Endoscope assisted retrosigmoid intradural suprameatal approach

see Endoscope assisted retrosigmoid intradural suprameatal approach for vestibular schwannoma

Case series

A retrospective study of all patients with trigeminal schwannomas was performed with a focus on dumbbell tumors. Tumors were classified according to a modified Samii classification. Extent of tumor removal, outcome, and morbidity rates in the 2 subgroups were compared.

Twenty patients were enrolled: 8 had dumbbell-shaped tumors (type C1), 8 had middle fossa tumors (A1-3), 3 had extracranial extension (D2), and 1 had posterior fossa tumor. Gross total resection was achieved in 15 and near-total resection in 5 patients. In 4 patients with dumbbell tumors, the classic RISA (Samii approach) was used; EA-RISA was used in the other 4 patients. The extent of petrous apex drilling was determined individually on the basis of the anatomic variability of suprameatal tubercle and degree of tumor-induced petrous apex erosion; in 2 patients, only minimal drilling was needed. The endoscope was applied after microsurgical tumor removal and in 3 of 4 patients revealed a significant unrecognized tumor remnant in the anterolateral and superolateral aspects of the Meckel cave. Thus, the endoscope assisted retrosigmoid intradural suprameatal approach (EA-RISA) technique allowed gross total resection of the tumor.

The EA-RISA enlarges the exposure obtained with the classic RISA. Its judicious use can help achieve safe and radical removal of dumbbell-shaped trigeminal schwannomas (C1 type) [1].

1)
Samii M, Alimohamadi M, Gerganov V. Endoscope-assisted retrosigmoid intradural suprameatal approach for surgical treatment of trigeminal schwannomas. Neurosurgery. 2014 Dec;10 Suppl 4:565-75; discussion 575. doi: 10.1227/NEU.0000000000000478. PubMed PMID: 24991713.