|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
|  | Ipsilateral | Contralateral | *P* value |
| Latency, mean (SD), ms |  |  |  |
| 90dB |  |  |  |
| Wave I | 1.39 (0.12) | 1.38 (0.11) | 0.44 |
| Wave III | 3.62 (0.16) | 3.60 (0.14) | 0.25 |
| Wave V | 5.44 (0.25) | 5.45 (0.22) | 0.83 |
| 80dB |  |  |  |
| Wave I | 1.54 (0.16) | 1.51 (0.13) | 0.72 |
| Wave III | 3.69 (0.18) | 3.70 (0.16) | 0.81 |
| Wave V | 5.56 (0.18) | 5.56 (0.21) | >0.99 |
| 70dB |  |  |  |
| Wave I | 1.72 (0.15) | 1.66 (0.14) | 0.30 |
| Wave III | 3.79 (0.17) | 3.83 (0.15) | <0.05\* |
| Wave V | 5.70 (0.22) | 5.69 (0.22) | 0.86 |
| Amplitude, mean (SD), mA |  |  |  |
| 90dB |  |  |  |
| Wave I | 0.31 (0.10) | 0.26 (0.12) | 0.06 |
| Wave III | 0.31 (0.13) | 0.30 (0.17) | 0.87 |
| Wave V | 0.41 (0.15) | 0.39 (0.15) | 0.53 |
| 80dB |  |  |  |
| Wave I | 0.29 (0.12) | 0.25 (0.16) | 0.41 |
| Wave III | 0.30 (0.14) | 0.26 (0.11) | 0.22 |
| Wave V | 0.40 (0.14) | 0.42 (0.13) | 0.46 |
| 70dB |  |  |  |
| Wave I | 0.18 (0.13) | 0.14 (0.12) | <0.05\* |
| Wave III | 0.22 (0.09) | 0.26 (0.09) | 0.16 |
| Wave V | 0.34 (0.16) | 0.32 (0.13) | 0.79 |
| V/I ratio, mean (SD) |  |  |  |
| 90dB | 1.54 (1.00) | 1.82 (1.03) | 0.06 |
| 80dB | 1.51 (0.57) | 2.92 (3.12) | 0.12 |
| 70dB | 2.02 (0.97) | 2.90 (3.31) | 0.39 |

**Table S1.** Comparison of ABR data between the ipsilateral ear and contralateral ear in the acute group (N=17).

P-values were acquired by paired T-test, except for the latency of waves I, III, V, and V/I ratio in 90dB nHL, latency of wave V, V/I ratio in 80dB nHL, and V/I ratio in 70dB nHL (Wilcoxon’s signed-rank test). \* : *P* < 0.05

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
|  | Ipsilateral | Contralateral | *P* value |
| Latency, mean (SD), ms |  |  |  |
| 90dB |  |  |  |
| Wave I | 1.41 (0.11) | 1.39 (0.10) | 0.05\* |
| Wave III | 3.64 (0.16) | 3.63 (0.15) | 0.64 |
| Wave V | 5.48 (0.20) | 5.48 (0.23) | 0.64 |
| 80dB |  |  |  |
| Wave I | 1.55 (0.14) | 1.54 (0.14) | 0.81 |
| Wave III | 3.71 (0.16) | 3.72 (0.16) | 0.78 |
| Wave V | 5.58 (0.23) | 5.59 (0.22) | 0.60 |
| 70dB |  |  |  |
| Wave I | 1.72 (0.15) | 1.69 (0.15) | 0.22 |
| Wave III | 3.84 (0.16) | 3.83 (0.19) | 0.73 |
| Wave V | 5.74 (0.22) | 5.75 (0.22) | 0.80 |
| Amplitude, mean (SD), mA |  |  |  |
| 90dB |  |  |  |
| Wave I | 0.31 (0.13) | 0.30 (0.13) | 0.30 |
| Wave III | 0.31 (0.12) | 0.31 (0.14) | 0.81 |
| Wave V | 0.41 (0.13) | 0.42 (0.11) | 0.70 |
| 80dB |  |  |  |
| Wave I | 0.26 (0.13) | 0.28 (0.13) | 0.38 |
| Wave III | 0.24 (0.09) | 0.27 (0.13) | 0.15 |
| Wave V | 0.38 (0.13) | 0.40 (0.12) | 0.24 |
| 70dB |  |  |  |
| Wave I | 0.19 (0.13) | 0.20 (0.13) | 0.94 |
| Wave III | 0.22 (0.11) | 0.22 (0.15) | 0.82 |
| Wave V | 0.34 (0.11) | 0.34 (0.10) | 0.85 |
| V/I ratio, mean (SD) |  |  |  |
| 90dB | 1.63 (1.03) | 1.76 (1.29) | 0.44 |
| 80dB | 1.72 (1.03) | 1.79 (0.95) | 0.68 |
| 70dB | 2.37 (2.33) | 1.70 (0.74) | 0.75 |

