : 12:00:28 30-Sep-2015

\*P3SUB1A4-2.avg- P31A4CONNUEVO.avg-  
 P3SUB1A4-1.avg-



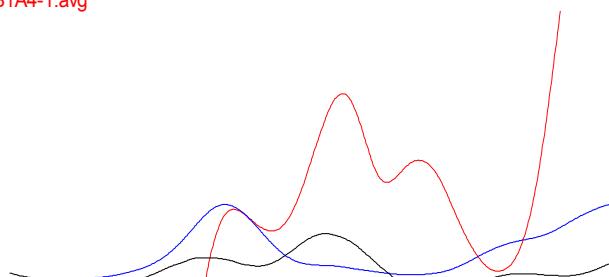
PDD(広汎性発達障害)の患者(行動と衝動性に問題あり)。P300認知試験で、**対照群(青線)**と**治療前(赤線)**と6ヶ月間の治療後(黒線)を比較したときに、前頭極部領域(**FP1-FP2**)で、過剰電圧の有意な減少が認められる。患者は、HGFとGCSFを服用していた。

FP1

Subject: PATIENT 2, Age: 16  
 EEG file: P3SUB1A4-2.avg Recorded : 03:12:50 10-May-2015  
 Rate - 500 Hz, HPF - 0.5 Hz, LPF - 30 Hz, Notch - 50 Hz

Neuroscan  
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\*P3SUB1A4-2.avg- P31A4CONNUEVO.avg-  
 P3SUB1A4-1.avg-



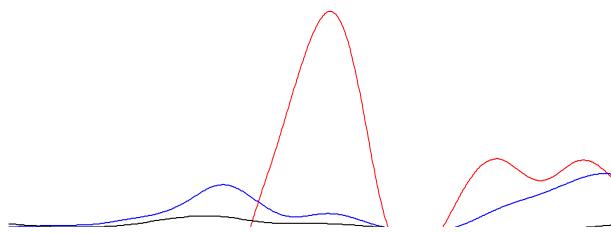
PDD patient (behavior and impulsivity problems). Observe the significant reduction of the excessive voltages in the fronto polar regions (**FP1-FP2**) during the P300 cognitive test **before** (red) and after (black) 6 months of treatment versus the **control group (blue)**. The patient received HGF and GCSF.

FP2

Subject: PATIENT 2, Age: 16  
 EEG file: P3SUB1A4-2.avg Recorded: 03:12:50 10-May-2015  
 Rate - 500 Hz, HPF - 0.5 Hz, LPF - 30 Hz, Notch - 50 Hz

Neuroscan  
 SCAN 4.3  
 Printed: 12:00:58 30-Sep-2015

\*P3SUB1A4-2.avg- P31A4CONNUEVO.avg-  
 P3SUB1A4-1.avg-



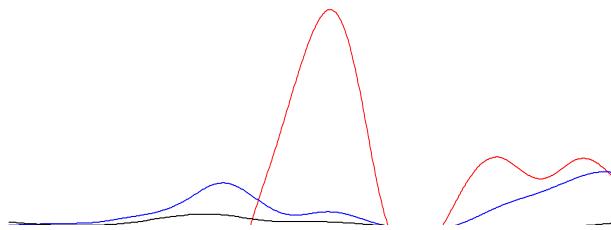
PDD(広汎性発達障害)の患者(行動と衝動性に問題あり)。P300認知試験で、**対照群(青線)**と**治療前(赤線)**と6ヶ月間の治療後(黒線)を比較したときに、前頭極部領域(**FP1-FP2**)で、過剰電圧の有意な減少が認められる。患者は、HGFとGCSFを服用していた。

