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Letter to the Editor

Urinary impairment and prognosis in patients with multiple system atrophy

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To the Editor:

Guevara et al. (2019) investigated the risk factors of annualized-whole-brain atrophy rate (a-WBAR) in 41 patients with multiple system atrophy (MSA). Among several predictive indicators, the baseline urinary score was weak but significant association with progression of brain atrophy, particularly in the frontal and temporal lobes. The authors concluded that urinary impairment was a key target indicator for fast progression of MSA. I have some concerns about their study.

First, they presented square value of regression coefficient being 0.15. This means that only 15% of MSA progression was explained by urinary impairment. As the authors did not select multivariate analysis, net effect of urinary impairment on MSA progression could not be determined. Relating to the first query, MSA is composed of striatonigral degeneration, olivopontocerebellar atrophy and Shy-Drager syndrome, sometimes overlapping manifestations of these diseases. Each disease has different predominant symptoms, and stratified analysis is needed to specify the risk assessment of MSA progression. Taken together, increased number of samples is recommended to verify the association.

Second, Low et al. (2015) conducted a prospective study and found that patients with severe symptomatic autonomic failure, such as symptomatic orthostatic hypotension and/or urinary incontinence, at diagnosis had a poor prognosis than those without severe symptomatic autonomic failure. I appreciate that Guevara et al. specified fast progression of MSA by objective evaluation of neuronal loss. To confirm that urinary impairment was the risk factor of MSA progression, further prospective studies are needed with enough number of samples.

Finally, Sakakibara et al. (2019) conducted a prospective study to evaluate if urinary symptoms (bladder dysfunction) would occur earlier than motor disorders in patients with MSA. About 18.2% of patients suffered urinary symptoms initially, and the mean interval from the onset of urinary symptom to subsequent onset of motor symptoms was 2.8 years, ranging from 1 to 7 years. This reference was also cited by Guevara et al. (2019), and the intervals without motor symptoms would mask symptoms of MSA. There is a need of neurological attention in patients with urinary impairment, although specific markers have not been reported.

Disclosure statement

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Declaration of Competing Interest

There is no conflict of interest in this study.

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