Correlation between glucose metabolism and visual complaint in posterior cortical atrophy. A FGD-PET study

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Background

Posterior Cortical Atrophy (PCA) is a progressive neurodegenerative disease characterized by initial predominant visual impairment (Benson et al., 1988). In contrary to typical AD patients, data from literature seem to suggest that insight of their visual difficulties is spared in this condition (Benson et al., 1988; Tang-Wai et al., 2004)

Issues

Delayed diagnosis and misdiagnosis are major issues in this pathology. Is the patient's complaint well characterized?
The aim of this study is to better understand PCA patients' complaint. Does it accurately reflect their visual deficits and can we link complaint and brain metabolism alterations ?

Methods

Complaint Assessment

Croisile Questionnaire
Daily visual and gestual complaints (/32)

Cognitive Assessment

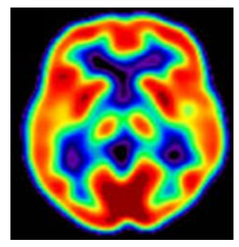
Visual Function
- *VOSP*
- *BORB*
- *Benton Facial Recognition Test*

Language Function
- *Writing*
- *Reading*
- *Dictation*
- *Denomination*

Memory Function
- *FCRST*
- *BECS*

Metabolism Assessment

FDG-PET



Participants:

14 PCA patients

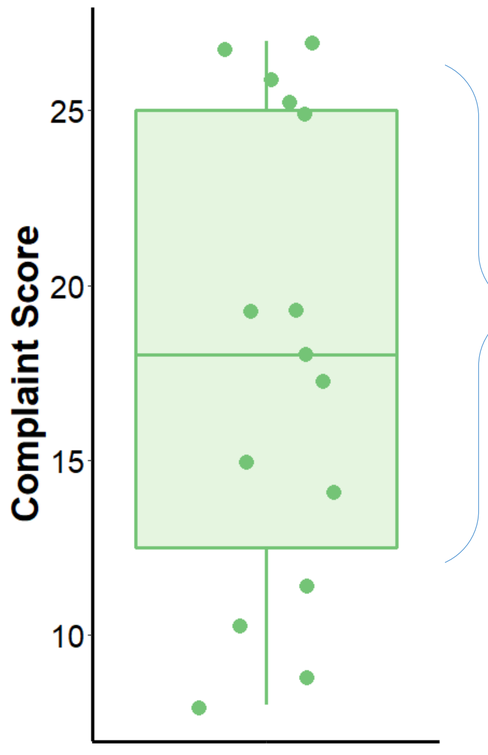
- Age (years): 64 ± 7
- Socio-cultural level (years): 12,6 ± 2,3
- MMSE (/30): 18,8 ± 5,7

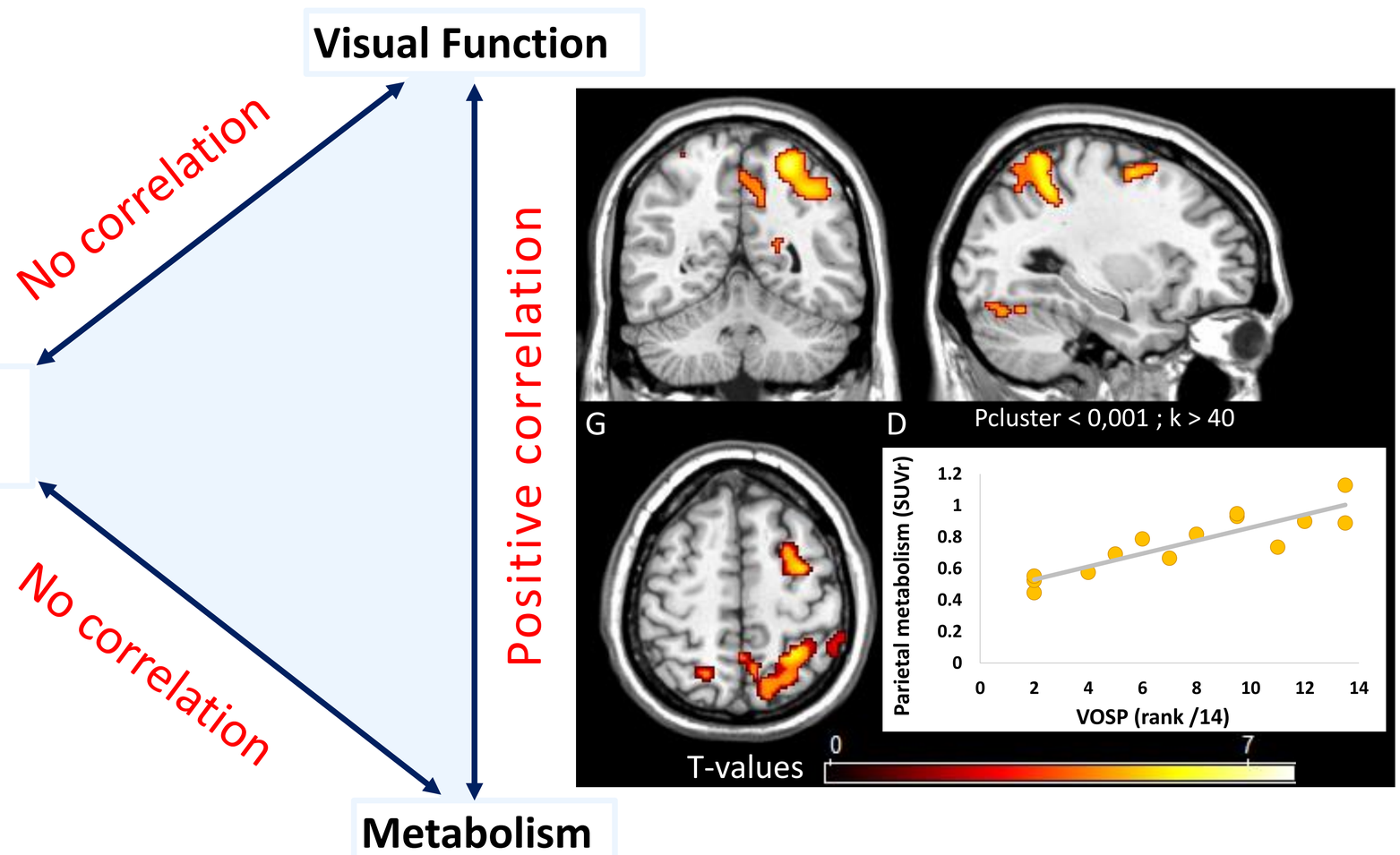
Statistics:

Correlations between:
- Complaint score (Croisile Questionnaire) ⇔ visual performances: Spearman
- FDG-PET imaging ⇔ cognitive performances: Multiple regression, SPM12, Matlab
- FDG-PET imaging ⇔ complaint score: Multiple regression, SPM12, Matlab

Results

Complaint Score (Croisile)





Discussion

- Although data of literature report that patients are aware of their difficulties, our results suggest that PCA patients' complaint is not correlated to their visual performances or brain metabolism.
- The phenomenon of lack of awareness (i.e. anosognosia) has already been described in typical Alzheimer's Disease (Souchay, 2007., Starkstein, 2014). In view of the great variability in the complaint score among PCA patients with similar visual alterations, it would seem that this phenomenon is also present in the atypical form of Alzheimer's disease.

References

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