Coronary heart disease patients with no teeth have nearly double risk of death

Researchers connect levels of tooth loss (due primarily to poor dental hygiene that leads to periodontal disease) with increasing rates of death and stroke

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The World's Dental Hygiene Newspaper · U.S. Edition

Coronary heart disease patients with no teeth have nearly double the risk of death as those with all of their teeth, according to research recently published in the European Journal of Preventive Cardiology. The study with more than 15,000 patients from 39 countries found that levels of tooth loss were linearly associated with increasing death rates.

The relationship between dental health, particularly periodontal disease, and cardiovascular disease has received increasing attention over the past 20 years," said lead author Dr. Ola Vedin, cardiology at Uppsala University Hospital and Uppsala Clinical Research Center in Uppsala, Sweden. "However it has been insufficiently investigated among patients with established coronary heart disease who are at especially high risk of adverse events and death and in need of intensive prevention measures."

Analysis included 15,456 patients from 39 countries on five continents. This was the first study to prospectively assess the relationship between tooth loss and outcomes in patients with coronary heart disease (CHD). The results are from a substudy of the STABILITY trial, which evaluated the effects of the lip-PLA2 inhibitor darapladib versus placebo in patients with CHD.

The analysis included 15,456 patients from 39 countries on five continents from the STABILITY trial. At the beginning of the study, patients completed a questionnaire about lifestyle factors (smoking, physical activity, etc), socioeconomic factors and number of teeth in five categories (26-32 [considered all teeth remaining], 20-25, 15-19, 1-14 and none).

Patients were followed for an average of 3.7 years. Associations between tooth loss and outcomes were calculated after adjusting for cardiovascular risk factors and socioeconomic status. The primary outcome was major cardiovascular events (a composite of cardiovascular death and all-cause death, major cardiovascular events, and lower education). Patients who need more prevention efforts were older, smokers, female, less active and more likely to have diabetes, higher blood pressure, higher body mass index and lower education.

During follow up there were 1,543 major cardiovascular events, 705 cardiovascular deaths, 1,210 deaths from any cause and 301 strokes. After adjusting for cardiovascular risk factors and socioeconomic status, every increase in category of tooth loss was associated with a 6 percent increased risk of major cardiovascular events. The 17 percent increased risk of cardiovascular death, 16 percent increased risk of all-cause death and 14 percent increased risk of stroke.

"The risk increase was linear, with the highest risk in those with no remaining teeth," said Vedin. "For example, the risks of cardiovascular death and all-cause death were almost double to those with all teeth remaining. Heart disease and gum disease share many risk factors such as smoking and diabetes, but we adjusted for these in our analysis and found a seemingly independent relationship between the two conditions."

"Many patients in the study had lost teeth so we are not talking about a few individuals here," continued Vedin. "Around 16 percent of patients had no teeth and roughly 40 percent were missing half of their teeth."

During the study period, 746 patients had a myocardial infarction. There was a numerically increased risk of myocardial infarction for every increase in tooth loss, but this was not significant after adjustment for risk factors and socioeconomic status. Vedin said, "We found no association between number of teeth and risk of myocardial infarction. This was puzzling (because) we had robust associations with other cardiovascular outcomes, including stroke."

Tooth loss could identify patients who need more prevention efforts. Gum disease is one of the most common causes of tooth loss. The inflammation from gum disease is thought to trigger the atherosclerotic process and may explain the associations observed in the study. Poor dental hygiene is one of the strongest risk factors for gum disease.

"This was an observational study so we cannot conclude that gum disease directly causes adverse events in heart patients," Vedin said. "But tooth loss could be an easy and inexpensive way to identify patients at higher risk who need more intense prevention efforts. While we can’t yet advise patients to look after their teeth to lower their cardiovascular risk, the positive effects of brushing and flossing are well established. The potential for additional positive effects on cardiovascular health would be a bonus."

About the European Journal of Preventive Cardiology

The European Journal of Preventive Cardiology describes itself as being the world’s leading preventive cardiology journal, playing a pivotal role in reducing the global burden of cardiovascular disease.

