

Intracranial aneurysm expansion

Patients with [large intracranial aneurysm](#) and [giant intracranial aneurysms](#) (IAs) can experience neurological deterioration within 6 months after successful [flow diverter](#) (FD) placement. The purpose of a study of de Korte et al. from the Department of Neurosurgery, Radboud University Medical Center, [Nijmegen](#), The Netherlands, was to assess if occurrence of neurological deterioration can be linked to IA expansion within 6 months after FD treatment.

Between 2010 and 2016, 45 FD procedures were performed in 44 patients with a large or giant IA. From this group, they selected all patients (14 patients with 15 IAs) with neurological deterioration within 6 months after FD treatment. All these patients received follow-up imaging within the same time-frame. Patients were then divided into 2 groups, those with mass-effect related and those with ischemia related symptoms. The volumes of all treated IAs were determined through manual segmentation of available pre- and post-operative imaging to determine IA expansion after FD treatment. To rule out false-positive findings, we only considered an IA volume increase of >20% after FD treatment as a true IA volume increase.

At follow-up, 6 IAs increased in volume and 9 IAs did not increase in volume. More patients presenting with mass effect related symptoms showed IA expansion (6 out of 10 IAs) than patients presenting with ischemia related symptoms (0 out of 5 IAs) (Fisher's Exact Test, two sided. $p=0.044$).

The volume of large and giant IAs can increase in the first 6 months after FD treatment. More patients presenting with mass effect related symptoms showed IA expansion than patients with [ischemia](#) related symptoms ¹⁾.

¹⁾

de Korte AM, Aquarius R, Meijer FJA, Boogaarts HD, de Vries J. Intracranial aneurysm expansion may cause neurological deterioration after flow diverter treatment. *World Neurosurg.* 2018 Aug 30. pii: S1878-8750(18)31952-1. doi: 10.1016/j.wneu.2018.08.169. [Epub ahead of print] PubMed PMID: 30172980.

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