



DENTAL SPECIALTIES | PERIODONTICS

What you need to know about gum disease, infective endocarditis

There is no causal link between periodontitis and infective endocarditis, indicating that past clinical practices may have overstated the role of periodontitis in preventing the condition, reports research published in the *International Dental Journal*.

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There is no causal link between periodontitis and infective endocarditis (IE), indicating that past clinical practices may have overstated the role of periodontitis in preventing the condition, reports research published in the *International Dental Journal*.

Although observational studies suggest a link between periodontitis and IE, genetic evidence does not support a relationship between the two conditions, the authors wrote.

"Our findings indicate that there is no genetic causal association between periodontitis and infective endocarditis," wrote the authors, led by Rui-lin Liu of the Second Xiangya Hospital of Central South University in China ([Int Dent J](#), August 2, 2024).

The researchers used Mendelian randomization (MR) to evaluate a potential causal relationship between periodontitis and IE. The research team used both univariable and multivariable MR approaches that estimate the causal effect of periodontitis on IE by leveraging summary data from genomewide association studies.

Additionally, they selected instrumental variables significantly associated with periodontitis and performed univariable MR to infer a causal relationship between periodontitis and IE. Additionally, multivariable MR was used to adjust for potential confounders such as smoking, drinking, diabetes, and education.

The analysis showed no evidence of a causal link between periodontitis and IE with odds ratios (OR) of 0.992 (95% confidence interval [CI], 0.879-1.120), 0.947 (95% CI, 0.738-1.214), and 1.056 (95% CI, 0.916-1.217) for acute (AP), chronic (CP), and aggressive periodontitis (AgP), respectively.

In the multivariable MR analysis of the three periodontitis subtypes and IE that were adjusted for drinking, smoking, diabetes, and education, the ORs were 0.970 (95% CI, 0.878-1.072) for AP, 1.053 (95% CI, 0.888-1.249) for CP, and 0.939 (95% CI, 0.761-1.159) for AgP, according to the results.

The study had limitations, including that it primarily focused on European populations. Therefore, caution is needed when applying these results to other populations, the authors added.

"Despite observational studies showing an association between periodontitis and IE, this univariable and multivariable MR study demonstrated that there is no causal relationship between periodontitis and IE," they concluded.

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