



Symptomatic Bradycardia Masking the Presentation of Ruptured Posterior Communicating Artery Aneurysm

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Case Description

Patient presented post syncope with bradycardia and lethargy. EKG demonstrated Mobitz type 1 heart block. Cardiology placed a transvenous pacemaker; despite this, lethargy persisted. Subsequent CT head demonstrated diffuse subarachnoid hemorrhage and hydrocephalus. CT angiogram demonstrated ruptured right PCOM aneurysm. Neurosurgery and neuroradiology were consulted. Patient was admitted to the neurological ICU and an external ventricular drain (EVD) was placed. Her mental status improved after drainage insertion. Patient underwent coil embolization of 6mm right posterior communicating artery aneurysm. Post-procedure neurological exam was within normal limits; patient could follow simple and complex commands but had insomnia.

Assessment/Results

Endovascular findings included successful coil embolization with near complete aneurysm occlusion and preservation of patent adjacent arteries. Subsequent MRI of the head demonstrated multiple small foci of recent ischemic infarction in right MCA and PCA territories suspicious for vasospasm and patient was started on course of Nimodipine. Serial transcranial dopplers subsequently demonstrated resolution of vasospasm and EVD was removed. The patient was admitted for acute inpatient rehabilitation.

After admission to inpatient rehabilitation, she continued to have some behavioral disturbance requiring the continued use of Seroquel; however, neurologic examination was otherwise within normal limits. Therapists noted good functional independence with activities of daily living and patient was able to return home for outpatient follow up. She was able to ambulate 150 feet with close supervision without an assistive device.

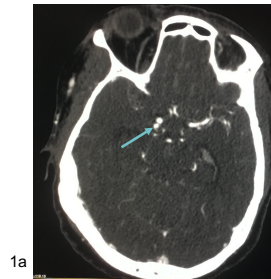


Figure 1a. CT angiogram demonstrating ruptured right PCOM aneurysm, axial view (arrow)

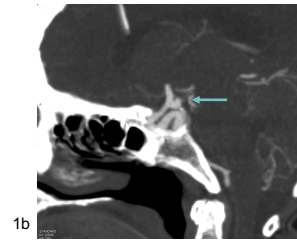


Figure 1b. CT angiogram demonstrating ruptured right PCOM aneurysm from sagittal view (arrow)



Figure 2. CTH demonstrating diffuse subarachnoid hemorrhage and hydrocephalus (axial view)

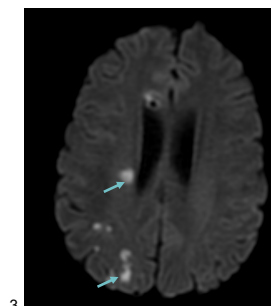


Figure 3. Diffusion weighted MRI demonstrating multiple small foci (arrows) of recent ischemic infarction in right MCA and PCA territories suspicious for vasospasm (axial view)

Discussion

This case highlights the difficulty in syncope work up as the differential is broad. Reassessment and timely monitoring of response to therapy is key to determining a likely diagnosis, subsequent treatment strategies, and maximizing the patient's functional outcomes.

Conclusion

The presentation of cerebral hemorrhage can mimic other systemic processes at initial presentation and requires careful assessment in its management.

References

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*Images do not reflect the condition of the patient and are for illustration purposes only.