

### Hashimoto's encephalopathy presenting with progressive cerebellar ataxia

To the Editor

We have read with interest the excellent case report on Hashimoto's encephalopathy presenting with progressive cerebellar ataxia in a 25-year-old woman published in *Neurosciences* journal.<sup>1</sup> Algahtani et al<sup>1</sup> described a case of 2-month progressive, sporadic adult-onset cerebellar degeneration. Elevated anti-thyroid antibodies were found in the normal thyroid function test. Extensive investigations, including cerebrospinal fluid, genetic, and paraneoplastic tests, were unremarkable. Brain magnetic resonance imaging revealed symmetrical cerebellar atrophy. Treatment with pulse steroid therapy followed by oral prednisone administration did not improve the cerebellar signs. The trial of plasma exchange, followed by intravenous immunoglobulin administration, resulted in some improvement of the patient's symptoms.

The authors suggested that ataxia associated with elevated anti-thyroid antibodies could be due to Hashimoto's encephalopathy-related cerebellar degeneration. This association raises several important issues for the diagnosis and treatment of sporadic adult-onset cerebellar ataxia. I want to make 2 comments.

First, there is another clinical presentation of Hashimoto's encephalopathy-associated cerebellar ataxia that includes acute to subacute cerebellar syndrome, encephalopathy, elevated cerebrospinal fluid protein, and dramatic clinical response to steroids, which is a strong indicator of an autoimmune process in the cerebellum.

Second, the prevalence of anti-thyroid antibodies in the general population is high (6.9–9.7% in women of reproductive age).<sup>2</sup> Therefore, it is plausible that elevated anti-thyroid antibodies are coincidental findings. The presence of anti-thyroid antibodies can be associated with other autoimmune disorders. Therefore,

the finding of anti-thyroid antibodies, in this case, could suggest the presence of another autoimmune disease, which is responsive to plasma exchange and intravenous immunoglobulin. Therefore, the use of the term "Hashimoto's encephalopathy" may be inaccurate.

Yaser M. Al Malik,

College of Medicine,

King Saud bin Abdulaziz University for Health Sciences

Riyadh, Saudi Arabia

#### Reply from the Author

We have read with the correspondence of Dr. Yasir Almalik with interest and we really appreciate his comments. We did all work-up for the differential diagnoses and possible causes in our case with the only explanation found being Hashimoto's encephalopathy with progressive cerebellar ataxia. Our diagnosis should be accurate until another cause is found. Given the excellent response, long duration follow-up and lack of any clinical features suggesting an alternative diagnosis, the diagnosis in my opinion is still valid and convincing.

Hussein A. Algahtani,

King Abdulaziz Medical City, King Saud bin

Abdulaziz University for Health Sciences, Jeddah,

Kingdom of Saudi Arabia.

#### References

1. Algahtani HA, Fatani AN, Shirah BH, Algahtani RH. Hashimoto's Encephalopathy Presenting with Progressive Cerebellar Ataxia. *Neurosciences (Riyadh)* 2019; 24: 315-319.
2. Tunbridge WM, Evered DC, Hall R, Appleton D, Brewis M, Clark F, et al. The spectrum of thyroid disease in a community: the Whickham survey. *Clin Endocrinol (Oxf)* 1977; 7: 481-493.