

POSTCENTRAL GYRUS IN PATIENTS AT FIRST EPISODE OF SCHIZOPHRENIA: A LONGITUDINAL STRUCTURAL MRI STUDY

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Introduction: Postcentral gyrus (PoCG) has received little attention in brain imaging literature compared to others brain regions. In spite of that, some structural magnetic resonance (sMRI) studies have detected the presence of structural and functional abnormalities in schizophrenia.

Objectives: 1 year longitudinal study assessing PoCG morphometry in First Episode Schizophrenia (FES) patients and in healthy comparison (HC)

Aims: We aimed to assess PoCG volumes differences and to explore possible changes over time, by means of sMRI. Also, we aimed to investigate the relationships between PoCG morphometry and clinical and cognitive variables.

Methods: 56 FES patients, selected through the PAFIP Program, carefully assessed for dimensional psychopathology and cognitive functioning, and matched HC (n=56), underwent two sMRI at 1,5 T (interscan interval=1 year). PoCG grey matter (GM) volumes were measured.

Results: We found a significant reduction in right PoCG GM volume in patients at follow up (Tab.1) and a trend of interaction *time x group* in male right PoCG. We found positive correlations between right PoCG and SAPS total scores and disorganized symptoms. Finally, we observed inverse correlations between left PoCG and WAIS BD at baseline and between bilateral PoCG and CPT scores at follow up.

| | baseline | | follow up | | F | time x group interaction | |
|------------|---------------------|-------------------------|---------------------|-------------------------|------------|--------------------------|------|
| | FES Patients (n=56) | Healthy Subjects (n=56) | FES Patients (n=56) | Healthy Subjects (n=56) | | | |
| | Mean±SD | Mean±SD | Mean±SD | Mean±SD | | | |
| Left PoCG | 15.35±2.60 | 15.49±3.64 | 0.04 | 14.90±2.07 | 15.23±2.09 | 0.79 | 0.26 |
| Right PoCG | 15.16±2.37 | 15.46±2.30 | 0.50 | 14.57±2.09 | 15.24±1.93 | 4.20** | 2.64 |
| Total PoCG | 30.51±4.54 | 30.95±5.42 | 0.21 | 29.46±3.82 | 30.48±3.70 | 2.54 | 1.12 |

Table 1. Results about volume comparisons at baseline, at follow up and the interaction time for group. **p value<0.05

Conclusion: this is the first study focusing on PoCG in FES patients. Our results suggest a greater decrease of right PoCG, at a trend level, in male patients than in HC, sustaining that PoCG morphometry change in the first year of the illness, possibly sustaining the symptomatology and the cognitive impairment.