Cerebral vasospasm is a rare complication following transsphenoidal resection of pituitary tumors. We describe a patient who had symptomatic cerebral ischemia due to internal carotid artery (ICA) vasospasm after transsphenoidal resection of a pituitary adenoma, and who was treated successfully with balloon angioplasty.

This 41-year-old man with acromegaly underwent a sublabial, transsphenoidal approach for resection of a large pituitary tumor (Fig. 1). The bulk of the tumor was removed successfully, without evidence of cerebrospinal fluid (CSF) leakage, and the patient awoke without deficit. On postoperative Day 10 he became somnolent, followed 24 hours later by the appearance of mild aphasia and right arm weakness. Examination of his CSF revealed elevated protein, 18 total nucleated cells, and negative bacterial cultures. A computerized tomography scan was obtained that revealed no evidence of intraparenchymal hemorrhage, subarachnoid hemorrhage (SAH), or infarction. A cerebral angiogram revealed severe left supraclinoid ICA vasospasm, which was treated with balloon angioplasty (Fig. 2). Over the following 8 hours the patient’s neurological deficits resolved, and he made a complete recovery.

Ischemic neurological deficit due to vasospasm following transsphenoidal pituitary surgery has been described previously. Based on these reports and our case, large tumors seem to predispose patients to this complication. Balloon angioplasty has recently emerged as a useful treatment for patients with vasospasm following SAH. In this case, balloon angioplasty was used successfully to treat vasospasm following transsphenoidal surgery, and this may be a reasonable approach in other patients with this postoperative complication.

References