**Table S2.** Comparison of ABR data between the ipsilateral ear and contralateral ear in the subacute group (N=45).

P-values were acquired by Wilcoxon’s signed rank test, except wave III latency, wave III amplitude, wave V amplitude in 90dB nHL, wave V latency, wave I amplitude in 80dB nHL, amplitude of wave V in 70dB nHL(paired T-test). \* : *P* < 0.05

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
|  | Ipsilateral | Contralateral | *P* value |
| Latency, mean (SD), ms |  |  |  |
| 90dB |  |  |  |
| Wave I | 1.48 (0.17) | 1.39 (0.11) | 0.01\* |
| Wave III | 3.64 (0.15) | 3.60 (0.15) | 0.07 |
| Wave V | 5.45 (0.25) | 5.46 (0.26) | 0.85 |
| 80dB |  |  |  |
| Wave I | 1.61 (0.17) | 1.53 (0.13) | 0.07 |
| Wave III | 3.76 (0.22) | 3.69 (0.16) | 0.17 |
| Wave V | 5.58 (0.26) | 5.57 (0.26) | 0.92 |
| 70dB |  |  |  |
| Wave I | 1.77 (0.21) | 1.67 (0.14) | 0.06 |
| Wave III | 3.87 (0.25) | 3.76 (0.15) | 0.10 |
| Wave V | 5.74 (0.31) | 5.67 (0.25) | 0.10 |
| Amplitude, mean (SD), mA |  |  |  |
| 90dB |  |  |  |
| Wave I | 0.27 (0.13) | 0.28 (0.13) | 0.84 |
| Wave III | 0.31 (0.12) | 0.33 (0.14) | 0.50 |
| Wave V | 0.45 (0.15) | 0.41 (0.15) | 0.25 |
| 80dB |  |  |  |
| Wave I | 0.24 (0.15) | 0.23 (0.12) | 0.79 |
| Wave III | 0.25 (0.12) | 0.26 (0.12) | 0.64 |
| Wave V | 0.47 (0.16) | 0.37 (0.11) | 0.006\* |
| 70dB |  |  |  |
| Wave I | 0.16 (0.11) | 0.11 (0.13) | 0.06 |
| Wave III | 0.23 (0.11) | 0.24 (0.14) | 0.77 |
| Wave V | 0.39 (0.16) | 0.40 (0.14) | 0.87 |
| V/I ratio, mean (SD) |  |  |  |
| 90dB | 2.31 (1.86) | 2.11 (2.26) | 0.53 |
| 80dB | 2.19 (1.20) | 1.88 (1.00) | 0.15 |
| 70dB | 2.23 (1.37) | 4.15 (5.34) | 0.11 |

**Table S3.** Comparison of ABR data between the ipsilateral ear and contralateral ear in the chronic group (N=18).

P-values were acquired by paired T-test, except amplitude of wave I, V/I ratio in 90dB nHL, amplitude of wave I, III in 80dB nHL, wave III latency, wave V amplitude, V/I ratio in 70dB nHL(Wilcoxon’s signed rank test). \*: *P* < 0.05

