

Pretemporal transzygomatic transcavernous approach

Using the pretemporal [transzygomatic approach](#) and [transcavernous approach](#), opening the oculomotor trigone, and removing the anterior clinoid and the posterior clinoid when necessary, a wide exposure of the interpeduncular fossa is achieved.

The approach uses the pretemporal route with exposure of the lateral wall of the cavernous sinus. It entails removal of the [anterior clinoid process](#). The [posterior clinoid process](#) is also removed when necessary. The approach leads to the upper [basilar artery](#) region. It is widened inferiorly to expose the anterior aspect by removal of the posterior clinoid process and the petroclival osseous and dural elements. Its lateral extension exposes the region of the [Meckel cave](#) and it can be widened by removal of the [petrous apex](#). Seventy patients experienced new transient mild cranial neuropathies, 67 of whom recovered fully. Surgically related ischemic morbidities occurred in three patients with [basilar artery aneurysms](#) (one small medial thalamic infarct, ataxia due to superior cerebellar artery ischemia, and distal middle cerebral artery embolus in a patient with atrial fibrillation in whom anticoagulation therapy was stopped). All the neuropathies in patients with BA aneurysms were oculomotor and recovery was the rule in all of them. Three new permanent cranial neuropathies occurred in the patients with meningiomas. In seven patients with preoperative neuropathy, two had partial improvement. Five patients with atypical meningiomas were treated with postoperative radiation therapy. Progression occurred later in four patients who were treated with Gamma knife radiosurgery. There were no surgery-related deaths. More than 1 year of follow-up data were available in 85 patients, and 94% of those patients were in an active and functional state (Glasgow Outcome Scale scores of 4 and 5).

The safety achieved with the transcavernous route allows surgeons to achieve wide exposures to lesions involving the anterior upper third of the posterior fossa. It is an approach that should be mastered by every neurosurgeon dealing with cranial lesions ¹⁾.

¹⁾

Krisht AF. Transcavernous approach to diseases of the anterior upper third of the posterior fossa. Neurosurg Focus. 2005 Aug 15;19(2):E2. PubMed PMID: 16122211.

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Last update: 2024/06/07 02:55

