46 y/o female with sudden onset left facial droop, LUE weakness, and paresthesia

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Clinical Presentation

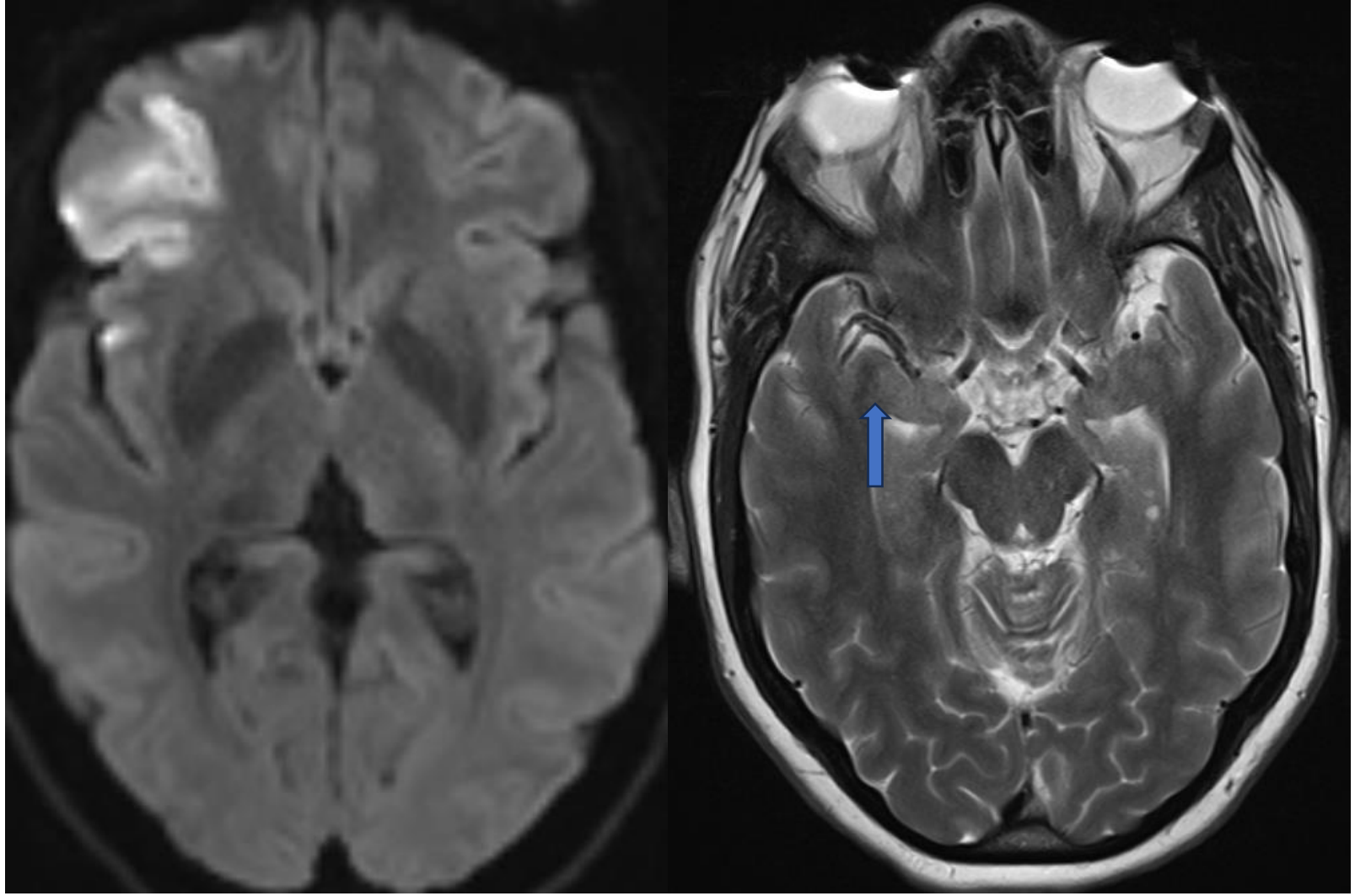
- 46 y/o F with history of HTN, tobacco abuse presents with sudden onset right-sided headache, left facial droop, LUE weakness and paresthesia, following a nap.
- Initial outside CT/CTA head was read as unremarkable.
- Patient transferred to UTMCK due to c/f stroke.

Clinical Presentation

- In the ED, patient was resting comfortably with stated symptom resolution other than lingering LUE paresthesia. No PE findings.