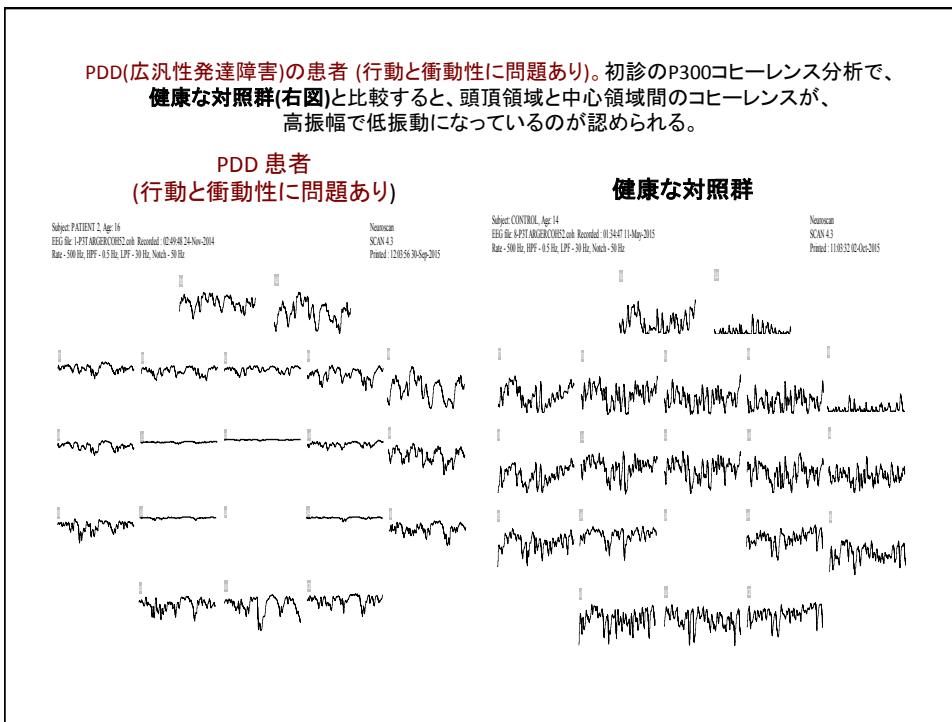
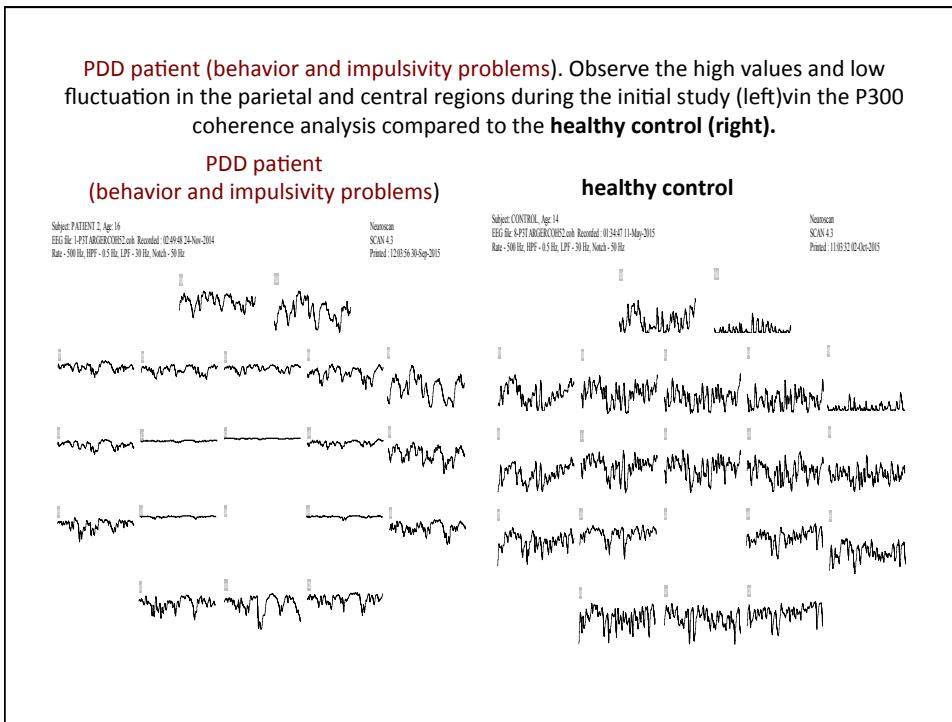
FP2

