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LETTER TO THE EDITOR

Stroke presenting with an isolated foot drop in a patient with antiphospholipid syndrome: an uncommon clinical entity

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Dear editor,

Antiphospholipid syndrome (APS) is a disease characterized by hypercoagulable state and thrombotic events. Cerebrovascular disease is a common manifestation in APS and there are many different presentations of stroke.

We herein describe a patient with APS presenting with isolated foot drop associated with stroke, which is commonly attributed to peripheral etiologies like a peroneal nerve lesion.

Case

A 60-year-old woman was admitted to our clinic with right-sided foot drop that occurred 8 days ago. She had ascribed it to trauma where she fell down on her knee followed by dorsiflexion weakness of the right foot. The previous neurological history was unremarkable. She was hypertensive and diabetic with mild chronic renal failure. She had been admitted to a rheumatology clinic with joint pain in wrist and knees for approximately 20 years ago, was found positive for antiphospholipid antibodies, and was diagnosed as undifferentiated connective tissue disease with comorbid primary APS. Before the incident, she was on hydroxychloroquine 400 mg/day and acetylsalicylic acid 100 mg/day and was on follow-up for other comorbidities in relevant clinics.

Her physical examination showed profound loss of strength in plantar flexors and dorsiflexors of the right foot with an extensor plantar response on the same side. The sensory examination was normal. She also exhibited signs of vascular events, such as livedo reticularis, a positive Raynaud's phenomenon, and digital ischemia of toes.

Her biochemical tests showed mild renal involvement with chronic hyponatremia which did not contribute to diagnosis, and markedly elevated anti-B2 glycoprotein IgG (152 RU/mL, reference value < 20) associated with antiphospholipid syndrome.

Nerve conduction studies and needle electromyography performed on the second week of the insult revealed normal results. A cranial and spinal magnetic resonance imaging was performed to explain the upper motor neuron findings (Fig. 1). While she had mild degenerative changes in cervical and lumbar MRI, images were inconsistent with the neurological findings. Brain imaging showed chronic ischemic changes and a subacute infarction in the left precentral gyrus at the high convexity within the distribution of the anterior cerebral artery.

ASA was replaced by clopidogrel and she was discharged with ongoing neurological findings.

Discussion

Neurologic involvement is a common manifestation for APS, with a prevalence of 19.8%. In fact, it is found in disease onset

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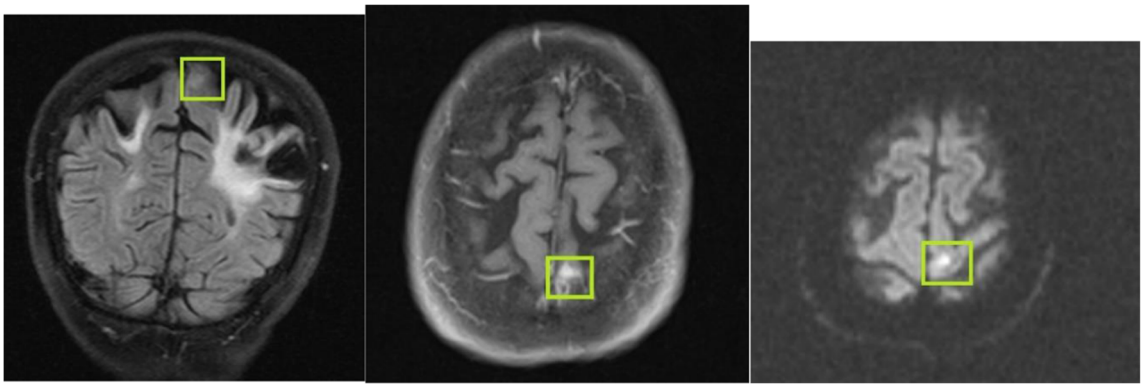

Fig. 1 FLAIR protocol and T1 postcontrast images shows the infarction area marked with green frame, respectively. Diffusion weighted MRI also shows restriction of diffusion in the rightmost image. All of these findings were compatible with a subacute infarction in the left precentral gyrus at the high convexity within the distribution of the anterior cerebral artery

in 13.1% of the patients [1]. Neurologic manifestations are usually in the form of cerebrovascular disease, but as it is an autoimmune condition, non-vascular manifestations, such as transverse myelitis, demyelinating disease, or peripheral neuropathy, may be encountered. The suggested mechanisms behind increased incidence of cerebral thrombotic events are endothelial dysfunction, hypercoagulable state, elevated levels of complement activation products, and platelet activation [2].

Isolated foot drop (weakness in ankle dorsiflexors) is an uncommon presentation of ischemic stroke. As far as we could reach, six cases have been described previously [3, 4]. Foot drop is usually the result of a peripheral neuropathy, especially the peroneal nerve. Other than that, muscular diseases, neuromuscular junction pathologies, motor neuron diseases, or spinal cord diseases should be considered in the differential diagnosis. Rarely, it can be the result of a central nervous system insult, such as a tumor, stroke, or multiple sclerosis [3]. Most of the cases can be identified by a careful neurological examination, since pathological reflex positivity and hyperreflexia can be the only differentiating findings [5].

In our patient, APS is not the sole condition underlying the ischemic event in the presence of other comorbidities such as hypertension and diabetes mellitus which were also associated with stroke. However, its contribution cannot be excluded.

In conclusion, clinicians should be aware of unusual stroke presentations, especially in patients with vascular risk factors. Awareness with proper history taking and detailed examination is the only key for the correct diagnosis and treatment.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Informed consent Informed consent was obtained from patient before usage of information and material.

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