Bruxism as a clinical indicator of mental ilness: lessons from the COVID-19 to the future!

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The inaugural case of SARS-CoV-2 infection in China in the end of 2019 and the worldwide spread of COVID-19 outbreak leaded to dramatic changes in most of the population dynamics with direct and indirect impact on physical and mental health, particularly with regard to fears and uncertainties in face of the highly contagious disease and the related morbidity and mortality rates, but also in light of the emerging changes within the global economic and financial landscape [1].

In order to contain and mitigate this pandemic, social isolation was instituted, which itself implies significant behavioral adaptations and forced changes in daily routines and therefore constituting a potential study model for relevant areas of human biological and social activity whose clinical impact is important and from which variables of interest with usefulness in individual and public health can be evidenced[2]. As an example, we have the indicators of psychosocial stress, such as anxiety, depression, exacerbation of pain, changes in circadian rhythms and in sleep patterns, increased consumption of medications and illegal substances. These pathological conditions and inadequate behaviors, whose frequency have increased during the period of confinement, are all related to the increased perception of repetitive masticatory muscle activity/bruxism in the population [2].

Despite the multiple etiological factors, bruxism, characterized by an involuntary activity of the masticatory muscles, often associated with clenching / grinding of the teeth and muscular rigidity of the face, has a direct and bidirectional association with stress, particularly with psychosocial stress [3], being this is a crucial element for the exacerbation of mental illness and emotional imbalance, which is commonly found in bruxers [4]. The recent increases in the incidence and prevalence of mental illness associated with the state of emergency and with the "lockdown" status in the context of the pandemic outbreak of the new corona virus, together with the estimates that further increases are likely to occur in the near future, makes clear the need for adequate monitoring and psychosocial support to the general population and in particular to the most vulnerable people [5].

The use of risk indicators for mental health surveillance is critically lacking, and one of the major limitations in the practice of the contemporary psychiatry is the general lack of diagnostic tests and valuable prognostic factors. This has led to a research thrust towards identifying 'biomarkers' that have the ability to accurately forecast the onset of illness in individuals without clinical disorder, or provide additional diagnostic or prognostic information in those presenting to clinical care.

The effectiveness of either monitoring and supportive strategies depends on timely and adequate suspicion and on the accurate diagnosis. So, the existence of reliable indicators, with high levels of sensitivity and specificity is of undoubted relevance, deserving careful investigation. Could repetitive oral motor activity classified as bruxism, framed in an individualized circadian profile and adjusted to the domains of psychosocial stress associated with mental illness, become a good candidate? And wouldn't be nice to look at it?

Conflict of interest

References

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