Endoscopic transcanal transpromontorial approach

Case series

2017

Four patients with vestibular schwannomas.

Three tumors were Koos grade I and one tumor was Koos grade II. All ears had non-serviceable hearing prior to surgery. The EETTA enabled access to the internal auditory canal and porus acousticus as well as limited access to the cerebellopontine angle. Gross total tumor resection was achieved in all cases. There were no intraoperative or postoperative complications and the mean hospital duration was 2.8 days. After a mean follow-up of 5.0 months, all cases had a good facial nerve outcome.

The EETTA can be successfully used for the management of small vestibular schwannomas in ears without serviceable hearing. Additional studies are needed to fully elucidate the risk-benefit profile of this minimally invasive approach [1].

2016

The aim of this study was to describe the first case series in which an exclusive endoscopic transcanal transpromontorial approach (EETTA) was used to treat small vestibular schwannomas (VSs) and meningiomas of the internal auditory canal (IAC).

Marchioni et al. performed a retrospective review of patients who had undergone surgery using an EETTA to the IAC at 2 university tertiary care referral centers during the period from November 2011 to January 2015.

Ten patients underwent surgery via an EETTA for the treatment of VS in the IAC at the University Hospital of Modena or the University Hospital of Verona. The patients had Koos grading scale I or II tumors and American Academy of Otolaryngology Head and Neck Surgery class (AAO-HNS) Class D hearing status preoperatively. Gross total resection was achieved in all patients. No major complications such as cerebrospinal fluid leakage or hemorrhage were reported. In 7 of 10 (70%) patients, facial nerve function was normal immediately after surgery (Rough Grading System [RGS] Grade I). Two patients presented with a transitory facial palsy immediately after surgery (RGS Grade II-III) but experienced complete recovery during the follow-up period. The mean follow-up was 10 months. CONCLUSIONS The EETTA proved to be successful for the removal of VS or meningioma involving the cochlea, fundus, and IAC, with possible lower complication rates and less invasive procedures than those for traditional microscopic approaches. The potential for the extensive and routine use of this approach in lateral and posterior skull base surgery will depend on the development of technology and surgical refinements and on the diffusion of skull base endoscopic skills among the otolaryngological and neurosurgical communities [2]

1)
Wick CC, Arnaoutakis D, Barnett SL, Rivas A, Isaacson B. Endoscopic Transcanal Transpromontorial Approach for Vestibular Schwannoma Resection: A Case Series. Otol Neurotol. 2017 Dec;38(10):e490-e494. doi: 10.1097/MAO.0000000000001588. PubMed PMID: 29135868.

2)

Marchioni D, Alicandri-Ciufelli M, Rubini A, Masotto B, Pavesi G, Presutti L. Exclusive endoscopic transcanal transpromontorial approach: a new perspective for internal auditory canal vestibular schwannoma treatment. J Neurosurg. 2016 Mar 11:1-8. [Epub ahead of print] PubMed PMID: 26967786.