



When an Embolic Source Remains Elusive for Recurrent CVAs, the Third Time's a Charm

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Background

- Recurrent cryptogenic strokes should prompt a thorough and comprehensive evaluation for potential embolic sources.
- Cardiac papillary fibroelastoma (CPF) can potentially cause systemic emboli, stroke, MI, and sudden death and should remain on the differential in an otherwise negative workup.

Learning Objectives

- Understand the difference between a Lambli's excrescence (LE) and a CPF.
- Recognize the importance of TEE in the diagnostic evaluation for recurrent cryptogenic strokes.
- Recognize a multidisciplinary approach in managing a CPF.

Case

- A 63-year-old RHD, AA female with history of Hodgkin's lymphoma, ALL, HTN, and DM initially presented to the ED with sudden-onset speech changes, right facial droop, and right hemi-body hypoesthesia and neglect.
- NIHSS was 7, NCCTH was normal, CTA of the head and neck showed no large vessel occlusion or stenosis.
- tPA was administered, MRI brain showed subacute infarct in a left MCA distribution (Fig. 1A).
- TTE showed no right-to-left shunt, an antiplatelet and statin were started, and she was discharged to an acute rehab facility (ARF).
- Etiology remained cryptogenic although embolic event from a proximal source was suspected.
- 7 months later, she returned to the ED with sudden worsening of her right-sided symptoms. CTA of the head showed abrupt cut-off of the left inferior M2 MCA (Fig. 1B).
- tPA was administered and the patient was transferred to a stroke center for brain CT perfusion. She was not a candidate for endovascular thrombectomy and was discharged to an ARF.
- 1 month later, she was brought to the ER by family with concerns for agitation and medication non-compliance.
- NCCTH showed sequela from previous stroke.
- MRI revealed new subacute infarct in the left ventral thalamus (Fig. 1C).
- TTE showed no evidence of thrombus and no significant valvular abnormalities.

Case

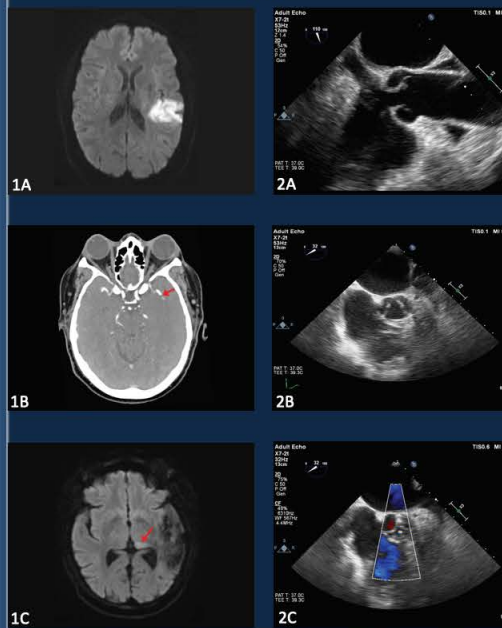


Figure 1. A) MRI brain showing subacute infarct in a left MCA distribution. B) CTA head showing occluded left inferior M2 MCA. C) MRI brain showing subacute infarct in the left ventral thalamus. Figure 2. A) TEE images.

- TEE showed a thin, filamentous mobile density (7.5 mm) on the tips of the aortic valve, suspicious for a Lambli's excrescence, and a 4 mm nodule on the aortic side of the non-coronary cusp with mild independent motion.
- Heparin drip was initiated and a hypercoagulable workup was negative (protein C/S not performed due to heparin).
- Coronary CTA per cardiology recommendations was unremarkable. The patient was switched to coumadin after CT surgery recommended against valve-sparing excision or shave excision at the time due to risk for hemorrhagic conversion. ILR was placed with discharge to ARF.

Treatment and Outcome

- At cardiology follow-up, ILR did not identify arrhythmias. She was adherent to coumadin and a repeat TEE was scheduled.
- Suspect the aortic mass is likely a CPF versus thrombus but if present on repeat TEE, she will be referred to CT surgery.
- She has been referred to oncology to evaluate for recurrence of Hodgkin's lymphoma.

Implications/Discussion

- CPF is the most prevalent valvular and overall second most common cardiac tumor after myxoma.¹
- LEs are fine, mobile, filiform fronds that typically occur at sites of valve closure, believed to result from minor endothelial damage due to wear and tear.²
- CPF is thought to be a larger form of an LE, evolving from a thrombotic phenomenon due to traumatization of the endothelial cells at the level of valves which have an increased pressure gradient.³
- No definitive guideline exists for management of LE/CPF.
- Surgery should be considered for history of embolic events or at risk of embolization, CAD secondary to the mass, mobile CPF, or size > 1 cm.⁴
- Complete resection is curative and long-term post-op prognosis is excellent.^{4,5}
- Case reports suggest a trial of DAPT initially and if a recurrent ischemic event occurs, offering a trial of anticoagulation.⁶
- LE/CPF will likely become more prevalent given advent of higher-resolution imaging.

References

1. Kumar V, Soni P, Hashmi A, Moskovits M. Aortic valve fibroelastoma: A rare cause of stroke. *BMJ Case Rep.* 2016;2016. doi:10.1136/bcr-2016-217631
2. Kumar V, Nanavati SM, Abuarqoub A, et al. Enigma of recurrent strokes with literature review. *AME Case Reports.* 2017;1:5-5. doi:10.21037/acr.2017.10.01
3. Mkalaluh S, Szczepowicz M, Torabi S, et al. Surgery for Cardiac Papillary Fibroelastoma: A 12-Year Single Institution Experience. *Med Sci Monit Basic Res.* 2017;23:258-263. doi:10.12659/MSMBR.904881
4. Chu A, Aung TT, Sahalon H, Choksi V, Feiz H. Lambli's excrescence associated with cryptogenic stroke: A case report and literature review. *Am J Case Rep.* 2015;16:876-881. doi:10.12659/AJCR.895456
5. Kamran H, Patel N, Singh G, Pasricha V, Salifu M, I. McFarlane S. Lambli's excrescences: A case report and review of the literature. *Clin Case Reports Rev.* 2016;2(7):486-488. doi:10.15761/ccr.1000254
6. Yandrapalli S, Mehta B, Mondal P, et al. Cardiac papillary fibroelastoma: The need for a timely diagnosis. *World J Clin Cases.* 2017;5(1):9. doi:10.12998/wjcc.v5.i1.9