



Reply to: “1.5 Dissociation” of somatoparaphrenia for the upper limb and neglect for the lower limb following a thalamic stroke presenting as flaccid hemiparesis: rehabilitation applications and neuroscience implications

F. Perren¹ · O. Blanke² · T. Landis³

Received: 15 October 2018 / Accepted: 17 October 2018 / Published online: 25 January 2019
© Springer-Verlag GmbH Germany, part of Springer Nature 2019

This interesting case study reports on a patient who subsequent to a right thalamic hematoma developed a left hemiparesis, left extrapersonal and personal hemineglect and somatoparaphrenia, but only for the arm not the leg. It is not specifically mentioned whether this patient had also anosognosia for her hemiplegia or if somatoparaphrenia, a disturbed sense of ownership of her arm, was dissociated from intact awareness of her motor deficit, as recently described in five patients by Invernizzi et al. (2013).

We doubt about the usefulness of the term “1.5 Dissociation” because extrapersonal and possibly personal neglect was probably present for the lower and the upper limb.

Somatoparaphrenia of one limb alone is rare, it has been described for the leg by Barkman (1925) and ourselves (Perren et al. 2015) and for the arm by the authors of the present letter. However, there might be a bias since in bedside testing it is more common to ask, “Whose hand is this?” then asking the same questions for the foot.

The very interesting aspect of this case is that, despite neglect, motor rehabilitation efforts in shifting attention towards the paralyzed side were partly successful for the leg, but failed completely for the somatoparaphrenic arm. Could this be due to the altered ownership? If yes, could motor

rehabilitation be improved when attention was directed towards the “alien” rather than the “own” limb?

The unique case of Bottini et al. (2002) of a patient with somatoparaphrenia in whom dense tactile imperception in the left hand got dramatically recovered when she was instructed to report touches delivered to her niece’s hand, rather than to her own hand, gives hope that such a strategy might even work for motor rehabilitation.

References

- Barkman A (1925) De l’anosognosie dans l’hémiplégie cérébrale: contribution Clinique a l’étude de ce symptôme. *Acta Med Scand* 52:235–254
- Bottini G, Bisiach E, Sterzi R, Vallar G (2002) Feeling touches in someone else’s hand. *Neuroreport* 13:249–252
- Invernizzi P, Gandola M, Romano D, Zapparoli L, Bottini G, Paulesu E (2013) What is mine? Behavioral and anatomical dissociations between somatoparaphrenia and anosognosia for hemiplegia. *Behav Neurol* 26:139–150
- Perren F, Heydrich L, Blanke O, Landis T (2015) “Crossed” somatoparaphrenia: an unusual new case and a review of the literature. *Exp Brain Res* 233:175–179

Publisher’s Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

✉ F. Perren
Fabienne.Perren@hcuge.ch

¹ LUNIC Laboratory, HUG, Department of Clinical Neurosciences, Neurocenter of the Faculty of Medicine in Geneva, 1211 Geneva, Switzerland

² Laboratory of Cognitive Neuroscience, LNCO, CNP, Brain Mind Institute, Campus Biotech H4, Chemin des Mines 9, 1202 Geneva, Switzerland

³ Faculty of Medicine, University of Geneva, 1205 Geneva, Switzerland