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Oral health related cardiovascular disease risk factors: a cross-sectional study

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Background: Hypertension, cardiovascular disorders, and hypercholesterolemia represent significant public health concerns. This research presentation examines the impact of various oral health indicators, such as bleeding gums, untreated dental decay, loose teeth, and missing teeth, on these conditions within Hungary.

Materials and methods: This study utilized data from 5,603 individuals participating in the 2019 Hungarian European Health Interview Survey. Predictor variables were chosen using elastic net regularization and k-fold cross-validation to enhance the performance of weighted logistic regression models. Sensitivity analysis underpinned the robustness of the results.

Results: Significant associations emerged between deteriorating oral health and the prevalence of various cardiovascular conditions. An increased likelihood of hypertension was observed in individuals with multiple tooth removals, showing an odds ratio (OR) of 1.67 with a 95% confidence interval (CI) of [1.01-2.77]. The use of dental prosthetics presented an OR of 1.45 [1.20-1.75]. Additionally, presence of gum bleeding corresponded to elevated odds for both cardiovascular disease (OR = 1.69 [1.30-2.21]) and hypercholesterolemia (OR = 1.40 [1.09-1.81]).

Conclusions: enhancing oral health could potentially mitigate chronic cardiac conditions, highlighting the importance of integrating dental care in comprehensive disease management strategies.

Key messages:

- Poor oral health is linked to higher hypertension and heart disease odds.
- Dental care is crucial in cardiac disease prevention and management.