Table 1Etiology of hearing loss in the inner ear malformation group

|  |  |  |
| --- | --- | --- |
| Etiology | Number of patients | Percentage (%) |
| Mondini | 13 | 17% |
| CCD | 11 | 13% |
| [LVAS](javascript:;) | 6 | 8% |
| CND | 5 | 6% |
| Vestibular deformation | 2 | 3% |
| Narrow IAC | 2 | 3% |

CCD, common cavity deformity; LVAS, large vestibular aqueduct syndrome; CND, cochlear nerve deformity; IAC, internal auditory canal

Table 2 Age (months) of gross motor development in relation to VEMP tests

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | cVEMP | | | oVEMP | | |
|  | Normal | No responses | *p* | Normal | No responses | *p* |
| Head control | 3.43±0.69 | 3.62±0.83 | 0.304 | 3.49±0.66 | 3.54±0.78 | 0.815 |
| Independent sitting | 6.96±0.96 | 7.24±1.64 | 0.438 | 7.00±1.08 | 7.11±1.56 | 0.759 |
| Independent crawling | 9.04±1.74 | 8.95±1.46 | 0.844 | 9.20±2.01 | 8.92±2.78 | 0.626 |
| Independent walking | 13.59±2.92 | 16.05±5.44 | 0.017\* | 13.65±2.70 | 15.08±3.38 | 0.138 |

Table 3 CVEMP parameters of the IEM and control groups before CI

|  |  |  |  |
| --- | --- | --- | --- |
|  | IEM group | Control group | *p* |
| N (ears) | 78 | 78 |  |
| Response rates | 57.69% | 74.35% | 0.003\* |
| p13 latency (ms) | 13.76±2.4 | 13.60±2.45 | 0.735 |
| n23 latency (ms) | 21.49±3.2 | 21.47±2.90 | 0.974 |
| p13-n23 amplitude (mV) | 81.27±47.42 | 66.87±41.38 | 0.103 |
| p13-n23 corrected amplitude (㎶) | 1.82±0.98 | 1.78±0.92 | 0.833 |
| p13-n23 interval (ms) | 7.72±2.41 | 7.87±2.84 | 0.788 |

\*Response rate of cVEMP in the IEM group is significantly lower than the control group before CI

Table 4 OVEMP parameters of the IEM and control groups

|  |  |  |  |
| --- | --- | --- | --- |
|  | IEM group | Control group | *p* |
| N (ears) | 50 | 46 |  |
| Response rates | 60% | 86.95% | 0.003\* |
| N1 latency (ms) | 10.63±1.67 | 10.70±1.81 | 0.865 |
| P1 latency (ms) | 16.22±1.83 | 15.72±2.47 | 0.351 |
| N1-P1 amplitude (㎶) | 16.80±14.86 | 12.15±9.57 | 0.116 |
| N1-P1 interval (ms) | 5.60±1.23 | 5.02±1.84 | 0.144 |

\*Response rates of oVEMP in IEM group is significantly lower than the control group