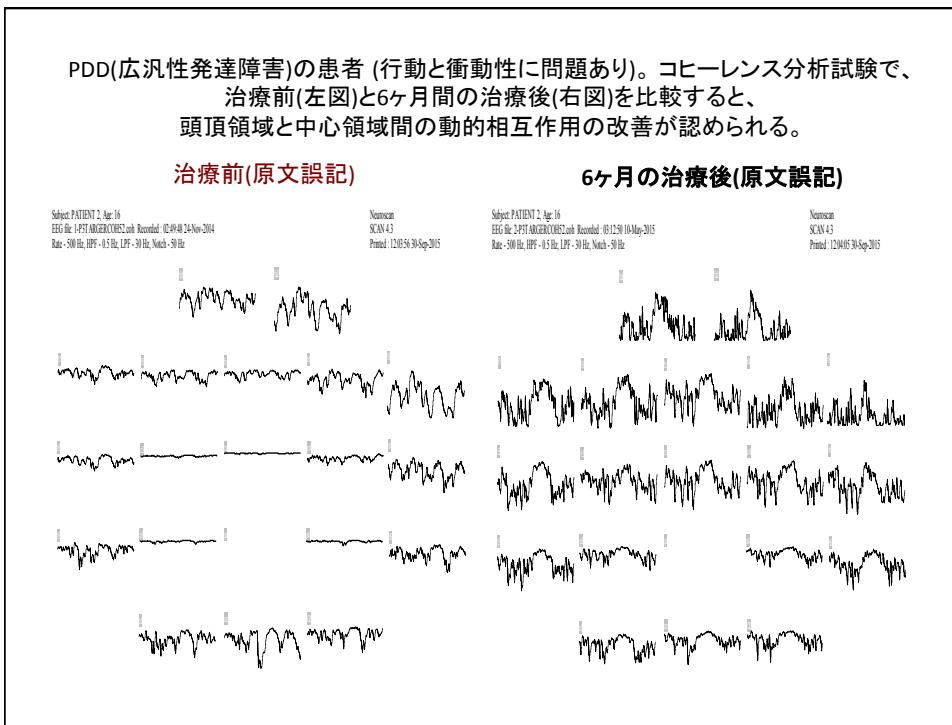
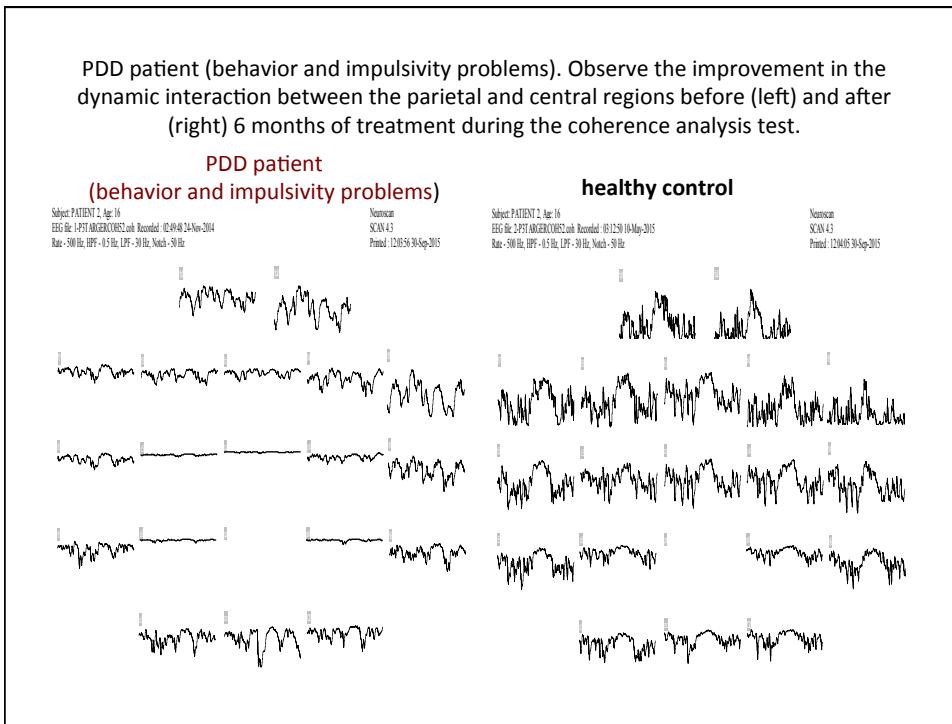
Subject: PATIENT 2, Age: 16  
 EEG file: P3SUB1A4-2.avg Recorded: 03:12:50 10-May-2015  
 Rate - 500 Hz, HPF - 0.5 Hz, LPF - 30 Hz, Notch - 50 Hz

Neuroscan  
 SCAN 4.3  
 Printed: 12:00:58 30-Sep-2015

\*P3SUB1A4-2.avg- P31A4CONNUEVO.avg-  
 P3SUB1A4-1.avg-







## Clinical Case

- 40 year old patient with a clinical diagnosis of anxiety disorder. The patient showed hyper excitability (excessive voltage) in the temporal anterior right region (T4) during the attention and visual space memory test in the initial study as well as excessive voltages in the fronto polar regions during the emotional processing test. The P300 cognitive test also showed deficient voltages in the parietal, central and frontal regions.
- After 6 months of treatment with a combination of hepatocyte growth factor (HGF) and granulocyte colony stimulating factor (GCSF) the patient showed a significant reduction of the hyper excitability in the temporal right region during the attention and visual space memory tests as well as a reduction of the excessive voltages detected in the fronto polar regions during the emotional processing test. The patient also showed an increase in activity in the frontal, central and parietal regions during the P300 cognitive test.

## 臨床例

- 不安障害と診断された40歳の患者。初見の感情処理試験で、前頭極部領域に過剰電圧が認められたばかりでなく、注意力試験と視空間記憶試験で、右側頭中部(T4)に過大な興奮(過剰電圧)が認められた。P300認知試験でも、頭頂領域、中心領域、そして前頭領域で、電圧の低下が認められた。
- 肝細胞増殖因子(HGF)と粒球コロニー刺激因子(GCSF)を組み合わせた6ヶ月間の治療の後、患者は感情処理試験で、前頭極部領域に検出された過剰電圧が減少したばかりでなく、注意力試験と視空間記憶試験で、右側頭領域の過大な興奮の有意な減少が認められた。また、この患者では、P300認知試験で、前頭領域、中心領域、そして頭頂領域の活動の増加も認められた。

