



Corona, Stress And Bruxism-The Triad

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Abstract

The corona virus pandemic has been the largest health adversity to hit the human race since the Spanish flu and large scale panic and skyrocketing stress levels are collateral damage of the same. Bruxism has widely been considered a red flag as far as stress and mental health issues are concerned.

This article deals with correlating the triad of Bruxism, stress and the Corona virus and the role that the dentist plays in the current scenario. Drug dependence, disturbances in sleeping patterns, bouts of aggression, increased cases of depression and increase in the number of cases calling into suicide helplines have all been on the rise during the corona pandemic. Stress and bruxism go hand in hand, and this has seen a steady decline as well. To assess bruxism and refer patients to the necessary mental health care providers is an important role that the dentist will play in the coming months and this article tries to highlight this particular role.

Corona viruses are a large family of viruses that may cause illness in animals and humans. In humans, several coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as MERS and SARS. The most recently discovered coronavirus causes COVID-19. This new virus was unknown till the outbreak began in Wuhan, China in Dec 2019.

The most common symptoms of COVID-19 are fever, tiredness and dry cough. It has been observed that most patients with the disease showed mild to moderate symptoms and recovered without any special treatment. However, older patients and patients with Co-morbidity i.e. underlying medical conditions like Hypertension, Diabetes Mellitus and Heart conditions are likely to develop serious illness.

The spread of the virus is primarily from person to person through droplet infection, when an infected patient coughs or sneezes. These droplets settle on surfaces and objects around and can be a source of infection. Due to this it is important to disinfect regularly used surfaces often and pertinent to maintain 3 feet distance from the infected patient as per the Ministry of Health and Welfare, India.

Corona and stress

Information regarding corona is available at the click of a button, whether it is print or digital media 24/7. Even though having information to protect oneself and prepare for any adversity is necessary, the overload of information from every sector can be as much a bane as it is a boon.

Information overload combined with social distancing and the nationwide lockdown to curb the spread of the virus has led to a sharp rise in stress and depression in most people living alone. It has been observed that each individual has a different coping mechanism to deal with stress. However, in most cases the primary objective remains to distract oneself from the problem with some other activity. However, with the lockdown in place, the ways and means to distract oneself are restricted to indoor activities. Under lockdown, with fewer opportunities to use our normal coping mechanism the anxieties of our collective consciousness are coming out unfettered to play.

Anxiety, frustration, panic attacks, loss or sudden increase in appetite, insomnia, depression, mood swings, delusions, fear and suicidal tendencies have become quite common during the lockdown as per counsellors. Several Pan-india organisations like Cehat-Mumbai, Shakti Shalini-Delhi, The Psychiatric society of Goa etc have been working overtime helping people and reaching out to them to provide free online psychological evaluation and treatment. The lockdown is specially challenging for people suffering from substance abuse due to unavailability of substances they are addicted to. In the current fiscal environment with

uncertainty about income, the constant fear of unemployment and the impending financial troubles is another factor resulting in stress and anxiety.

Bruxism and Stress

In 2013, international consensus was obtained on a simple and pragmatic definition of bruxism as a repetitive masticatory muscle activity that is characterised by clenching or grinding of the teeth and/or by bracing or thrusting of the mandible, and that is specified as either sleep bruxism or awake bruxism, depending on its circadian phenotype.¹ It was observed that patients with mental disorders, anxiety and stress had higher tendencies to develop bruxism.

It has been suggested that in an otherwise healthy individual, the presence of bruxism can be considered as a risk factor for underlying psychological conditions.² Several studies have shown a significant relationship between bruxism and certain personality traits like aggression and emotional suppression³, psychosocial factors like work stress, target achievement^{4,5} etc. and psychological stress.⁶

Thus, it was inferred that bruxism is observed to be induced centrally, with somatic effects seen in the stomatognathic system i.e. muscle tenderness, limitation of jaw movements, oral and facial pain, headache, and tooth wear or fracture.⁷ The appearance of bruxism is always associated with a stressful period.

