Sudden hearing loss

- Static and Dynamic Changes in Local Brain Connectivity in Unilateral Sudden Sensorineural Hearing Loss
- Acute Respiratory Tract Infection and Sudden Sensorineural Hearing Loss: A Multinational Cohort Study
- Analysis of factors influencing the effective dose of intratympanic steroid injection of dexamethasone in idiopathic sudden sensorineural hearing loss
- Characteristics of adverse drug reactions and risk management strategies for methylprednisolone sodium succinate in the treatment of idiopathic sudden sensorineural hearing loss: a clinical study of 1026 patients
- Assessing the Role of Nystagmus Slow Phase Velocity as a Prognostic Indicator in Idiopathic Sudden Sensorineural Hearing Loss: A Prospective Study
- Vestibular dysfunction and hearing outcome in idiopathic sudden sensorineural hearing loss
- Electroacupuncture for Sudden Sensorineural Hearing Loss: A Case Report
- Ménière's disease

Sudden sensorineural hearing loss (SSNHL) is a medical emergency that requires prompt evaluation and management. The following steps are typically taken in the management of sudden hearing loss:

Immediate Medical Attention:

Seek urgent medical attention from an otolaryngologist (ENT specialist) or a healthcare provider experienced in managing hearing disorders. Medical History and Examination:

A thorough medical history will be taken to identify potential causes or contributing factors. A physical examination, including an ear examination and neurological evaluation, may be performed. Audiometric Testing:

Audiometry, including pure-tone audiometry and speech audiometry, is crucial to quantify the degree and nature of hearing loss. Imaging Studies:

Magnetic Resonance Imaging (MRI) or Computed Tomography (CT) scans of the temporal bone may be ordered to rule out structural abnormalities, tumors, or other issues. Laboratory Tests:

Blood tests may be conducted to check for underlying systemic conditions such as infections or autoimmune disorders. Treatment with Corticosteroids:

High-dose corticosteroids, either oral or injected, are commonly prescribed to reduce inflammation and swelling in the inner ear. The sooner treatment is initiated, the better the chances of recovery. Hyperbaric Oxygen Therapy (HBOT):

In some cases, hyperbaric oxygen therapy may be considered, as it is believed to improve oxygen supply to the damaged inner ear tissues. Vasodilators and Blood Flow Enhancers:

Medications that improve blood flow, such as vasodilators, may be prescribed to enhance circulation in the inner ear. Follow-up Audiometry:

Regular follow-up audiometric tests are important to monitor the progress of the hearing loss and to adjust the treatment plan accordingly. Addressing Underlying Causes:

If an underlying cause is identified (e.g., infections, autoimmune disorders), appropriate treatment will be initiated. It's crucial to emphasize that the management of sudden hearing loss varies from case to case, and the effectiveness of treatment can depend on factors such as the severity of hearing loss, the time elapsed since onset, and the specific cause. Seeking prompt medical attention is essential for the best possible outcome. If you or someone you know experiences sudden hearing loss, consult with a healthcare professional immediately.

There is a common misconception that improvement in sudden sensorineural hearing loss (SSNHL) after treatment with steroid therapy effectively excludes the diagnosis of a vestibular schwannoma (VS) and such cases do not warrant an MRI. Paralleling this, steroids are commonly withheld for SSNHL in patients with an existing diagnosis of VS, believing that this condition is not steroid-responsive. This study seeks to underscore that improvement or recovery of SSNHL with steroid therapy does not exclude the diagnosis of VS and does not preclude the need for magnetic resonance imaging.

METHODS: A retrospective chart review was performed (2002-2017) of patients with previously untreated sporadic VS who developed SSNHL that improved after steroid treatment. A clinically significant audiometric improvement was defined as an increase of more than or equal to 15% in word recognition score (WRS) and/or decrease of more than or equal to 15 dB in 4-frequency pure-tone average (PTA). To supplement these data, a separate population of patients with incomplete or missing audiometric data, who reported unequivocal subjective improvement in hearing after steroid treatment, were also described to reinforce the study objective. Patient demographics, tumor characteristics, steroid regimen, and data regarding treatment response were recorded.

RESULTS: A total of 29 patients (55% women; median age of 47 yr) met inclusion criteria. Fourteen (48%) cases had objective audiometric documentation of SSNHL, while 15 (52%) had either subjective report only or incomplete audiometric data available. Eighteen (62%) had a single event, while 11 (38%) had more than one episode of SSNHL that was treated with steroids. For all patients, the median time between SSNHL and diagnosis of VS was 1.3 months (range, 0.13-148.4 mo). At the time of diagnosis, 15 tumors were purely intracanalicular, while 15 tumors had cerebellopontine angle extension. Of the latter, the median cisternal tumor size was 15.9 mm (range, 5.3-33). Twenty-six (90%) cases received oral steroid therapy alone, two (9%) had intratympanic steroid therapy alone, and one (3%) required combination therapy. The median PTA improvement with steroid therapy was 21 dB HL (range, -10-101.2) and the median WRS improvement was 40% (range, 4-100%).

CONCLUSION: A therapeutic response to steroid therapy for SSNHL does not exclude the diagnosis of VS. All patients with SSNHL should undergo appropriate diagnostic imaging to prevent delays in diagnosis and potential treatment [1)].

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Puccinelli C, Carlson ML. Improvement or Recovery From Sudden Sensorineural Hearing Loss With Steroid Therapy Does Not Preclude the Need for MRI to Rule Out Vestibular Schwannoma. Otol Neurotol. 2019 Feb 15. doi: 10.1097/MAO.0000000000002171. [Epub ahead of print] PubMed PMID: 30807520.