Letter by Urra et al Regarding Article, “Autoimmune Responses to the Brain After Stroke Are Associated With Worse Outcome”

To the Editor:

The prognostic and therapeutic implications of immunity in stroke are very promising. Becker et al recently described that immune responses to various brain antigens can be found in patients after stroke.¹ This study confirms previous reports suggesting the presence of such autoimmune responses in human stroke.²,³ The study further describes that 90-day outcome was mainly associated to autoimmunity to myelin basic protein, raising the question of whether the consequences of autoimmunity vary depending on the antigen specificity, which would be an indication of a complex crosstalk between the central nervous system and the immune system after stroke. However, we would like to make some clarifications, especially on some of the conclusions regarding the relevance of infection in the promotion of autoimmunity.

The conclusion that the risk of developing an inflammatory response to myelin basic protein is increased by infection is not supported by the data because stroke severity is a major risk factor for infection but is also associated with the immune responses in the study. In fact, the authors explain that the effect of infection on immunologic outcome was lost after controlling for stroke severity. In addition, it would be most interesting to know if infection was an independent predictor of poor outcome in this study, because the possibility is extensively discussed by the authors but not reported in the results and previous literature is largely contradictory on this topic.⁴,⁵

Also, it is questionable whether these results show that the response to brain antigens predicts long-term outcome as stated in the summary because 90-day outcome was only associated with immune responses at 90 days but not with those in the acute phase. Further studies will certainly help unravel the significance of these autoimmune responses at different times and identify their prognostic consequences and hopefully also the best therapeutic targets.

Disclosures

None.

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