

# Flow diversion improves vision among patients with paraclinoid aneurysms

July 26 2016

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Aneurysms of the paraclinoid region of the internal carotid artery (ICA) and the interventions used to treat them often result in visual impairment.

Researchers at Brigham and Women's Hospital, however, found that flow diversion demonstrates a higher rate of visual improvement and a lower rate of visual decline in [patients](#) with these types of aneurysms. Results from this new study were presented at the Society of NeuroInterventional Surgery's (SNIS) 13th Annual Meeting today in Boston.

Because of the proximity of paraclinoid aneurysms to the [optic nerve](#) and the ophthalmic artery, between 16 percent and 53 percent of patients present with visual deficits. And while flow diversion is increasingly used throughout endovascular neurosurgery, few studies have reported the visual outcomes of treating these aneurysms with this technique, or compared it to coiling or clipping.

Researchers performed a retrospective analysis of patients with paraclinoid aneurysms who were treated at Brigham & Women's Hospital with a Pipeline embolization device (PED). Visual deficits were improved in 8 patients (80 percent) following treatment. No patients experienced sustained worsening of their existing visual impairment; however, one patient acquired postoperative iatrogenic vision impairment (5 percent).

"We compiled visual outcome data for 29 patients presenting with 32 paraclinoid aneurysms treated at our site with the Pipeline embolization device, 12 of whom presented with [visual impairment](#)," said Michael Silva, a medical student at Harvard Medical School working with Dr. Mohammad A. Aziz-Sultan on the project. "We found a high rate of visual improvement and a low rate of complications in these patients, especially compared to historical visual outcomes reported for coiling and clipping of paraclinoid [aneurysms](#)."

Provided by Society of NeuroInterventional Surgery

Citation: Flow diversion improves vision among patients with paraclinoid aneurysms (2016, July 26) retrieved 23 April 2024 from <https://medicalxpress.com/news/2016-07-diversion-vision-patients-paraclinoid-aneurysms.html>

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