

AWARD FOR BEST CASE REPORT PRESENTATION AT THE  
WCMSR BASED ON JUDGE SCORES, 2nd PLACE

### 37. VERTIBRAL ARTERY DISSECTION SECONDARY TO MALIGNANT HYPERTENSION PRECIPITATING A POSTERIOR CIRCULATION STROKE

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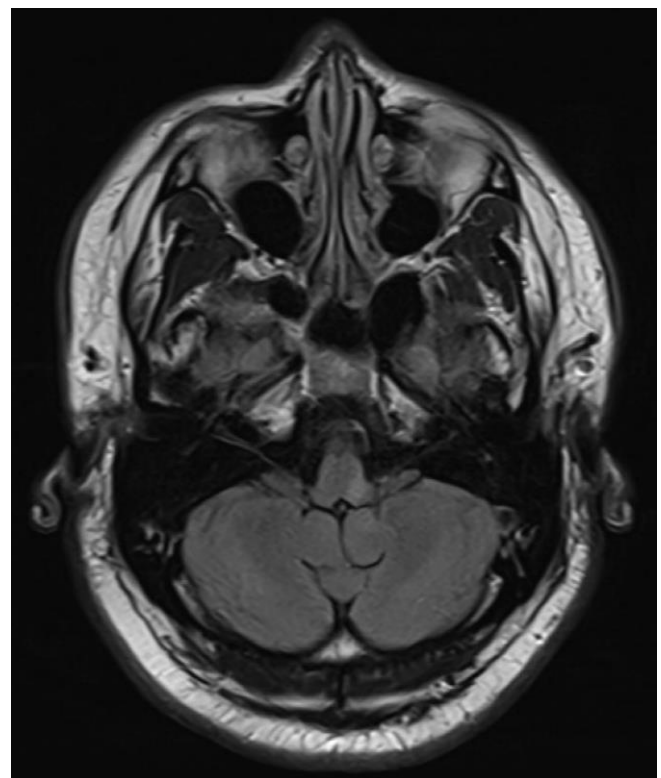


<https://www.youtube.com/live/fSpXH-3Xy5w?t=10790s>

**Background:** Diagnosing posterior circulation strokes is challenging due to non-focal symptoms and their overlap with anterior circulation ischemia. Common presentations include lateral medullary syndrome (Wallenberg) and cerebellar infarctions, with symptoms like nystagmus, truncal ataxia, tongue deviation, internuclear ophthalmoplegia, and contralateral pain and temperature impairment. These strokes are often missed on NCCT head scans. High clinical suspicion and evolving neurological signs should prompt a CT angiogram of the head and neck, though MR angiography remains the gold standard for confirming vertebral artery dissection. **Case:** A 35-year-old male with a history of hypertension, chronic kidney disease, pre-diabetes, left ventricular hypertrophy, and previous left Bell's palsy presented with sudden left facial paralysis, dizziness, blurred vision, nausea, vomiting, and a blood pressure of 217/141 mmHg. In the emergency room, his vitals included a pulse of 110 bpm, temperature of 36.6 °C, respiratory rate of 23/min, and a BMI of 47.5 kg/m<sup>2</sup>. Examination revealed bilateral nystagmus, ongoing cranial nerve VII deficits, slurred speech, and left upper limb ataxia. A stroke alert was triggered, and an initial non-contrast head CT was negative. Given an NIH Stroke Scale score of 3 and persistent symptoms, a CT angiogram was performed which showed occlusion of the left vertebral artery in the distal V3 and V4 segments, while the basilar artery remained patent with right-dominant circulation. MRI confirmed a left lateral medullary stroke. Management included placing a nasogastric tube, initiating dual antiplatelet therapy (Aspirin 75 mg and Clopidogrel 75 mg), and administering antihypertensives (Hydralazine, Lisinopril-Hydrochlorothiazide, Metoprolol, and Amlodipine). The patient was discharged three days later with instructions

to continue dual antiplatelet therapy for 90 days. **Conclusion:** Malignant hypertension can trigger vertebral artery dissection, leading to a posterior circulation stroke, which has an ambiguous clinical presentation and is often missed on a non-contrast head CT. If clinical symptoms and exam findings suggest this condition, a CT angiogram of the head and neck should be performed, with MRI and MR angiography used for confirmation. Treatment decisions are complicated by the choice between anticoagulants and antiplatelets with antiplatelets being preferred due to their safety profile.

**Figure.** MRI showing Left Vertebral Artery Dissection.



**Key Words:** Posterior Circulation Stroke, Vertebral Artery Dissection, Malignant Hypertension, Lateral Medullary Syndrome, CT Angiogram, Dual Antiplatelet Therapy, Stroke Diagnosis.