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | |
| Model |  | Unstandardized coefficient | | Standardized coefficient |  |  |
| B | SE | β | t | *P* value |
| (Constant) |  | 0.30 | 0.02 |  | 12.94 | <0.01\* |
| Age |  | 0.00 | 0.00 | -0.12 | -2.66 | 0.01\* |
| Sex | M=0, F=1 | 0.10 | 0.01 | 0.38 | 8.72 | <0.01\* |
| Laterality | Ipsilateral=0, Contralateral=1 | 0.01 | 0.01 | 0.03 | 0.77 | 0.44 |
| Duration | Acute | - | - | - | - | - |
|  | Subacute | -0.01 | 0.01 | -0.04 | -0.77 | 0.44 |
|  | Chronic | 0.01 | 0.02 | 0.03 | 0.52 | 0.60 |
| Intensity | 90dB | - | - | - | - | - |
|  | 80dB | -0.05 | 0.01 | -0.19 | -3.91 | <0.01\* |
|  | 70dB | -0.08 | 0.01 | -0.30 | -6.22 | <0.01\* |

**Table S4.** Multiple linear regression of wave III amplitude presented with coefficient and p-value

SE : standard error, \* : P < 0.05, Enter method was used. Adjusted-R2 : 0.187

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| --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | |
| Model |  | Unstandardized coefficient | | Standardized coefficient |  |  |
| B | SE | β | t | *P* value |
| (Constant) |  | 0.35 | 0.03 |  | 13.96 | <0.01\* |
| Age |  | 0.00 | 0.00 | 0.01 | 0.30 | 0.76 |
| Sex | M=0, F=1 | 0.08 | 0.01 | 0.28 | 6.31 | <0.01\* |
| Laterality | Ipsilateral=0, Contralateral=1 | 0.00 | 0.01 | -0.01 | -0.31 | 0.76 |
| Duration | Acute | - | - | - | - | - |
|  | Subacute | 0.00 | 0.01 | -0.01 | -0.18 | 0.86 |
|  | Chronic | 0.04 | 0.02 | 0.12 | 2.21 | 0.03\* |
| Intensity | 90dB | - | - | - | - | - |
|  | 80dB | -0.02 | 0.01 | -0.06 | -1.27 | 0.21 |
|  | 70dB | -0.07 | 0.01 | -0.23 | -4.75 | <0.01\* |

**Table S5.** Multiple linear regression of wave V amplitude presented with coefficient and p-value

SE : standard error, \* : P < 0.05, Enter method was used. Adjusted-R2 : 0.125

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|  | | | | | | |
| Model |  | Unstandardized coefficient | | Standardized coefficient |  |  |
| B | SE | β | t | *P* value |
| (Constant) |  | 3.61 | 0.03 |  | 109.47 | <0.01\* |
| Age |  | 0.00 | 0.00 | 0.11 | 2.48 | 0.01 |
| Sex | M=0, F=1 | -0.09 | 0.02 | -0.22 | -5.26 | <0.01\* |
| Laterality | Ipsilateral=0, Contralateral=1 | -0.02 | 0.01 | -0.04 | -1.08 | 0.28 |
| Duration | Acute | - | - | - | - | - |
|  | Subacute | 0.02 | 0.02 | 0.04 | 0.80 | 0.42 |
|  | Chronic | 0.00 | 0.02 | -0.01 | -0.11 | 0.91 |
| Intensity | 90dB | - | - | - | - | - |
|  | 80dB | 0.09 | 0.02 | 0.23 | 4.95 | <0.01\* |
|  | 70dB | 0.20 | 0.02 | 0.51 | 11.06 | <0.01\* |

