Effect of cigarette smoking on hearing impairment in Korean adults over 40 years old: based on data from the Korean National Health and Nutrition Examination Survey, 2013

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Aims

Previous studies reported that smoking was associated with hearing impairment. However, the results were not consistent. We therefore aimed to analyse the effect of smoking on hearing impairment in Korean adults over 40 years of age.

Methods

This study included 4,212 participants over 40 years of age in the 2013 Korean National Health and Nutrition Examination Survey. Pure-tone audiometric testing was conducted and the frequencies tested were 0.5, 1, 2 and 3 kHz. Smoking status was categorised into two groups: smoking and non-smoking. The smoking group was divided according to the number of cigarettes smoked into four groups: 1–10, 11–20 and >20 cigarettes/day.

Results

In the smoking group, the prevalence of hearing impairment was increased (odds ratio (OR), 1.46; 95% confidence interval (CI), 1.260–1.685). In the age-stratified analysis, smoking was associated with hearing impairment in those aged 50–69 years. Adjusting for age, alcohol consumption, diabetes, hypertension, regular exercise, education, and noise exposure, we found that the smoking group had significantly increased hearing impairment compared to the non-smoking group (OR, 1.86; 95% CI, 1.514–2.283). In those aged 50–69 years, the OR was 2.07 (95% CI, 1.601–2.682). The increase in prevalence according to smoking level was more prevalent (OR, 2.40; 95% CI, 1.582–3.645).

Conclusion

Smoking significantly influences hearing impairment, and the risk increases greatly in those aged 50–69 years. There was a dose-response relationship between smoking level and prevalence. ■

Conflict of interest statement

No potential conflict of interest.

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