**Abstract**

Background: Chronic Kidney Disease is an increasing health alarm worldwide with systemic signs like hematologic changes, bone metabolic error, and compromised immune status presenting to a dental practitioner with oral complications. Hence a study was done to assess the oral health condition, cytological changes, and presence or absence of candida in patients with chronic renal disease undergoing dialysis aged between 30 to 65 years and controls in South India.

Subjects and Methods: A cross sectional study was conducted among 80 adults with CKD and controls, attending KMC and MCODS, Mangalore. Oral manifestations and oral hygiene were assessed; Cytological smears were taken for morphometric analysis of buccal mucosal cells from the subjects. Oral smears were cultured to check for the growth of fungal species in subjects and controls. Statistical analysis was done using SPSS Version 13. Chi square test was used to compare categorical variables between the groups.

Results: There was a significant difference in oral hygiene status and cytological changes in patients with CKD. Oral Fungal Infection was found in 32% of our patients on dialysis and oral lesions, defined as clinical signs associated with OFI such as erythematous oral stomatitis, membranous candidiasis, or angular cheilitis, were found in 37% of the patients with OFI, while 5% of the patients without findings of fungal infection presented oral lesions associated with OFI ($p=0.0002$). Furthermore, patients with self-reported mouth dryness were three times more likely ($p=0.02$) to be diagnosed with OFI.

Conclusions: Hemodialysis patients are found to have significantly more OFI than controls. Oral dryness and dental plaque formation also seem to be at risk of developing OFI. Detection of oral lesions associated with OFI should be combined with a histopathological diagnosis before antifungal treatment. The prevalence of oral candida in these cases is alarming and can be a predictor of a poor prognostic index. As medicine advances, oral health care professionals should have a holistic approach to the management of patients with complex medical problems especially to diseases of the renal system as it is pivotal in maintaining a stable internal environment and homeostasis.