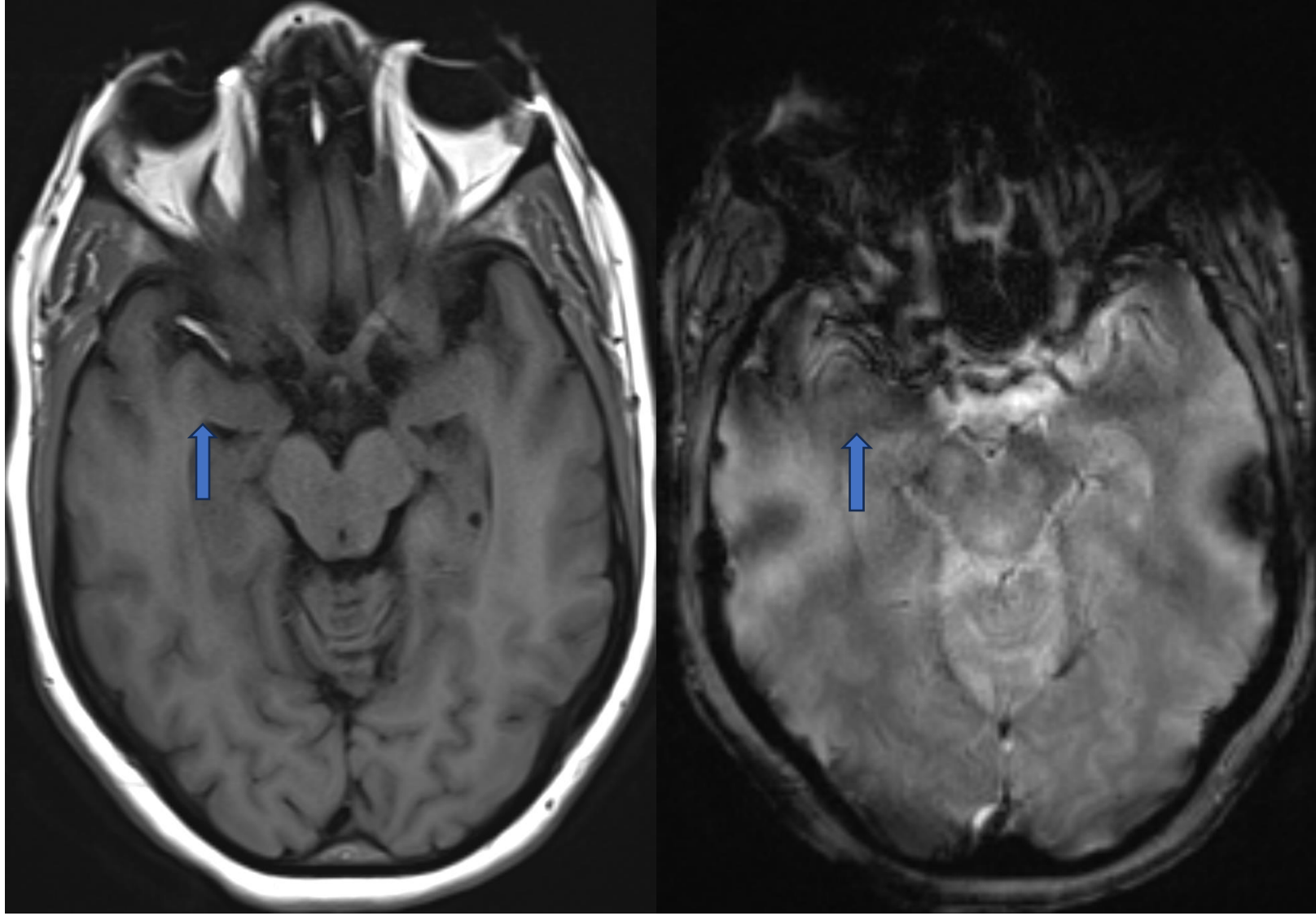
- MR brain performed for further evaluation.

MR Brain
7/23/2024



Right MCA, anterior segment cytotoxic edema with patchy opercula and insular involvement. M1/2 segment disease, possibly dissection. Recommend CTA head

MR Brain
7/23/2024



T1 weighted linear hyperintense signal along the right MCA with corresponding T2* hypointense signal. "Shadow sign".

Initial differential

Neurology consulted

- Transient neurologic deficits related to migraine (if imaging neg)
- Cardioembolic cerebrovascular accident (reported recent RCA infarct, long distance travel) vs hypercoaguable state.

