DISCUSSION

Annual applications of 38% SDF to prevent root caries in older adults decreased the incidence of new lesions by at least 50%, with longer periods of applications achieving greater effects. SDF was found to be significantly more effective in preventing new caries from developing compared to placebo and had effects similar to or better than either FV or CHX varnish.

Oliveira BH, Cunha-Cruz J, Rajendra A, et al: Controlling caries in exposed root surfaces with silver diamine fluoride: A systematic review with meta-analysis. *J Am Dent Assoc* 149:671-679, 2018

Reprints available from BH Oliveira, Dept of Community and Preventive Dentistry, Faculty of Dentistry, Rio de Janeiro State Univ, Blvd 28 de Setembro, 157, Vila Isabel, Rio de Janeiro, Rio de Janeiro 20551-030, Brazil; e-mail: branca@uerj.br

SLEEP BRUXISM

Bruxing, stress, and sleep connections

BACKGROUND

Bruxism can affect patients' quality of life and eat up considerable resources as they try to obtain effective treatment. Between 8% and 31% of the population suffer bruxism, which is characterized by clenching or grinding of the teeth sometimes accompanied by bracing or thrusting of the mandible. These characteristics can manifest during the day (awake bruxism) or night (sleep bruxism) and can cause tooth wear, compromise dental restorations, create tenderness and pain in the masticatory muscles, produce headaches, and disturb sleep. Usually the risk factors for sleep bruxism have been identified using questionnaires, but these only suggest the diagnosis. Few studies verify the diagnosis through a polysomnographic recording (PSG), which is both costly and time-consuming. In addition, the procedure is done in an unusual environment and not in the patient's normal sleeping quarters. A portable device has been developed that combines electromyographic and electrocardiographic data and has the potential to reduce the number of false-positives and false-negatives in diagnosing sleep bruxism. This device was used to investigate possible associations between sleep bruxism, chronic stress, and sleep quality.

METHODS

The 67 participants completed questionnaires, were assessed for clinical signs of bruxism, and underwent recording of their electromyographic and electrocardiographic data. Thirty-eight were identified as bruxers and 29 as non-bruxers. Bruxers were further classified as moderate (17 participants) or intense (21 participants) bruxers. In addition to their definition as bruxers or non-bruxers, all participants completed the Trier Inventory for the Assessment of Chronic Stress (TICS) and the Pittsburgh Sleep Quality Index (PSQI) to obtain self-reported stress and self-reported sleep quality measures, respectively. Participants were also asked about their smoking status; their body mass index (BMI) and work status were gleaned from the PSQI. The results of these investigations were analyzed statistically.

RESULTS

With respect to sleep quality, none of the measures indicated a difference between bruxers and non-bruxers. Similarly, no significant differences were found between the 2 groups on measures of smoking status, chronic stress, or BMI. Bruxism was affected by profession, with most retired individuals being non-bruxers.

Poor sleep quality was found to be associated with work overload, work discontent, excessive demands, lack of social recognition, social isolation, and chronic worrying. These are aspects identified on the TICS as indicating chronic stress.

DISCUSSION

Although no association was found between sleep bruxism and chronic stress or poor sleep quality, some associations were seen between chronic stress and disturbed sleep. The presence or absence of bruxism did not add to or detract from this chronic stress–poor sleep relationship.

Clinical Significance

Further studies are needed to investigate the effects of chronic stress on bruxism, particularly if the stress leads to the patient developing bruxing behaviors. For example, sleep bruxism may result from disturbed sleep, which could be related to chronic stress. The relationships between sleep, stress, and bruxing require additional investigation in a larger sample of subjects with more objective measures for stress and sleep quality.

Ohlmann B, Bömicke W, Habibi Y, et al: Are there associations between sleep bruxism, chronic stress, and sleep quality? *J Dent* 74:101-106, 2018

Reprints available from B Ohlmann, MZK 8.2, Im Neuenheimer Feld, 400 69120 Heidelberg, Germany; email: brigitte_ohlmann@med.uni-heidelberg.de