Posterior communicating artery pseudoaneurysm

Intracranial pseudoaneurysm is a rare complication of endoscopic endonasal surgery. Herein, Morinaga et al., from Fukuoka University Chikushi Hospital describe two-staged stent assisted coil embolization for posterior communicating artery pseudoaneurysm after endoscopic endonasal surgery for pituitary neuroendocrine tumor.

A 68-year-old man had a history of severe adult growth hormone secretion deficiency, requiring growth hormone replacement therapy; secondary adrenal hypofunction; hyperthyroidism; hypertension; constipation; glaucoma; and hyperuricemia. Five years ago, after initial endoscopic transsphenoidal surgery for pituitary neuroendocrine tumor, he was hospitalized for reoperation. Posterior communicating artery injury was observed during second endoscopic trans-sphenoidal surgery and pressure hemostasis was performed using a hemostatic preparation. Immediately post-surgery, a localized subarachnoid hemorrhage was observed. Sudden-onset impaired consciousness and respiratory disturbances ensued on postoperative day 7, and computed tomography of the head was performed. Recurrent subarachnoid hemorrhage was confirmed, and acute hydrocephalus secondary to third ventricular blockage was identified. Cerebral angiography was performed after urgent bilateral cerebral ventricular drainage under general anesthesia. A pseudoaneurysm was identified in the left posterior communicating artery, and coil embolization was performed. Six weeks post-surgery, LVIS® Jr. stent was placed in the posterior communicating artery. Recurrence of the aneurysm was not detected 6 months post-surgery. He underwent lumboperitoneal shunting for secondary normal pressure hydrocephalus after dual antiplatelet therapy discontinuation and is being followed-up as an outpatient with a modified Rankin Scale of 2 10 months post-surgery.

Two-staged stent-assisted coil embolization using LVIS® stent was effective for a posterior communicating artery pseudoaneurysm occurring after posterior communicating artery injury following endoscopic trans-sphenoidal surgery for Follicle stimulating hormone secreting pituitary neuroendocrine tumor [1)].

1)
Morinaga Y, Nii K, Sakamoto K, Inoue R, Mitsutake T, Hanada H. Stent-assisted Coil Embolization for a Ruptured Posterior Communicating Artery Pseudoaneurysm after Endoscopic Trans-sphenoidal Surgery for pituitary neuroendocrine tumor. World Neurosurg. 2018 Dec 21. pii: S1878-8750(18)32870-5. doi: 10.1016/j.wneu.2018.12.047. [Epub ahead of print] PubMed PMID: 30583130.