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Letter to the editor

A probable surge in oral lichen planus cases under the aura of coronavirus in females in India



A mucocutaneous disorder, Oral Lichen Planus (OLP) is seen to affect the oral cavity commonly. As it does not fit into the attire of a classical autoimmune disorder, its best portrayed as a chronic inflammatory disease. It is mediated immunologically by the action of cytotoxic T-cells directed against basal keratinocytes causing epithelial damage [1]. The commonest part of oral cavity involved is the gingiva and tongue with a high predilection for females in between fourth and fifth decade of age. LP is found to be significantly associated with an increased risk of cancer of lip, tongue, oralcavity [2], OLP, in itself is a very painful disease with severe burning symptoms in the oral cavity for the affected person. After taking medication for long time too, it recurs most of the time. This again induces fear amongst the affected of developing an incurable disease. Stress has been infamously branded to alter several parameters of the endocrine system and immune response in individuals with OLP. Even higher rate of sleep problems, depression and anxiety has been stated in OLP patients [3]. A connotation between psychological disorders and the development of OLP has already been established through studies [4].

Majority of Indian woman, are exposed to various cultural and moral attributes at an early age. Though modernisation in a developing country like India is revealing them as epitome of courage, resilience and the ability to fit into diverse roles, still anxiety and stress grips them more firmly [5]. Understanding stress pathogenesis, it can activate the sympathetic nervous system and the hypothalamic pituitary adrenocortical axis. This leads to heavy influx of inflammatory cytokines like IL-6, IL-1 and TNF by the sympathetic nervous system. Modifications in the kynurenine metabolites as a result of this influx leads to neurotoxic changes in brain. The excess secretion of cortisol originates as immunosuppression through multiple mechanisms (NF κ B, AP1, Raf, MAPK mediated signalling pathways). Even, hormonal changes in females makes them prone to stress induced systemic disorders. Studies have also shown females to be more susceptible to the central effects of increased cytokines during stress [6].

The World Health Organization (WHO) on March 11, 2020, declared the novel coronavirus (COVID-19) outbreak a global pandemic by WHO Director-General, Dr. Tedros Adhanom Ghebreyesus. Today, India is under a 21-day nationwide lockdown starting from 25th March in a desperate attempt to contain the spread of novel coronavirus SARS-Cov-2, which has already broken the 7000-mark in the country [7]. As people are being placed in quarantine, isolation and travel restrictions, surge in fear and chaos is evident among the mass. The psychological toll is complex related to factors like fear of losing loved ones, fear of losing livelihood, compulsive need to hoard, phobia for contracting the infection, etc. The disastrous effect of coronavirus on human morbidity and mortality is evident from reports from other countries. An impression of triggering potential mayhem for a low socio-economic country like India is in abundance. The lock down has literally bought down the Indian economy to a standstill having huge im-

pact on Indian population. Its leading to superior levels of anxiety and sense of insecurity amongst the people, especially the lower socioeconomic classes. This, pandemic in itself is a colossal causative factor for stress and anxiety amongst Indian women. Though the malignant transformation from OLP was assessed to be 0.5% in a recent systematic review and meta-analysis [9], but the question remains; What are the chances of a surge in oral lichen planus cases under the impact of this pandemic stress on females in India? Will this stress act an inducing or as a contributing factor for the transformation, if at all? The ICD-11 has recognized a new group of 'disorders specifically associated with stress' that identifies disorders in which external stress is a necessary and prominent causal factor [8]. Prioritising public health, especially in context to mental health is the need of the hour and the key to wellbeing in this era of pandemic [10].

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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