Researchers find possible link between bruxism and periodontitis

By DTI

OKAYAMA, Japan: In a recent study, researchers from Okayama University investigated whether involuntary masseter muscle activity showed any specific pattern concerning the severity of periodontitis. According to their results, after performing detailed measurements in a group of people with various degrees of periodontal disease, they found that bruxism might be related to its acuteness.

A total of 31 participants took part in the study, 16 of whom had no or mild periodontitis (NMP), with the remaining 15 having moderate to severe periodontitis (MSP). To ensure researchers were able to attain an in-depth analysis of the results, participants were equipped with a portable electromyography (EMG) device and monitored both day and night. In addition to wearing the device, participants of the study were also required to keep a diary—noting activities such as when they ate their meals, which enabled researchers analysing the data to filter out all muscular activity not related to involuntary teeth grinding. Teeth movement due to speech was filtered out by monitoring voice activity from a microphone attached to the EMG device.

According to the study’s results, during both waking and sleeping hours, the duration of masseter muscle activity was significantly longer in the MSP group than in the NMP group. However, due to oral conditions such as missing teeth or the use of removable partial dentures not being taken into account, as well as the limited capabilities of the EMG setup, researchers stated that bruxism leading to periodontitis could not be concluded.

The study, titled “Relationship between severity of periodontitis and masseter muscle activity during waking and sleeping hours”, was published in the Archives of Oral Biology on 1 March 2018.