World Journal of Otorhinolaryngology-Head and Neck Surgery (2016) 2, 234—239

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.keaipublishing.com/WJOHNS; www.wjent.org

Short Communication

Summary and consensus in 7th International Conference on acoustic neuroma: An update for the management of sporadic acoustic neuromas

Hao Wu [a,e,f,*], Liwei Zhang [b,f,**], Dongyi Han [c,f,***], Ying Mao [d,f,****], Jun Yang [e,f], Zhaoyan Wang [a,e,f], Wang Jia [b,f], Ping Zhong [d,f], Huan Jia [a,e]

[a] *Department of Otolaryngology Head and Neck Surgery, Shanghai Ninth People's Hospital, Shanghai Jiaotong University School of Medicine, Shanghai 200011, China*
[b] *Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medial University, Beijing 100050, China*
[c] *Department of Otolaryngology Head and Neck Surgery, People's Liberation Army General Hospital, Beijing 100853, China*
[d] *Department of Neurosurgery, Huashan Hospital, Shanghai Medical College, Fudan University, Shanghai 200040, China*
[e] *Department of Otolaryngology Head and Neck Surgery, Xinhua Hospital Shanghai University School of Medicine, Shanghai 200092, China*
[f] *Committee of 7th International Conference on Acoustic Neuroma, Shanghai, China*

Received 4 May 2016; received in revised form 17 October 2016; accepted 19 October 2016
Available online 24 December 2016

* Corresponding author. Department of Otolaryngology Head and Neck Surgery, Shanghai Ninth People's Hospital, Shanghai Jiaotong University School of Medicine, Shanghai 200011, China.
** Corresponding author. Department of Neurosurgery, Beijing Tiantan Hospital, Capital Medial University, Beijing 100050, China.
*** Corresponding author. Department of Otolaryngology Head and Neck Surgery, People's Liberation Army General Hospital, Beijing 100853, China.
**** Corresponding author. Department of Neurosurgery, Huashan Hospital, Shanghai Medical College, Fudan University, Shanghai 200040, China.
E-mail addresses: wuhao622@sina.cn (H. Wu), zlwtt@aliyun.com (L. Zhang), hdy301@263.net (D. Han), maoying@fudan.edu.cn (Y. Mao).
Peer review under responsibility of Chinese Medical Association.

Production and Hosting by Elsevier on behalf of KeAi

http://dx.doi.org/10.1016/j.wjorl.2016.10.002

KEYWORDS
Sporadic acoustic neuroma;
Vestibular schwannoma;
Management;
Symptoms grading;
Tumor stage;
Microsurgery;
Radiotherapy

Abstract Sporadic vestibular schwannoma (acoustic neuroma) is a benign tumor arising from cochleovestibular nerve. Nowadays, various specialties and medical centers are treating this disease, and the multidisciplinary collaboration is the trend. In an effort to promote a uniform standard for reporting clinical results, even for treatment indications, the mainly controversies were posed and discussed during the 7th International Conference on acoustic neuroma, and the agreement was summarized by the Committee of this conference. The main symptoms grading and tumor stage should note its name of classification for making them comparable. The goal of the modern managements for vestibular schwannoma is to improve the quality of life with lower mortality, lower morbidity and better neurological function preservation. The experience of surgical team and their preference might be a major factor for the outcome. Because of lacking of long-term follow-up large data after radiotherapy, and with the development of microsurgery, radiotherapy is now less recommended except for recurrent cases or elderly patients.

Introduction

The 7th International Conference on acoustic neuroma was held on April 12—15, 2015 in Shanghai, China. This series conference, where gathers the outstanding experts worldwide, is the most remarkable meeting in the field of acoustic neuroma. The 7th conference was co-hosted by the Xinhua Hospital, People's Liberation Army General Hospital, Tiantan Hospital, and Huashan Hospital. There were more than 700 participants, including 345 foreign attendees from 41 countries, composed of neurosurgeons, neurotologists, radiotherapists, neuro-radiologists, audiologists, plastic surgeons, and basic researchers. After several multidisciplinary discussions, some ancient controversies reached an agreement, and this consensus summarized by the committee of this conference.

Nomenclature

Acoustic neuroma (AN) is also known as vestibular schwannoma, since this benign tumor almost originates from superior or inferior vestibular branch of the cochleovestibular nerve in the internal auditory canal (IAC).[1] Moreover, the tumor is schwannoma in pathology rather than neuroma. The two nomenclatures are both accepted, however, vesctibular schwannoma (VS) is preferable.

Sporadic Vestibular Schwannoma is basically distinct from Neurofibromatosis type 2 (NF2). If it is not specifically noted, VS refers to the sporadic vestibular schwannoma in the context.

Cystic vestibular schwannnoma (CVS) should be distinguish from solid vestibular schwannoma (SVS) because of the their variant clinical, radiological, histopathological features and surgical outcomes.[2—5] CVS can be peripherally located thin-walled tumors, and centrally located thick-walled tumors based on CT or MRI images. CVS frequently presents rapid progression of symptoms with facial nerve involvement.

Standardization of main symptoms grading

The purpose of standardizing the grading of the main symptoms is to unify the description of patients' status, and then to make analyzing management strategy and outcome more precisely. Classically, the AAO-HNS Hearing Classification System,[6] House-Brackmann Facial Nerve Grading System,[7] Tinnitus Handicap Inventory[8] and Dizziness Handicap Inventory[9] are widely accepted and used for VS. But the two latters are in the form of questionnaire which is more complicated, this consensus attempts to classify them into four grades as alternatives (Tables 1 and 2).

Tumor size and stages

Several stage grading systems have been reported according to tumor size.[10—13] Generally, the tumor size should be measured on MRI images, and the maximum diameter (also called tumor diameter) means the one measured in cerebellopontine angle (CPA) along the long axis of tumor. The type of tumor within the IAC should be classified separately. Four commonly used tumor grading are Sterkers classification, House classification, Koos classification and Samii classification (Fig. 1).

Table 1 Tinnitus grading system for acoustic neuromas.

Grade	Descriptions
I	No tinnitus
II	Intermittent or mild tinnitus, can only be heard when the ambient noise is low
III	Persistent or moderate tinnitus, can be heard every day
IV	Persistent and severe tinnitus, interfere with work and sleep

Table 2 Dizziness grading system for acoustic neuromas.

Grade	Descriptions
I	No dizziness or imbalance
II	Occasional and mild dizziness or imbalance
III	Persistent or moderate vertigo or imbalance
IV	Persistent and severe dizziness or imbalance, disturbing daily life