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Reply to Comment on: Voluntary Inhibitory Control of Chorea

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We appreciate the interest of Maciel and colleagues¹ in our recent publication, and we are pleased that the authors confirm our observation concerning temporary suppression of chorea.²

The authors present a case of a 40-year-old gentleman with a diagnosis of chorea-acanthocytosis, in which, differently from what is normally observed, choreic movements subsided when performing cognitive tasks involving motor skills (i.e., unlocking a mobile).¹ Similar to our cases, no premonitory urge was observed.^{1,2}

However, unlike our cases, Maciel and colleagues did not observe a temporary suppression of involuntary movements on command.¹ This observation is of particular interest since it suggests that chorea may be controlled by two different mechanisms, voluntary inhibition and attention, which don't necessarily occur together. This also holds true for tic control. In fact, Misirlisoy and colleagues demonstrated that in tics the distraction provided by attending specifically to finger actions during motor tasks seemed to determine a significant reduction of involuntary movements.³ In particular, the authors observed that patients may be able to obtain by attentional focus a decrease in involuntary movements as successful as those with active tic inhibition.³ In addition, they proved that tic inhibition was more beneficial when focusing on voluntary compared to involuntary actions.³ The authors suggested that mechanism of attentional modulation is likely to be different to voluntary inhibition, since they probably act at a different tic generator stage.³ Based on clinical evidence, we might assume that similar mechanisms occur in chorea, but confirmatory experimental data are needed.

In view of this novel observation, it is relevant to recognize the temporary suppression of chorea in clinical practice.

We believe this case represents an additional step forward towards a new definition of chorea.

Author Roles:

Author Roles: 1) Research project: A. Conception, B. Organization, C. Execution; 2)

Statistical Analysis: A. Design, B. Execution, C. Review and Critique; 3) Manuscript

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Ethical Compliance Statement:

We confirm that we have read the Journal's position on issues involved in ethical publication and affirm that this work is consistent with those guidelines. The patients have given written and informed consent for online publication of their videos. The authors confirm that the approval of an institutional review board was not required for this work.

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