Comparison of the prevalence and features of inner ear malformations in congenital unilateral and bilateral hearing loss

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The prevalence of inner ear malformations was extremely higher in children with congenital unilateral sensorineural hearing loss (USNHL) than in children with bilateral sensorineural hearing loss (BSNHL).

The etiology of USNHL was considered to be greatly different from that of BSNHL.

Introduction

The aim of the study was to clarify the difference of prevalence and features of inner ear malformations between congenital USNHL and BSNHL.

Methods

Subjects: Infants whose hearing loss was found by newborn hearing screening from 2000 to 2016 (99 with USNHL and 93 with BSNHL)

Method: Charts and temporal bone computed tomography (CT) findings were analyzed

Results

Table 1 Demographic and clinical characteristics of the subjects

The percentage of family history of hearing loss was significantly higher in BSNHL than USNHL.

It is expected that relationship between the cause and clinical features in congenital hearing loss will be elucidated.

Fig.1 Prevalence of malformations in USNHL and BSNHL

Fig.2 Prevalence of each malformation

Fig.3 Combination of each malformation

Abbreviations
C/V/SC: Cochlear/Vestibular/Semicircular canal
CNC: Cochlear nerve canal
IAC: Internal auditory canal
LVA: Large vestibular aqueduct

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