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THE MICROSURGICAL APPROACH TO THE PETROUS APEX REGION

M.A. Arraez

Department of Neurosurgery. Carlos Haya University Hospital, Málaga, Spain.

Resumen

The petrous apex s a very complex anatomical region located at the petrous pyramid. The neurovascular relations are of paramount importance, petrous carotid artery, cavernous sinus, greater petrosal superficial nerve, trigeminal ganglion). Many approaches have been devised to reach this area.

In this paper the experience approaching the petrous apex by means of a temporal or fronto-temporal craniotomy with the addition of zygomatic osteotomy is presented. Although many publication point out the need for orbito-zygomatic osteotomy, in the author experience the simple zygomatic osteotomy is enough. An extradural dissection is done, indentifying the GPSN and petrous trajectory of the petrous carotid artery. The anterior petrous apex is approached. This route also allows for the removal of interdurally placed neoplasms (typically trigeminal neuromas) by means of interdural approach. The posterior fossa can be also reached (transpetrous approach).

Lesions at the bony petrous apex like cholesterol granuloma, epidermoid cysts can be removed. Tumors at the petrous-sphenoidal junction (chondrosarcoma) can be excised. Also trigeminal schwannoma can be removed, even being followed to the posterior fossa. If the interdural approach is difficult (epidural bleeding, etc.) an intradural approach can be done satisfactory. To follow the dumbbell tumors to the posterior fossa, the petrous superior sinus must be cut. Intraoperative monitoring is of paramount importance in this surgery (VI nerve monitoring is usually very helpful).