384 - Resting-state functional alterations in patients with persistent headache after COVID-19 infection: an exploratory study

Álvaro Planchuelo-Gómez[1], David García-Azorín[2], Ángel L. Guerrero[2], Santiago Aja-Fernández[1], Margarita Rodríguez[3], Raúl Moro[3], Rodrigo de Luis-García[1]

[1] Imaging Processing Laboratory, Universidad de Valladolid, Valladolid, Spain
[2] Headache Unit, Department of Neurology, Hospital Clínico Universitario de Valladolid, Valladolid, Spain
[3] Department of Radiology, Hospital Clínico Universitario de Valladolid, Valladolid, Spain

Laboratorio de Procesado de Imagen
Junta de Castilla y León
Consejería de Educación
Hospital Universitario Valladolid
European Union
European Social Fund

INTRODUCTION

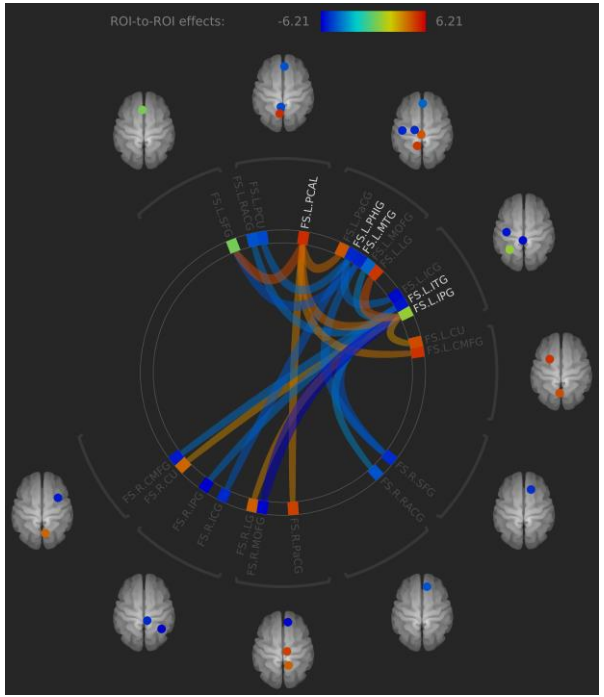
COVID-19: **Headache** is among the most frequent neurological symptoms, including long-term effects

Objective: Evaluate the resting-state functional properties of patients with persistent headache after COVID-19

METHODS

Sample: **10 patients** (54.0 years; 42-65 years; 9 women) + **10 controls** (**HC**; 52.0 years; 42-64 years; 9 women)

Resting-state **functional connectivity** between 84 cortical and subcortical gray matter regions



CONCLUSIONS

COVID-19 headache (connectivity):

- Strengthened → Occipital ROIs
- Weakened → Frontal, temporal and parietal ROIs

RESULTS

- COVID-19 > HC → Occipital - Cingulate/Frontal/Parietal ROI
- COVID-19 < HC → Cingulate – Temporal - Parietal – Frontal – Parahippocampal ROIs
- Main seeds: Inferior parietal + Middle/Inferior temporal + Para-hippocampal + Pericalcarine

Álvaro Planchuelo-Gómez
aplanchu@lpi.tel.uva.es