



ORIGINAL ARTICLE

Variables with prognostic value in the onset of idiopathic sudden sensorineural hearing loss^{☆,☆☆}



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KEYWORDS

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Abstract

Introduction: The establishment of an individualized prognostic evaluation in patients with a diagnosis of idiopathic sudden sensorineural hearing loss (ISSHL) remains a difficult and imprecise task, due mostly to the variety of etiologies. Determining which variables have prognostic value in the initial assessment of the patient would be extremely useful in clinical practice.

Objective: To establish which variables identifiable at the onset of idiopathic sudden sensorineural hearing loss have prognostic value in the final hearing recovery.

Methods: Prospective, longitudinal cohort study. Patients with ISSHL followed by the Department of Otolaryngology-Neurotology of a quaternary hospital were included. The following variables were evaluated and correlated with final hearing recovery: age, gender, vertigo, tinnitus, initial degree of hearing loss, contralateral ear hearing, and elapsed time to treatment.

Results: 127 patients with ISSHL were evaluated. Rates of absolute and relative recovery were 23.6 dB and 37.2% respectively. Complete hearing improvement was observed in 15.7% patients; 27.6% demonstrated significant improvement and improvement was noted in 57.5%.

Conclusion: During the onset of ISSHL, the following variables were correlated with a worse prognosis: dizziness, profound hearing loss, impaired hearing in the contralateral ear, and delay to start treatment. Tinnitus at the onset of ISSHL correlated with a better prognosis.

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PALAVRAS-CHAVE

Prognóstico;
Perda auditiva súbita;
Audiometria

Variáveis com valor prognóstico no momento da instalação da perda auditiva neurossensorial súbita idiopática**Resumo**

Introdução: Elaborar avaliação prognóstica individualizada em pacientes com diagnóstico de perda auditiva neurossensorial súbita idiopática (PANSI) permanece tarefa árdua e imprecisa devido, em grande parte, à variedade de etiologias. A determinação de quais variáveis teriam valor prognóstico na avaliação inicial do paciente seria de extrema utilidade na prática clínica. **Objetivo:** Estabelecer quais variáveis, identificáveis no momento de instalação da perda auditiva neurossensorial súbita idiopática, têm valor prognóstico na recuperação auditiva final.

Método: Estudo de coorte prospectivo, longitudinal. Incluídos pacientes com PANSI acompanhados pela Disciplina de Otolgia–Neurotologia de um hospital quaternário. As seguintes variáveis foram avaliadas e correlacionadas com a recuperação auditiva final: idade, gênero, vertigem, zumbido, grau de perda auditiva inicial, audição na orelha contralateral, tempo para início de tratamento.

Resultado: Foram avaliados 127 pacientes com PANSI. As taxas de recuperação absoluta e relativa foram 23,6 dB e 37,2% respectivamente. Apresentaram melhora completa da audição 15,7% dos pacientes; 27,6% apresentaram melhora significativa e 57,5% melhora.

Conclusão: No momento da instalação da PANSI, as seguintes variáveis correlacionaram-se com pior prognóstico: vertigem, perda auditiva profunda, audição alterada na orelha contralateral e demora para início do tratamento. Presença de zumbido na instalação da PANSI correlacionou-se com melhor prognóstico.

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Introduction

Idiopathic sudden sensorineural hearing loss (ISSHL) is characterized by the occurrence of a hearing loss of at least 30 dB in three contiguous frequencies, with its onset in a period from a few hours up to three days.¹ Despite being relatively common, with an incidence of 5–20 cases per 100,000 people per year,² the physiopathogenesis of ISSHL remains to be clarified. A recurring drawback in ISSHL is a delay in its diagnosis and, due to a variety of etiologies, an individualized prognostic assessment remains difficult to establish, and is frequently inaccurate.

Several case series indicate that ISSHL typically occurs in patients aged 43–53 years, with no predilection for gender. Spontaneous recovery of hearing threshold is observed in about one-third to 65% of cases.^{1,3} Despite the lack of consistent data on treatment of ISSHL, systemic corticosteroids have been used in clinical practice as the drug of choice.^{4,5}

Studies with a focus on prognostic factors have received limited attention and are usually neglected in lieu of research on treatment and etiology.⁶ Determining which variables would have prognostic value in an initial patient evaluation would be extremely useful in clinical practice, as it would allow an individual classification of patients according to the severity of each case, as well as the establishment of a more accurate prognosis for each individual, and defining which patients would be benefited with the use of corticosteroids. In addition, it would be possible to more precisely inform patients about the real chances of hearing recovery, in addition to avoid the use of corticosteroids – an often unnecessary therapy. Finally, it would strengthen

the efforts to change the current paradigm of empirical treatment of ISSHL.

This study aims to establish which variables identifiable at the onset of idiopathic sudden sensorineural hearing loss have prognostic value in the final hearing recovery.

Methods

This was a prospective, longitudinal cohort study that included patients with ISSHL attended to at the Sudden Deafness Outpatient Clinic and followed-up by the Department of Otolgia–Neurotology at a quaternary hospital. This project was approved by the institution's Ethics Committee, under protocol 0715/11.

All patients were treated with prednisone 1 mg/kg/day (maximum daily dose = 60 mg) PO for at least a week. The dose was reduced weekly for up to 21 days. Those patients with contraindications to the use of this dosage of prednisone had their dose reduced; or, in some rare cases, replaced by deflazacort.

Patients with a history of middle and inner ear disease with a defined etiology such as trauma, infection, perilymphatic fistula, retrocochlear disease (schwannoma), degenerative disease of the central nervous system (multiple sclerosis), exposure to ototoxic drugs, barotrauma, middle or inner ear malformation, history suggestive of mumps, definite Ménière's disease, bilateral ISSHL cases, and patients who had the onset of monitoring not begin until 45 days after the onset of hearing loss were excluded from this study.

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