

# Asomatognosia: structured interview and assessment of visuo-motor imagery

Provisionally

accepted The final, formatted version of the article will be published soon. [Notify me](#)



Gianluca Saetta<sup>1, 2\*</sup>,



Olivia Geissler<sup>1</sup>, Franziska Stauffacher<sup>3</sup>, Carlo

Serra<sup>4</sup>,



Gilles Vannuscorps<sup>5</sup> and



Peter Brugger<sup>6</sup>

- <sup>1</sup>Department of Neurology, University Hospital Zurich, Switzerland
- <sup>2</sup>Department of Psychology, University of Zurich, Switzerland
- <sup>3</sup>Neuropsychology Unit, Valens Clinic, Switzerland
- <sup>4</sup>Department of Neurosurgery, University Hospital Zurich, Switzerland
- <sup>5</sup>Psychological Sciences Research Institute, Catholic University of Louvain, Belgium
- <sup>6</sup>Valens Clinic, Switzerland

Asomatognosia designates the experience that one's body has faded from awareness. It is typically a somaesthetic experience, but may target the visual modality ("asomatoscopia"). Frequently associated symptoms are the loss of ownership or agency over a limb. Here we elaborate on the rigorous nosographic classification of asomatognosia and introduce a structured interview to capture both its core symptoms and associated signs of bodily estrangement. We additionally report the case of a pure left-sided hemiasomatognosia occurring after surgical removal of a meningioma in the right atrium. Despite the wide lesions of the right angular gyrus and of the temporo-parietal junction, the patient did not present visuo-spatial deficits or bodily awareness disorders other than hemiasomatognosia. The patient and ten matched controls' motor imagery was formally assessed with a limb laterality task where they had to decide whether hands and feet presented under different angles of rotation depicted a left or a right limb. Bayesian statistics showed that patient's reaction times were significantly impaired exclusively for the left foot, and

especially for mental rotations requiring somatomotor rather than visual limb representations. This was in accordance with a more enduring left-sided hemiasomatognosia for the lower limbs, confined to the somesthetic modality. Our findings shed new light on motor imagery in asomatognosia and encourage the future use of the structured interview introduced here. In addition, the limb laterality task may capture phenomenological elements of a case by chronometric means. This allows a more standardized reporting of phenomenological detail and improves communication across different clinical facilities.