**Table S6.** Multiple linear regression of wave III latency presented with coefficient and p-value

SE : standard error, \* : P < 0.05, Enter method was used. Adjusted-R2 : 0.235

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|  | | | | | | |
| Model |  | Unstandardized coefficient | | Standardized coefficient |  |  |
| B | SE | β | t | *P* value |
| (Constant) |  | 5.39 | 0.04 |  | 123.95 | <0.01\* |
| Age |  | 0.00 | 0.00 | 0.19 | 4.49 | <0.01\* |
| Sex | M=0, F=1 | -0.16 | 0.02 | -0.29 | -7.13 | <0.01\* |
| Laterality | Ipsilateral=0, Contralateral=1 | 0.00 | 0.02 | 0.00 | 0.01 | 0.99 |
| Duration | Acute | - | - | - | - | - |
|  | Subacute | 0.02 | 0.03 | 0.03 | 0.66 | 0.51 |
|  | Chronic | -0.03 | 0.03 | -0.06 | -1.10 | 0.27 |
| Intensity | 90dB | - | - | - | - | - |
|  | 80dB | 0.11 | 0.02 | 0.21 | 4.57 | <0.01\* |
|  | 70dB | 0.26 | 0.02 | 0.48 | 10.66 | <0.01\* |

**Table S7.** Multiple linear regression of wave V latency presented with coefficient and p-value

SE : standard error, \* : P < 0.05, Enter method was used. Adjusted-R2 : 0.259

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| --- | --- | --- | --- |
|  | | | |
|  | Ipsilateral | Contralateral | *P* value |
| TEOAE |  |  |  |
| Failure, No. (%) | 0 (0) | 0 (0) | N/A |
| Signal, mean (SD), dB | 11.2 (3.8) | 11.3 (3.4) | 0.89 |
| DPOAE |  |  |  |
| Failure, No. (%) | 3 (25) | 4 (33) | 0.24 |
| Signal in 410.2Hz‡, mean (SD), dB | 6.1 (6.3) | 8.6 (6.5) | 0.61 |
| Signal in 574.2Hz‡, mean (SD), dB | 8.6 (9.1) | 8.4 (4.9) | 0.46 |
| Signal in 820.3Hz‡, mean (SD), dB | 9.6 (8.4) | 8.0 (8.3) | 0.72 |
| Signal in 1160.2Hz‡, mean (SD), dB | 11.0 (10.4) | 11.6 (8.5) | 0.93 |
| Signal in 1640.6Hz‡, mean (SD), dB | 8.8 (6.5) | 7.6 (9.5) | 0.35 |
| Signal in 2753.9Hz‡, mean (SD), dB | 0.8 (11.1) | -2.4 (11.6) | 0.37 |
| Signal in 3996.1Hz‡, mean (SD), dB | -4.6 (14.4) | -6.3 (10.6) | 0.43 |
| Signal in 5660.2Hz‡, mean (SD), dB | -3.9 (10.8) | -3.1 (10.2) | 0.87 |
| Signal in 6726.6Hz‡, mean (SD), dB | -5.2 (7.8) | -5.4 (6.8) | 0.75 |
| Signal in 8003.9Hz‡, mean (SD), dB | 0.5 (8.1) | 3.6 (9.3) | 0.58 |

**Table S8.** Comparison of OAE data between the ipsilateral and contralateral ears in the acute group (TEOAE N=5, DPOAE N=12).

TEOAE : transient-evoked otoacoustic emission, DPOAE : distortion-product otoacoustic emission, P-values were acquired by Wilcoxon’s signed rank test, except failure rate (Fisher’s exact test). \*: *P* < 0.05, ‡ : F1 frequency