Cumulative incidence rates by tooth loss level: (a) Major adverse cardiovascular events (MACEs) (cardiovascular death (CV dth), myocardial infarction (MI), or stroke); (b) cardiovascular death; (c) stroke; and (d) all-cause death from 0 to 1,400 days from randomization, stratified by tooth loss level (26–32, 20–25, 15–19, <15, or no teeth).

References


2. The Stabilization of Atherosclerotic Plaque by Initiation of Darapladib Therapy (STABILITY) study evaluated the efficacy of darapladib, an oral inhibitor of lipoprotein-associated phospholipase A2, compared to placebo. Patients were eligible to participate if they had coronary heart disease, defined as prior myocardial infarction, prior coronary revascularization, or multivessel coronary heart disease without revascularization.

Sources: European Society of Cardiology and European Journal of Preventive Cardiology
The PF2 mouthguard is a do-it-yourself guard that provides a custom fit without any need to take impressions of the teeth. Photo/Provided by Keystone Industries

Keystone Industries, the U.S.-based company that manufacturers some of the world’s top mouthguard products, has launched the latest product in its Pro-Form Mouthguard line — the PF2 mouthguard. Unlike laminated mouthguard products that require a dentist to custom fit to the patient, the PF2 mouthguard is a do-it-yourself guard that provides an accurate custom fit without any need to take impressions of the teeth. With the elimination of dentist appointments and impressions, the price of this guard is significantly lower than custom-fit mouthguards while still providing high-impact protection, according to the company. The PF2’s unique design also enables it to be re-fit by the user multiple times.

“Being a leader in this field means we need to set the bar high for new products and innovation,” said Michael Prozzillo, vice president of sales for Keystone. “The PF2 will change the way athletes buy mouthguards, but also how the dentist sells them.”

The suggested retail of the PF2 mouthguard is $38. It is available in either black or white. The company reports that there will be bulk purchases.

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INDUSTRY NEWS
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Keystone Industries unveils redesigned website

Worldwide dental manufacturer adds content and enhances ecommerce capabilities

Keystone Industries, one of the leaders in manufacturing dental products for both domestic and international markets, recently unveiled its completely redesigned website, www.keystoneindustries.com.

Changes include improved display on all screen sizes across multiple viewing platforms, an updated user experience for search and navigation, an option for live-chat with customer service, and a new way to place orders that the company describes as being easier and more efficient.

“We have been extremely excited to get this website launched for the start of 2016, because we know how much our customers value easy access to information and ordering,” said Derek Keene, vice president of marketing and product development. “As an international manufacturer, we want to stay ahead of the technological curve to serve our wide customer base.”

Along with the new look to Keystone’s website comes an experience that should better serve customers from all over the world. According to the company, placing orders is now more efficient than ever, with both Keystone and the customer’s preferred dealer able to process the order. Getting product information is readily available, with tutorial videos housed in a “Learning Center” and all SDS forms available in a newly designed SDS database.

“Everything from the look and feel of our product pages to our order forms has changed, and undeniably for the better,” Keene said. “This innovative platform for the dental industry will certainly boost the connection between manufacturer, dealer, end user and the product itself.”

Keystone’s website will undergo more updates in the coming months, including multiple language translations, more product tutorial videos and more.

The newly launched website is up and fully operating at www.keystoneindustries.com.

(Source: Keystone Industries)

Keystone Industries unveils redesigned website

On Keystone’s new website, both Keystone and the customer’s preferred dealer can now process orders.

Custom fit in less than a minute

“You just won’t be able to get ahold of another mouthguard that can be custom fit in under a minute and provide the same beneficial features,” said Derek Keene, Keystone’s vice president of marketing and product development. “We’re excited to watch PF2 take off and provide significant value to our customers and athletes across the country.”

To keep up to date on the PF2 and Keystone, go to www.keystoneindustries.com. You also can follow the company on all the major social media platforms.

About Keystone Industries

Keystone Industries, a privately held company founded in 1908, has maintained a reputation for producing innovative, high-tech dental products worldwide. The company is committed to providing customers with the finest quality materials while developing products that surpass customer expectations. As this commitment has been met, the company has moved forward with expansion around the globe.

(�Source: Keystone Industries)
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