ANXIETY AND DEPRESSION OF PATIENTS WITH UNILATERAL SENSORINEURAL HEARING LOSS: A COMPARISON WITH BILATERAL SENSORINEURAL HEARING LOSS

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Abstract –

Problem Statement
Unilateral hearing loss (UHL) is considered a minimal impairment, which does not directly affect language and communication functions. Therefore, in Taiwan, people with UHL are not eligible for disability identification. However, studies in recent years have shown that UHL causes two well-known problems: difficulty with speech perception in background noise and sound localization. Moreover, UHL may increase listening effort and mental fatigue and cause social withdrawal. Despite UHL's negative impact on the patient's life and well-being, little was discussed regarding its effect on mental health. We believe that anxiety and depression are intervening variables that help explain the relationship between UHL and social participation. Therefore, this study explored the anxiety and depression of patients with unilateral sensorineural hearing loss (USHL) and compared them with those of patients with bilateral sensorineural hearing loss (BSHL).

Methods
A retrospective cohort study was conducted using electronic medical records from a global federated health research network Trinetx (with over 81 million patients). Patients were included based on a diagnosis of USHL. Patients with USHL were 1:1 propensity score matched for age, sex, race, and comorbidities to patients with BSHL. We measured the incidence and hazard ratios (HRs) of major depressive disorder, persistent depressive disorder, and anxiety disorder.

Results
There were 112,136 included in the USHL cohort, and 112,136 matched controls in the BSHL group. Within a 3-year time window following the index event of hearing loss diagnosis, the BSHL group had a significantly higher incidence of major depressive disorder (13.92% versus 13.53 %, HR 1.030, CI 1.002, 1.060, p = 0.038). General anxiety disorder(2.47% versus 2.42 %, HR 1.017, CI 0.947, 1.092, p = 0.644) and persistent depressive disorder(1.36% versus 1.26 %, HR 1.044, CI 0.951, 1.146, p = 0.365) did not reach significant differences between the two groups.

Conclusion
Patients with USHL experienced similar mental stress to those with BSHL. We should pay more attention to the mental health of people with USHL.

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