Atypical Presentation of Cerebellar Stroke

Shirley Shen, BS, Brendon Lin, BS, Samantha Sabban-Wang, DO, Mohammad Islam, MD

CASE PRESENTATION

History of present illness:

48-year-old female with gait ataxia and dizziness after left cerebellar stroke resulting from vertebral artery occlusion.

Background:

- 48-year-old female with no past medical history presented acute headache, nausea, and intractable vomiting for 3 days.
- CT showed acute/subacute left cerebellar infarct
- CTA showed occlusion of vertebral artery close to origin, reconstitution distally.
- Neurology hypercoagulable workup including prothrombin mutation, protein S, protein C, AT III, Silica clotting time, Jak-2 mutation, Factor V Leiden, Homocysteine, Lipoprotein A, Cardiolipin Abs, DRVVT, COVID PCR and COVID Abs was negative except positive b2 glycoprotein and negative Beta-2-glycoprotein (IgA, IgG, IgM)

Past Medical History: none

Physical exam:

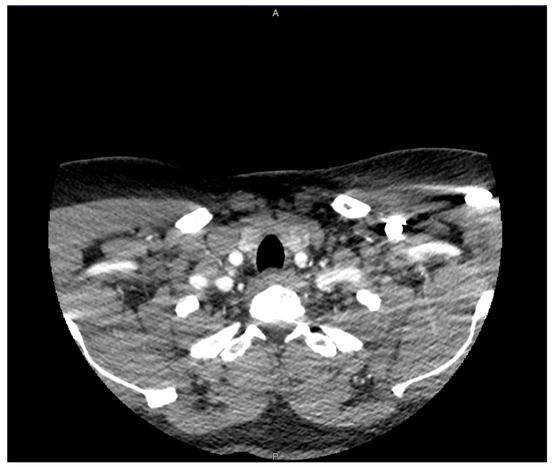
- Full strength, normal sensation and proprioception
- Intact cranial nerves
- Mild dysdiadokinesia on the left
- Gait: decreased step length, frequent pauses
- Negative for dysmetria

Plan:

- Admitted to acute inpatient rehab on day 10.
- Daily physical therapy and occupational therapy sessions for 1 week.

IMAGES

CT Head



CTA Neck

DISCUSSION

Beta-2-glycoprotein I (B2GI) inhibits the intrinsic coagulation pathway and is involved in the regulation of blood coagulation. Antibodies are commonly found in lupus and may play a role in formation of atherosclerosis in ischemic stroke. We present a case of a young individual with risk factors for hypercoagulability with a cerebellar infarct localized to the vermis of the posterior lobe. Her lack of cranial nerve involvement, sparing of the sympathetic nervous system, and lack of sensory or motor symptoms reflect noninvolvement of the brain stem, despite the proximal location of the lesion.

CONCLUSIONS

In young patients with cerebellar stroke without typical inciting factors, presentation may be atypical. Workup should include serum factors that may contribute to hypercoagulation.

BIBLIOGRAPHY

1. Datar, S., & Rabinstein, A. A. (2014). Cerebellar infarction. *Neurologic clinics*, *32*(4), 979-991.
2. Ma L, Wu J, Niu D, et al. Serum lipoprotein(a) complexes with beta2-glycoprotein I levels in patients with ischemic stroke. *Clin Chim Acta*. 2014;429:163-167. doi:10.1016/j.cca.2013.11.029
3. Macdonell R.A., Kalnins R.M., and Donnan G.A.: Cerebellar infarction: natural history, prognosis, and pathology. Stroke 1987; 18: pp. 849-855
4. Saeed A.B., Shuaib A., Al-Sulaiti G., et. al.: Vertebral artery dissection: warning symptoms, clinical features and prognosis in 26 patients. Can J Neurol Sci 2000; 27: pp. 292-296.
5. Savitz S.I., Caplan L.R., Edlow J.A.: Pitfalls in the diagnosis of cerebellar infarction. Acad Emerg Med 2007; 14: pp. 63-68.
6. Zhang L, Wu Y, Qiu L, Liu Y, Li Q. Elevated Levels of Serum β2-Glycoprotein I/Oxidized Low-Density Lipoprotein Complexes Are Associated with Cerebral Infarction in Patients with Type 2 Diabetes Mellitus. Med Sci Monit. 2018;24:1232-1240. Published 2018 Feb 28. doi:10.12659/msm.907078