Initial Management

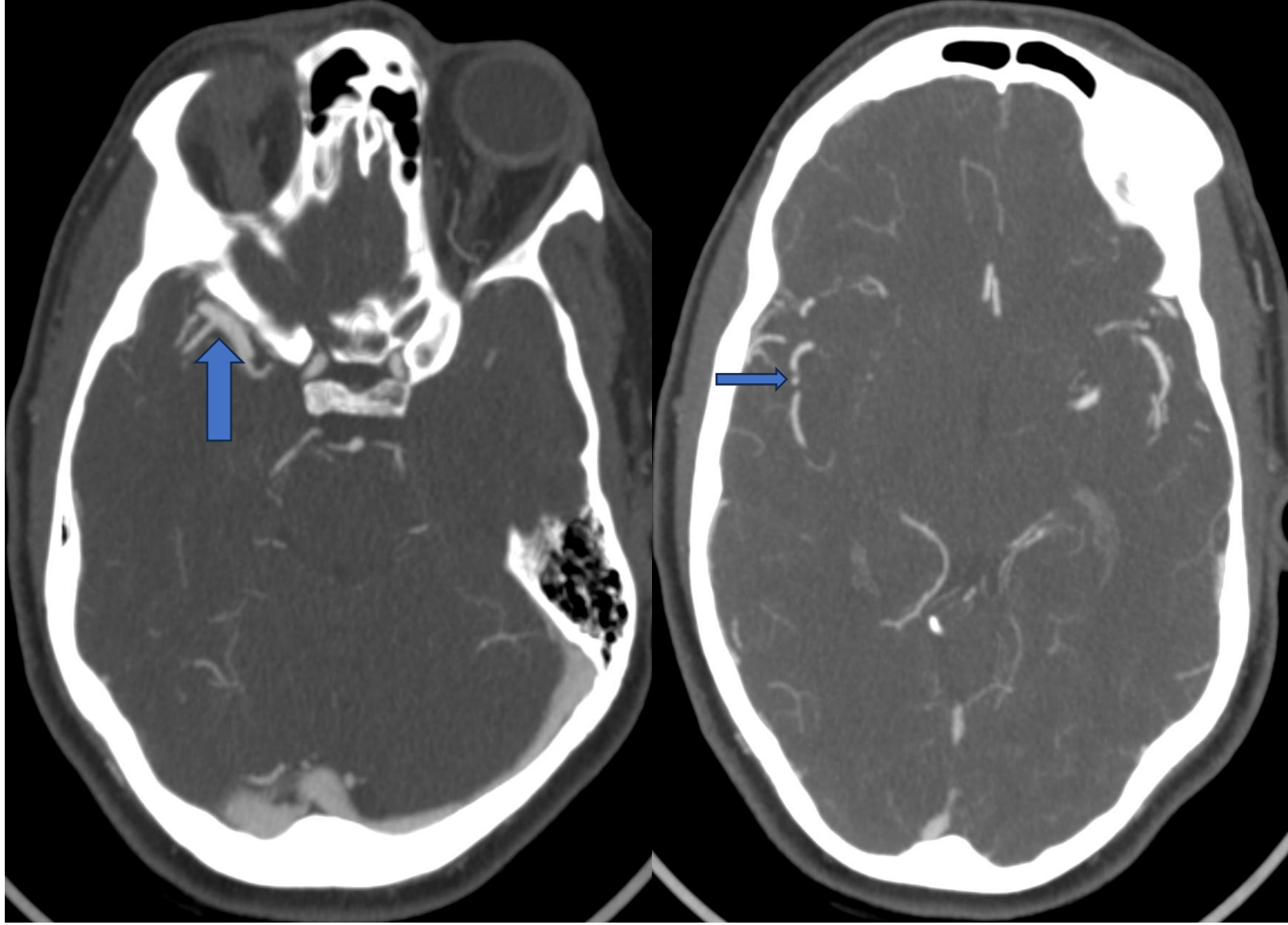
Investigation for cardioembolic source and possible atrial fibrillation. Aspirin/Statin therapy.

- TTE + bubble study negative. Lower extremity dopplers negative. Cardiac monitoring negative for dysrhythmia. (No further inpatient testing per neurology).
- Patient discharged 7/24/2024

- Patient returns 7/27/2024 with recurrent left facial droop, LUE and LLE paresthesia. Again symptoms improve when evaluated in the ED. Repeat CTA head/perfusion performed.

