Prevention

TOOTH LOSS IS HIGHLY PREVALENT AND ASSOCIATED WITH CARDIOVASCULAR RISK FACTORS IN PATIENTS WITH CHRONIC CORONARY HEART DISEASE IN THE GLOBAL STABILITY TRIAL

Poster Contributions
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Background: Several reports have proposed a link between periodontal disease (PD) and coronary heart disease (CHD). However, knowledge regarding PD in patients with established CHD is scarce. Therefore, we investigated the prevalence of self-reported PD and its relation to cardiovascular (CV) risk factors in high-risk patients with CHD participating in the ongoing STABILITY study, a global clinical trial evaluating the lipoprotein phospho-lipase A2 inhibitor darapladib.

Methods: At study baseline, 15,828 study participants from 39 countries reported their remaining number of teeth (none, 1-14, 15-19, 20-25 or 26-32) and frequency of gum bleeds (never/rarely, sometimes, often or always). Data on CV risk factors were also obtained. Statistical analyses were performed using linear and logistic regression, adjusting for age, smoking, diabetes and education.

Results: Approximately 40 % of participants had < 15 teeth and 16 % had no teeth; 25 % of subjects reported gum bleeds. For every decrease in number of teeth category we observed increasing levels of Lp-PLA2 activity (+1.98 mmol/L/min), hs-CRP (+0.07 g/L), LDL cholesterol (+0.015 mmol/L), fasting plasma glucose (+0.015 mmol/L), systolic blood pressure (+0.41 mmHg) and waist circumference (+0.52 cm) (p < 0.0001 for all), as well as a higher probability of having diabetes (odds increasing by 11% for every decrease in number of teeth category), being a current or former smoker vs. being a non-smoker (+39% and +21%, respectively), and having a lower education (p < 0.0001 for all). Gum bleeds were associated with increasing LDL cholesterol and systolic blood pressure, as well as a greater probability of being a non-smoker and having a higher education (p < 0.0001 for all).

Conclusion: Tooth loss was highly prevalent in this global CHD population and was associated with several traditional CV risk factors and inflammatory markers, including the novel Lp-PLA2 activity. Gum bleeding was less common and associations to CV risk factors were less evident compared to tooth loss. These findings require confirmation in large independent populations to elucidate whether PD can be used as a clinically useful risk marker for CHD.