AUDIOLOGIC AND MR IMAGING CORRELATION IN MENIERE’S DISEASE

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Abstract

This is a prospective study to evaluate the utility of high resolution submillimeter MRI for direct depiction of the endolymphatic duct and sac in healthy subjects and in patients with Meniere’s disease. Sixteen patients with unilateral Meniere’s disease were evaluated by basic audiological evaluation, auditory brainstem response, electronystagmography and MRI. Sixteen age and sex-matched subjects with normal auditory and vestibular function were taken as control. Visualization of the endolymphatic duct and sac was found to be statistically significant less frequent in Meniere’s disease patients (18.8% of the symptomatic ears and 56.2% of the asymptomatic ears) than in the control subjects (90.6%). The patients with non-visualized duct and sac showed statistically significant poorer pure-tone thresholds than the patients with visualized duct and sac. Moreover, there was a statistically significant positive correlation between the duration of illness and pure-tone average of the symptomatic ears and non-visualization of the endolymphatic duct and sac in the asymptomatic ears of Meniere’s disease patients.

Introduction

The endolymphatic system has long been recognized for its key role in the pathogenesis of labyrinthine hydrops, which manifests clinically as Meniere’s disease, a common malady that is difficult to diagnose and treat (Wackym et al., 1990).

The pathoetiology of Meniere’s disease remains elusive. Postulat-