

# WORLD SUMMIT ON DIABETES

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## SARS-CoV-2, Uncontrolled Diabetes and Corticosteroids - an unholy trinity in invasive fungal infections of the maxillofacial region? - A retrospective, multi centric analysis

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The health scenario of the latter part of 2019 and whole of 2020 has been dominated globally by a novel strain of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) - which, along with severe pneumonia is also associated with strokes, venous thrombosis, renal failure, cardiomyopathy, coronary and systemic vasculitis. Covid-19 is characterised by systemic inflammation and coagulopathy causing direct damage to blood vessels, with hepatic, renal and cardiac injuries[4] along with a decrease in CD4 + T and CD8 + T cells.

In the backdrop of this COVID-19 expression, there has been a notable rise in the incidence of invasive fungal infections (IFI) of the maxillofacial region, namely mucormycosis and aspergillosis. Hosts particularly susceptible to mucormycosis include diabetics, those on systemic corticosteroid use, patients with neutropenia and hematologic malignancies, stem cell transplant patients, and immunocompromised individuals. Prior to this pandemic, cases of maxillofacial mucormycosis were rare, and seen mostly in patients with uncontrolled diabetes. Cut to present, and we see a manifold rise in the number of mucormycosis and aspergillosis cases of the maxillofacial region. We hypothesise that the immunocompromising effects of corticosteroids, with microangiopathy of diabetes and possible peripheral microthrombi in COVID-19 provide the ideal host for mucormycosis, which due to its inherent angio-invasive nature leads to the increased incidence. This, along with the high incidence of diabetes in our population and widespread use of corticosteroids as a part of treatment of COVID-19 seems to be causal to this increased incidence. Given the poor prognosis of this disease and its time-lability, we aim to analyse our experience of 18 cases of IFI to draw correlations between causative factors to enable clinicians to understand an evolving disease pattern.

### Biography

Dr.Shreya Krishna is an Oral and Maxillofacial surgeon practicing in India. She completed her undergraduation and postgraduation in Oral and Maxillofacial Surgery from the top 10 medical schools in India. Following that, she pursued a year of Fellowship in Orthognathic, cleft and craniofacial surgery which was conferred by the Association of Oral and Maxillofacial surgeons of India(AOMSI). She is associated with the ABMSS( Deutsche Cleft Kinderhilfe) which is a non-profit organisation providing charitable treatment to children affected with cleft lip and palate. She has multiple national and international publications in the field of maxillofacial surgery. She has been an invited speaker in multiple webinars and conferences in India and overseas. Her core areas of interest include Maxillofacial infections, Maxillofacial trauma, cleft and craniofacial surgery etc.

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