



Can Coronavirus Disease-19 Lead to Temporomandibular Joint Disease?

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Abstract

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BACKGROUND: The coronavirus disease (COVID-19) has become pandemic spreading globally. The outbreak of COVID-19 has led to psychological problems and compromised the mental health of the people. Temporomandibular disorder (TMD) shows the pain and dysfunction of the masticatory apparatus. History of trauma, stress, psychosocial impairment, drinking alcohol, and catastrophizing are related to the TMD.

AIM: We aimed to present some background information, in which COVID-19 may be correlated with TMD.

METHODS: The outbreak of COVID-19 has led to psychological problems and compromised the mental health of the people.

RESULTS: The outbreak of COVID-19 has led to psychological problems and compromised the mental health of the people, not those only who suffered from coronavirus but also to those in self-isolation, social-distancing, and quarantined. TMD shows the pain and dysfunction of the masticatory apparatus, and one of the major causes of TMD is stress and psychosocial impairment apart from drinking alcohol and history of trauma. Hence, TMD may be correlated with COVID-19. The consequences of anxiety, depression, and stress in people from the outbreak of COVID-19 may lead to TMD.

CONCLUSION: Hence, COVID-19 may be correlated with TMD as one of the major causes of TMD is stress and psychosocial impairment.

The coronavirus disease (COVID-19) has become pandemic spreading globally over 210 countries [1], [2]. At present, many countries are locked down, and people are on self-quarantine to limit the spread of disease. COVID-19 is a respiratory virus showing symptoms such as fever, fatigue, dry cough, and dyspnea. Most infected people show mild-to-moderate respiratory illness and recover. Older people with underlying medical diseases such as diabetes, cardiovascular disease, chronic respiratory disease, and cancer have a higher chance of developing severe illness, causing mortality [2], [3]. The WHO has given details of COVID and mentions that there are no specific vaccines or other therapies developed for COVID-19 till now [2]. However, many ongoing clinical trials are evaluating potential treatments. Improvement in viral metagenomics could potentially aid the diagnosis of COVID-19 cases and the management of this pandemic [4].

The outbreak of COVID-19 has led to psychological problems and compromised the mental health of the people, not those only who suffered from coronavirus but also to those in self-isolation, social-distancing, and quarantined [5], [6]. In addition, people suffer from fear, anxiety, stress, and self-efficacy [7], and this also led COVID-19-suicides [8]. Most vulnerable are those with existing mental health problems such as

loneliness, depression, and isolation. Enforced isolation and quarantine interrupted normal social life causing emotional imbalance, economic shutdown, financial and future insecurities, and psychological fear.

Temporomandibular disorder (TMD) shows the pain and dysfunction of the masticatory apparatus and the temporomandibular joint. History of trauma, stress, drinking alcohol, psychosocial impairment, and catastrophizing are related to the TMD [9], [10], [11], [12]. Anxiety, depression, and stress contribute to chronic upregulation of the hypothalamic-pituitary-adrenal axis, which lead to TMD [9]. Hence, TMD may be correlated with COVID-19. The consequences of anxiety, depression, and stress in people from the outbreak of COVID-19 may lead to TMD.

The provision of care and support in people is a high priority service [2]. Work from home, spending time indoors with our families, connect to friends on social media, and engage in mindfulness activities may help to reduce the stress. A multidisciplinary clinical approach, including dentistry, is needed in the diagnosis of TMD and the treatment for this condition through a clinical practice supported by scientific knowledge [13]. Psychological intervention and mental health support are needed to reduce anxiety and stress as a part of the TMD treatment. Psychological counseling is also required to reduce anxiety and stress in severe cases.

Authors' Contributions

DR and SK conceptualized and designed the study. DR drafted the first manuscript. SK reviewed and edited the manuscript. All authors are responsible for the integrity of the data.

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