

Are All PICA Aneurysm's Dissecting In Nature: Review Of 16 Cases?

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Purpose

Ruptured PICA aneurysm is uncommon with reported incidences of between 0,5 and 5,3%. PICA aneurysms are a heterogeneous group with many having angiographic features of dissection and others saccular. We treated a patient with a ruptured PICA aneurysm that was saccular in appearance that subsequently rebled and on follow-up angiography appeared dissecting. This prompted us to review all PICA aneurysms to determine the angiographic features that may indicate underlying dissection.

Method

The UCT Neurovascular database was searched using terms "PICA dissection" and "PICA aneurysm" from Jan 2005 to Dec 2014. Flow-related aneurysms associated with AVMs, giant, unbled, traumatic and vertebral artery aneurysms were excluded. Patient clinical, angiographic, treatment and outcome data were reviewed.

Results

16 ruptured PICA aneurysms were identified (total 1346 patients, 1,2%). 6 were saccular, 10 dissecting. Fusiform and saccular were considered as dissecting if there was associated proximal or distal vessel stenosis or dilatation. The 6 saccular aneurysms were treated (1 clipping, 5 coiling), 1 rebled because of underlying dissection. The 10 dissecting aneurysms were treated by coiling of the saccular component in 4 and stent coiling in 1. 3 had aneurysm trapping (NBCA or coils) and 1 had parent vessel occlusion. 3 with delayed presentation had no intervention and healing of the dissection was confirmed on repeat angiography. Overall outcomes were good for 14 patients with 1 having severe disability and 1 mortality.

Conclusion

PICA dissection may have a fusiform appearance and careful assessment of angiographic morphology is required to determine if dissection is present.