

DENTURE INDUCED STOMATITIS IN A GROUP OF SRI LANKANS

G. J. PANAGODA, T. ANANDAMOORTHY*, A. A. D. ADIKARI*,
A. KULARAJASINGHAM AND H. N. FERNANDO

*Division of Microbiology, Department of Oral Medicine and Periodontology, *Department of
Prosthetics, Faculty of Dental Sciences, University of Peradeniya*

Candidal infections are commonly seen in compromised patients and manifest both as superficial and systemic infections (Panagoda *et al* 1999). For instance it is known that a significant proportion of regular denture wearers commonly suffer from *Candida*-associated denture induced stomatitis (Budtz-Jorgensen, 1990) and oro-pharyngeal candidosis is the most common opportunistic infection in HIV-infected individuals (Samaranayake and Holmstrup, 1989). Previous studies have shown that *Candida* species as aetiological agents in denture induced stomatitis in man (Cahn, 1936; Cawson, 1963). As such studies have not been performed in Sri Lanka, the main aim of this study was to demonstrate the aetiological agent(s) in denture induced stomatitis of a group of Sri Lankans.

The current investigation included a total number of 25 complete denture wearers (6 males and 19 females; age range of 45 to 72 years) with clinical signs and symptoms of stomatitis. On investigation, these patients were found to be devoid of other pre-disposing factors of oral candidosis. Of the total number of patients, 16 were regular (24 hrs of the day) denture wearers. Samples were taken from both the erythematous palatal surfaces and the corresponding fittings surfaces of the dentures, using sterile cotton swabs. These swabs were cultured on Sabaraoud's dextrose agar and incubated at 37 °C for 24 hrs. Gram's stain was performed on the suspected *Candida* colonies and the presence of *C. albicans* and non-*albicans* was determined by the germ tube test.

When the culture results were investigated, 24 dentures demonstrated the presence of *Candida* isolates (96%). However, only in 14, the palatal surfaces were positive for *Candida* isolates (56 %). Further, the number of colony forming units (cuf's) were very much less than that of the corresponding denture surfaces. In a single case, gram positive diplo cocci was isolated from both the denture and the corresponding fitting palatal surface. All the *Candida* isolates were identified as *C. albicans*.

In conclusion, the current study for the first time demonstrates a strong association between the denture induced stomatitis and *Candida albicans* for a group of Sri Lankans. Further, these results confirm findings of the previous investigators.