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
|  | Ipsilateral | Contralateral | *P* value |
| TEOAE | 8.3 (14.5) | 6.6 (6.1) |  |
| Failure, No. (%) | 6 (22) | 3 (11) | 0.55 |
| Response, mean (SD), dB |  |  |  |
| DPOAE |  |  |  |
| Failure, No. (%) | 13 (41) | 5 (16) | 0.32 |
| Signal in 410.2Hz‡, mean (SD), dB | 5.6 (5.4) | 7.0 (4.9) | 0.50 |
| Signal in 574.2Hz‡, mean (SD), dB | 4.6 (5.9) | 6.7 (4.7) | 0.21 |
| Signal in 820.3Hz‡, mean (SD), dB | 7.3 (6.4) | 7.9 (5.1) | 0.84 |
| Signal in 1160.2Hz‡, mean (SD), dB | 8.2 (5.9) | 9.1 (7.4) | 0.44 |
| Signal in 1640.6Hz‡, mean (SD), dB | 6.3 (7.9) | 7.5 (6.6) | 0.55 |
| Signal in 2753.9Hz‡, mean (SD), dB | -1.1 (10.4) | 1.1 (9.0) | 0.27 |
| Signal in 3996.1Hz‡, mean (SD), dB | -5.6 (11.0) | -2.0 (8.2) | 0.07 |
| Signal in 5660.2Hz‡, mean (SD), dB | -6.8 (11.4) | -3.0 (10.4) | 0.13 |
| Signal in 6726.6Hz‡, mean (SD), dB | -7.2 (9.0) | -7.9 (7.1) | 0.50 |
| Signal in 8003.9Hz‡, mean (SD), dB | -2.2 (8.1) | -2.3 (7.4) | 0.91 |

**Table S9.** Comparison of OAE data between the ipsilateral and contralateral ears in the subacute group (TEOAE N=27, DPOAE N=32).

TEOAE : transient-evoked otoacoustic emission, DPOAE : distortion-product otoacoustic emission, P-values were acquired by paired T-test, except the failure rate (Fisher’s exact test) and signal at 410.0Hz (Wilcoxon’s signed rank test). \*: *P* < 0.05, ‡ F1 frequency

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
|  | Ipsilateral | Contralateral | *P* value |
| TEOAE |  |  |  |
| Failure, No. (%) | 3 (23) | 1 (8) | 0.77 |
| Response, mean (SD), dB | 4.6 (6.9) | 5.2 (4.1) | 0.29 |
| DPOAE |  |  |  |
| Failure, No. (%) | 8 (53) | 7 (47) | 0.21 |
| Signal in 410.2Hz‡, mean (SD), dB | 5.5 (6.0) | 8.0 (13.5) | >0.99 |
| Signal in 574.2Hz‡, mean (SD), dB | 3.6 (5.4) | 2.8 (3.6) | 0.37 |
| Signal in 820.3Hz‡, mean (SD), dB | 2.8 (6.6) | 4.1 (6.7) | 0.53 |
| Signal in 1160.2Hz‡, mean (SD), dB | 5.3 (6.2) | 7.0 (7.4) | 0.33 |
| Signal in 1640.6Hz‡, mean (SD), dB | 3.8 (6.8) | 2.4 (9.0) | 0.44 |
| Signal in 2753.9Hz‡, mean (SD), dB | -0.1 (6.0) | -1.0 (7.8) | 0.44 |
| Signal in 3996.1Hz‡, mean (SD), dB | -6.5 (10.0) | -6.6 (7.3) | 0.65 |
| Signal in 5660.2Hz‡, mean (SD), dB | -11.7 (10.7) | -8.3 (9.8) | 0.89 |
| Signal in 6726.6Hz‡, mean (SD), dB | -6.0 (10.2) | -9.1 (5.1) | 0.07 |
| Signal in 8003.9Hz‡, mean (SD), dB | -1.4 (6.4) | -6.7 (5.1) | 0.07 |

**Table S10.** Comparison of OAE data between the ipsilateral and contralateral ears in the chronic group (TEOAE N=13, DPOAE N=15).

TEOAE : transient-evoked otoacoustic emission, DPOAE : distortion-product otoacoustic emission, P-values were acquired by Wilcoxon’s sign rank test, except for the failure rate.(Fisher’s exact test). \*: *P* < 0.05, ‡ : F1 frequency