

## Fenestration of the supraclinoid internal carotid artery

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A rare anomaly, fenestration of the supraclinoid internal carotid artery, is reported, and its clinical importance is discussed.

### Case report

A 46-year-old woman experienced severe headache, nausea and vomiting. On arrival at hospital 20 min after the ictus, she was comatose. CT demonstrated dense subarachnoidal clot, mainly in the cisterns of the posterior cranial fossa. External drainage for acute hydrocephalus was effective. Eight days later, angiography disclosed a saccular aneurysm at the origin of the superior cerebellar artery. Fenestrations of the supraclinoid internal carotid and anterior cerebral arteries on the right were observed (Fig. 1 a). During wrapping of the aneurysm on the 52nd day after bleeding, fenestration of the internal carotid artery was confirmed (Fig. 1 b).

### Discussion

Fenestration of the cerebral vessels is well known; it commonly involves the vertebrobasilar, anterior and middle cerebral arteries. To our knowledge, there have been only two reported cases of fenestration of the intracranial carotid artery [1, 2], and this is the first case with the same anomaly in the anterior cerebral artery.

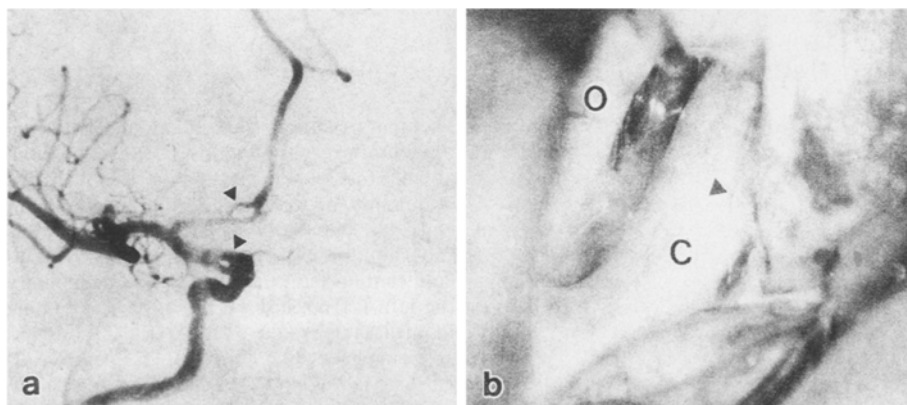
The cause of this anomaly is unknown, but the association of these two congenital fenestrations suggests persis-

tence of the plexiform vascular network of the early fetal stage [3].

Fenestration has been reported with aneurysms predominantly on other vessels, like our case, but Yock [1] reviewed cases with an aneurysm at the fenestration. Reporting a case of fenestration plus aneurysm at the supraclinoid internal carotid artery, he emphasised the morphological similarity of intracranial fenestration aneurysms. A defect of the muscular layer in the vessel wall was shown histologically at the proximal and distal ends of a basilar artery fenestration aneurysm, and fenestration identified as a preferential site of aneurysm formation [4]. Although it is sometimes difficult to show a fenestration aneurysm angiographically, both ends of the fenestration should be examined carefully, especially in a case of subarachnoid haemorrhage.

### References

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**Fig. 1. a** Right anterior oblique view of the right carotid artery, showing fenestrations of the supraclinoid internal carotid artery and anterior cerebral arteries *arrowheads*. **b** Operative photograph of the fenestration of the supraclinoid internal carotid artery *arrowhead*. *O* right optic nerve *C* right internal carotid artery