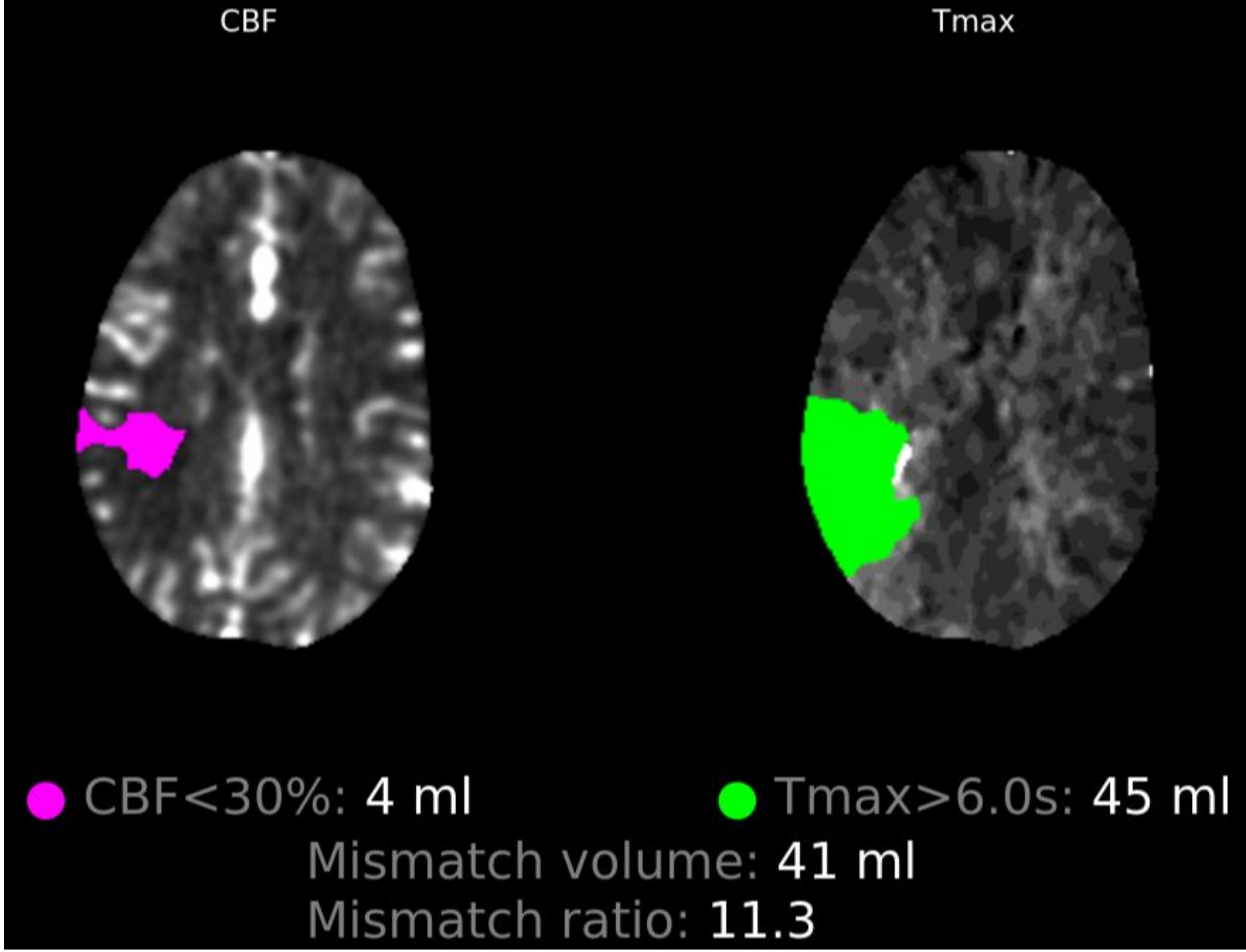
CTA Head
7/27/2024

New right M2/M3 segment occlusion, likely embolic and related to the M1 abnormality, c/f underlying dissection.



CT Perfusion 7/27/2024

Right MCA perfusion defect, penumbra 41 mL, Core infarct 4 mL.



Management/Outcome

Not candidate for antithrombotic therapy due to recent stroke. Switched to DUAT (ASA + Plavix).

Felt to be thrombotic as “no embolic source” documented.

Patient managed conservatively with neuro checks and telemetry. Discharged 7/29/2024. No additional follow up since.

Take Home points

MCADs are often spontaneous in younger aged population

Underrecognized etiology of stroke

Optimal treatment approach unclear

References

- Kamis MF, Yaakob MN, et al. Spontaneous Middle cerebral Artery (MCA) dissection and stenosis: Role of vessel wall imaging and 3D-RA endoluminal view as adjunct diagnostic tools in endovascular therapy. Interdisciplinary Neurosurgery. 2021. https://doi.org/10.1016/j.inat.2021.101170
- Asaithambi, G, et al. Isolated middle cerebral artery dissection: a systematic review. International Journal of Emergency Medicine 2014; 7 (1): 44. DOI: 10.1186/s12245-014-0044-1