

Internal carotid artery aneurysm

- [Early experience with the Drivewire 24: a newly FDA-approved steerable microwire](#)
- [Gelastic Seizures Associated with a Giant Internal Carotid Artery Aneurysm](#)
- [Stenting for a Ruptured Blood Blister-Like Aneurysm of the Basilar Artery: Case Report and Literature Review](#)
- [Expression of concern: "Peritonsillar abscess complicated by internal carotid artery aneurysm in a pediatric patient with congenital hypoplastic posterior communicating artery: A case report" \[Int. J. Surg. Case Rep, volume 130C, 111251\]](#)
- [Gender-Based Differences in Aneurysm Characteristics Among Patients With Aneurysmal Subarachnoid Hemorrhage: A Multidetector CT Angiography Study at a Tertiary Care Hospital](#)
- [Endovascular or microsurgical? Defining the best approach for blood blister aneurysms: A comparative meta-analysis](#)
- [Beyond the Bowel: Novel Comorbidity Patterns in Inflammatory Bowel Disease from the All of Us Research Program](#)
- [SMURF: Scalable method for unsupervised reconstruction of flow in 4D flow MRI](#)

[Anterior circulation aneurysm](#) of the [internal carotid artery](#)

Classification

[Internal carotid artery aneurysm classification](#).

Clinical features

see [Subarachnoid hemorrhage clinical features](#).

Presents with [diplopia](#), retro-orbital pain and unilateral [headaches](#). The symptoms are progressive and the diagnosis should be considered in a patient presenting with these complaints. Underlying [hypertension](#) and advanced [age](#) are specific [risk factors](#) ¹⁾.

Diagnosis

Results suggested that addition of local excitation to conventional [magnetic resonance angiography](#) was effective to diagnose unruptured aneurysm at the distal internal carotid artery, to clarify the configuration of the prominent lesion or whether the location of the adjacent branch orifice on the parent vessel was symmetric or asymmetric ²⁾.

Treatment

[Internal carotid artery aneurysm treatment.](#)

Complications

Minai L, Ogawa Y, Kinoshita M, Ito H, Kume M, Mitsui H, Shimada S, Kawamura T. Case of trigeminal trophic syndrome secondary to endovascular treatment for internal carotid artery aneurysm. *J Dermatol.* 2022 Feb 24. doi: 10.1111/1346-8138.16336. Epub ahead of print. PMID: 35212008.

Case series

Tsukada et al. included patients who underwent 3D [Phase contrast cine magnetic resonance imaging](#) before and after large [internal carotid artery aneurysm treatment](#). Spatially and temporally averaged volume flow rates and spatially averaged systolic [wall shear stress](#) (WSS) in healthy-side [internal carotid artery](#) distal to the [posterior communicating artery](#) (C1 internal carotid artery segments according to [Fisher's classification](#)) were measured before and after [parent artery occlusion](#) and [flow diverter](#) treatments.

Seventeen patients were included (5 patients in the parent artery occlusion group and 12 in the flow diverter group). At 1-2 months after treatment, median volume flow rate in healthy-side ICA increased from 5.36 ml/sec to 6.28 ml/sec (total increase 117%, $p = 0.04$) in the parent artery occlusion group and from 4.65 ml/sec to 4.93 ml/sec (total increase 106%, $p = 0.02$) in the flow diverter group. In the parent artery occlusion group, median WSS in the C1 segment of the healthy-side ICA increased from 3.91 Pa to 5.61 Pa (total increase 143%, $p = 0.08$); however, no significant increase was observed in the flow diverter group (4.29 Pa to 4.57 Pa [total increase 107%, $p = 0.21$]).

Postoperatively, volume flow rate and WSS in the C1 segment of the healthy-side ICA significantly increased in the parent artery occlusion group. Therefore, the parent artery occlusion group was more prone to [de novo aneurysm](#) than the [flow diverter](#) group ³⁾.

2016

A study included 97 patients harboring a total of 99 unruptured aneurysms of the distal internal carotid artery (ICA) who underwent single-stent implantation and more than 1 session of conventional angiography during follow-up (midterm follow-up only, $n = 70$; midterm and long-term follow-up, $n = 29$) between January 2009 and April 2014. The luminal narrowing point was measured using a local thickness map (ImageJ plug-in).

Stent-assisted coil embolization caused dynamic luminal narrowing of approximately 82% of the parent artery diameter on average after 8 months, which was reversed to 91% after 25 months. In addition, luminal narrowing greater than 40% was noticed in 2 (7%) of the 29 patients who experienced spontaneous reversion without additional management during follow-up. Most luminal narrowing changes seen were diffuse.

Luminal narrowing after aneurysm stent-assisted coil embolization is a dynamic process and appears to be a spontaneously reversible event. Routine management of luminal narrowing may not cause adverse events that require additional treatment ⁴⁾.

¹⁾

Kloss BT, Patel R, Sullivan AM. Intracranial internal carotid aneurysm causing diplopia. *Int J Emerg Med*. 2011 Sep 2;4:56. doi: 10.1186/1865-1380-4-56. PMID: 21888635; PMCID: PMC3180359.

²⁾

Suzuki M, Satow T, Komuro T, Kobayashi A, Miyamoto S. A local excitation magnetic resonance imaging method for intracranial unruptured aneurysm at the distal internal carotid artery. *J Clin Neurosci*. 2018 Jun 12. pii: S0967-5868(17)32159-8. doi: 10.1016/j.jocn.2018.06.012. [Epub ahead of print] PubMed PMID: 29907386.

³⁾

Tsukada T, Izumi T, Isoda H, Nishihori M, Kropp AE, Mizuno T, Wakabayashi T. Comparison of hemodynamic stress in healthy vessels after parent artery occlusion and flow diverter stent treatment for internal carotid artery aneurysm. *J Neurosurg*. 2021 Aug 20:1-8. doi: 10.3171/2021.2.JNS204185. Epub ahead of print. PMID: 34416714.

⁴⁾

Kim YS, Lee SW, Yeom JA, Yoon CH, Baik SK. Angiographic findings of in-stent intimal hyperplasia after stent-assisted coil embolization: are they permanent findings? *J Neurosurg*. 2016 Feb;124(2):328-333. Epub 2015 Aug 28. PubMed PMID: 26315002.

From:

<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:

https://neurosurgerywiki.com/wiki/doku.php?id=internal_carotid_artery_aneurysm

Last update: **2024/12/26 22:41**

