S-gene Dropout and False-negative Reverse Transcriptase-polymerase Chain Reaction Tests

The new dimension of COVID-19 variant named OMICRON was reported in late November by a South African team. This variant had about 50 mutations, majority of them in the spike proteins. A significant of them leads to an "S-gene target failure" (or "S-gene dropout"). This simply translates that one of the several key areas of the gene that are targeted by conventional COVID-19–specific reverse transcriptase-polymerase chain reaction (RT-PCR) testing is affected and such tests may give a false negative.[1,2] This variant has been reported to have a different trait by being readily transmissible and evades the immunity conferred by the vaccine.[2] The spread of this infection has evoked a mixed reaction. All major stakeholders including the medical, scientific, government, civil societies, media, and public health communities have earlier responded varyingly to past COVID-19 variants. The response varied between to either "stay calm" or pursues immediate countermeasures including "lockdowns."[3]

The past waves of COVID-19 have caused a huge impact on the practice, teaching, and research in maxillofacial surgery. The need to prioritize precious medical resources, especially when the trained medical professionals are low, diversion of health-care professionals, and deferring of planned and elective procedures have their own toll on overall long-term well-being of health. Education and training of residents have been drastically altered. All these have their impact.[4] India also has experienced its own share of drastic alterations in clinical practice. The need to alter the traditional way of Oral and Maxillofacial Surgery practice is necessitated by the COVID-19.[5] The aerosol released in dental operatory and its way of spread has a direct bearing on the spread of the infection.[6] The higher transmissibility of the OMICRON, the caution fatigue, possible negative RT-PCR test results, current poor understanding of the nature of immune response to OMICRON variant, and possible long-COVID-19 infection could contribute to the risk of maxillofacial surgery.[7-9] The international surgical teams have come out with their version of OMICRON threat assessment and action plan.[10] The need for another dose of vaccination is also debated.[11]

Considering the large degree of unknown, a maxillofacial surgeon needs to exercise caution, revisit his/her treatment approach, enhance barrier techniques, and ensure that proper COVID-19 appropriate behaviors are religiously followed. Given the rapid transmissibility and evasion of immunity, being cautious would definitely pay in the longer run.

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