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Case Description

This patient was a non-smoking 39 year old male with history of multiple sclerosis and ADHD who presented after a first time generalized tonic-clonic (GTC) seizure associated with 6 months of headaches. An MRI showed a right (R) PICA and left (L) PCA infarct. The patient had three more GTC seizures and follow up CT scans demonstrated evolution of PICA and PCA strokes and interval development of R ACA, R SCA, and L temporal lobe infarcts. The patient's physical exam demonstrated R facial droop, right upper extremity (RUE) weakness and dysmetria, R superior quadrantopia, and decreased hearing on the R side. Patient underwent retrosigmoid craniotomy for evacuation of ischemic stroke and was subsequently admitted to inpatient rehabilitation.



Image 1a

Image 1a: T2 FLAIR MRI demonstrating L PCA infarct, R cerebellar infarct with vasogenic edema.

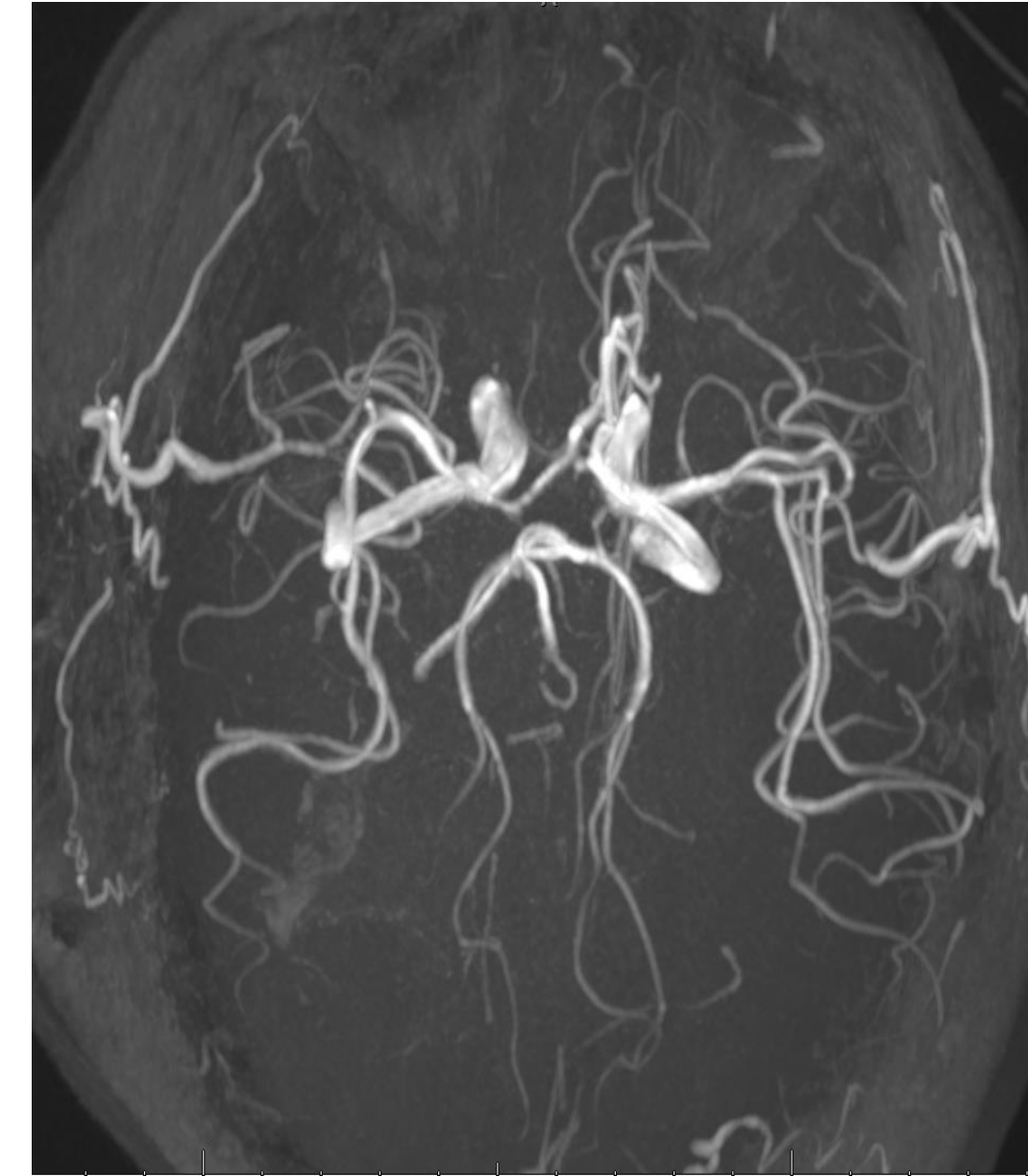


Image 1b

Image 1b: V1, V2, and proximal V3 portions of the right vertebral artery favored to represent occlusion. The distal V3 and V4 segments of the right vertebral artery likely demonstrate retrograde filling.

Discussion

In a young patient with several ischemic one must consider the contributing factors especially in someone without the traditional risk factors. This patient had normal blood pressure, normal cholesterol (196) and LDL (138), mildly elevated Hemoglobin A1C (6.2%), and no known family history of stroke. Upon review of telemetry, the patient was found to have new onset intermittent episodes of atrial fibrillation. It was also revealed that the patient had been on Lisdexamphetamine 50mg daily for about six months prior to presentation.

Conclusion

There is little research linking amphetamine medications to atrial fibrillation, however, it cannot be overlooked that this patient's clinical course correlates closely with his use of high dose lisdexamfetamine. His headache symptoms started shortly after increasing the dose and the resultant showering of emboli is likely related to the newly developed intermittent tachycardia. The lisdexamfetamine was discontinued upon admission and the patient no further episodes of tachycardia nor additional ischemic events. It is important to continue to evaluate the amphetamine class of ADHD medications and consider the possible risk of cardioembolic events that can have significant effects on function.