AMURA with single-shell acquisitions detects additional white matter properties compared to the Diffusion Tensor in patients with persistent headache after COVID-19

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**INTRODUCTION**

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

**Objective:** Evaluate the white matter structural properties of patients with persistent headache after COVID-19

**METHODS**

- Sample: 10 patients and 10 healthy controls (age: 42-65 years, 9 women per group)
- DTI measures: FA, AD, MD, RD
- AMURA measures: RTAP, RTOP, RTPP
- Comparison via TBSS

**RESULTS**

**AD:** COVID-19 > Controls (HC) in 5 regions
**RTPP:** COVID-19 < Controls (HC) in 11 regions

**CONCLUSIONS**

**COVID-19 headache:** Possible association with axonal alterations (barriers in axial orientation)

**AMURA:** Detection of additional microstructural changes compared to DTI in suboptimal conditions (single-shell)

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