Bruxism and Drug Dependence

Drug abuse refers to the use of a set of pharmacologic drugs linked by their usage and addictive effects. Drug addicts have shown to have a significantly higher degree of TMJ disorders and oral motor parafunctional activity as compared to controls.⁸

Alcohol abuse by far exceeds any other known drug abuse. Alcohol is a CNS depressant and fosters a feeling of wellbeing and euphoria post consumption. Although, it is usually accepted that alcohol consumption increases bruxism, there is no significant correlation between the two.^{9,10} A large Cross-sectional study conducted via telephonic interviews expanding over England, Germany and Italy concluded that bruxers reported

alcohol consumption before bed more often than nonbruxers. The study included 13,057 adults and self-reported bruxism was taken into account using the Sleep-EVAL system.¹¹ However, results of the study should be interpreted cautiously since self-evaluation can be affected by subjective opinions, thoughts and feelings of each patient. It often takes longer for an individual to come to terms with the addiction and accept the problem.¹²

Similar studies conducted via telephonic interviews provided a significant correlation between Nicotine and bruxism. It was observed that smokers were almost three times more prone to sleep bruxism as compared to non-smokers.^{13,14} Caffeine was also noticed to have similar effects on the development of bruxism. The correlation increased significantly in individuals that drank 8 cups or more of coffee.¹⁵

According to several news reports it has observed that the lockdown associated with coronavirus is especially difficult for drug and alcohol abusers as supply of these substances is limited at best at the present moment. Absence of the abused drug causes rise in aggression and stress levels in the abusers, which in turn is bound to cause resultant TMJ disorders and Bruxism. Recovering addicts are at a high risk of falling off the wagon due to lack of support groups and regular health checkups.

Bruxism and changes in sleeping pattern

Stress and stress related disorders are shown to have an effect on the sleep pattern in the majority of the population. This disrupted sleep pattern shows a greater propensity for bruxism and oro-facial pain.¹⁶ It has been observed that changes in the sleep schedule, sleeping habits and irregularity in the circadian rhythm are associated greatly with bruxers as compared to non-bruxers.¹⁶

Insomnia or changes in sleep patterns correlate majorly with stressful events and the need for internalization of said events along with poor coping mechanisms. The barrage of information on COVID-19 in the news as well social media, and news reports of the death toll has made almost every individual acutely aware of one's own mortality. This deep seated fear for self and family might be a huge stressing point leading up to insomnia, disturbed sleep and resultant Bruxism or TMJ disorders. According to Schneider et al, less positive coping strategies were exhibited by individuals with sleep bruxism than by those without bruxism.¹⁷ As discussed already, due to the restrictions levied on citizens during the

pandemic, the usual coping strategies including socialising, going out and keeping oneself busy are unavailable.

Conclusion

The pandemic has hit the world acutely and without discrimination into the far reaches of every part of the world. According to WHO, as the coronavirus pandemic rapidly sweeps across the world, it is inducing a considerable degree of fear, worry and concern in the population at large and among certain groups in particular, such as older adults, care providers and people with underlying health conditions. As reported by the Indian Psychiatric Society, cases of mental illness have risen by 20% in India since the country went into lockdown. It has also largely affected the Financial World and millions of people are left either unemployed or at risk of being unemployed soon.

In the weeks and months ahead, India will suffer from a massive mental health crisis due to unemployment, alcohol abuse, economic hardship, domestic violence and indebtedness. While this will affect most of the population it will disproportionately affect the poor, most vulnerable and marginalized groups. According to the WHO mental health division, with only 9000 psychiatrists per 1.3 million people the gap between what is available and what is needed has widened markedly.

As UNICEF has put it: “The stakes could not be higher. If not adequately or appropriately addressed, the mental health consequences for a generation of children and young people could far surpass the immediate health and economic impact of the COVID-19 pandemic, leaving long-term social and economic consequences in its wake.”

As seen through multiple scientific reports, Bruxism mirrors the levels of stress in patients, thus in the coming months the dentist will play a huge role in identifying at-risk patients and redirect them towards mental health care professionals to combat the devils of stress.

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