

Spontaneous Resolution of a Lenticulostriate Artery Aneurysm

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A 25-year-old male presented with sudden onset right hemiparesis. He did not have any vascular risk factors or any family history of stroke. A computed tomography (CT) scan of the brain revealed a left-sided gangliocapsular hemorrhage [Figure 1]. Cerebral three-dimensional (3D) rotational angiography showed an aneurysm ($2.9 \times 3.3 \text{ mm}^2$) in the distal part of the lateral lenticulostriate branch of the left middle cerebral artery [Figure 2]. As the patient did not give consent, we decided to follow up. We treated him with tranexamic acid 1 g/day and performed another angiography after 2 weeks, which showed aneurysm growth ($3.7 \times 4.6 \text{ mm}^2$) [Figure 3]. The patient gave consent for embolization after 5 days, but a repeat cerebral angiography showed spontaneous resolution of the aneurysm, possibly because of thrombosis [Figure 4].

Lenticulostriate artery (LSA) aneurysms distal to origin from the middle cerebral artery are relatively uncommon, and only 112 cases were described in the literature up to date.^[1] LSAs being end arteries supply the basal ganglia and internal capsule and are prone to rupture. Aneurysms arising from LSAs may be saccular or fusiform and may present commonly with intra-parenchymal bleed, although sub-arachnoid and intra-ventricular hemorrhage have been sparsely reported.^[2] Hemodynamic forces coupled with structural factors are thought to play important roles in their development. Systemic hypertension and other vascular abnormalities such as aneurysms in other vascular territories, arteriovenous malformation, Moyamoya disease, and vasculitis predispose to the formation of these aneurysms.^[3] In non-hypertensive young patients with deep intra-cerebral hemorrhage, LSA aneurysms should be ruled out and structural abnormalities should not be dismissed even in the presence of hypertension in elderly patients.^[4] These aneurysms may remain undetected on initial angiograms because of their deep-seated location and small size. Both surgical and endovascular management

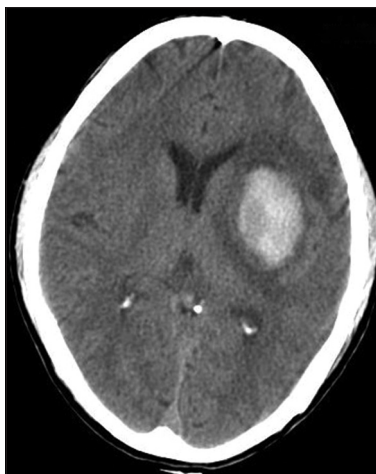


Figure 1: Non-contrast CT scan of the brain showing left gangliocapsular hemorrhage

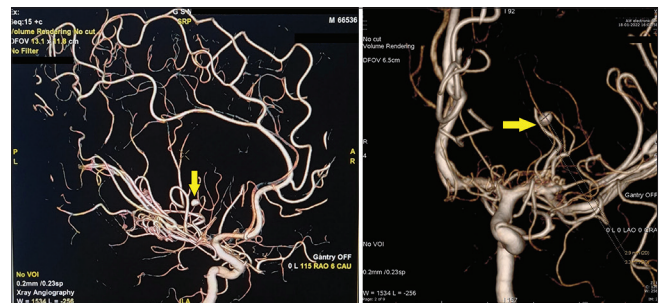


Figure 2: Left internal carotid artery angiography with 3D re-construction day 3 showing an aneurysm ($2.9 \times 3.3 \text{ mm}^2$) in the lenticulostriate branch of the left middle cerebral artery



Figure 3: Left internal carotid artery angiography with 3D re-construction 2 weeks after symptom onset showing aneurysm growth ($3.7 \times 4.6 \text{ mm}^2$)



Figure 4: Left internal carotid artery angiography with 3D re-construction performed 5 days after the second angiography showing resolution of the lenticulostriate aneurysm

can be performed for such aneurysms. However, spontaneous resolution has also been described.^[5]

Declaration of patient consent

Informed written consent was obtained from the patient.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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