

Denture Induced Stomatitis and Associated Factors in Patients Attending the Dental Hospital, Peradeniya, Sri Lanka

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Denture induced stomatitis (DIS) is a common oral medical problem in the elderly denture wearers. Clinically, DIS is characterized by erythematic patches on the denture bearing mucosa in both jaws with a high predilection for maxilla. However, there is no consensus on the aetiological factors of DIS at present. Therefore, objectives of this study were to determine the factors associated with DIS, assess the feasibility of using the presence of hyphae in palatal smears and denture surfaces to diagnose *Candida* associated DIS and assess the oral and hand carriage of *Candida* by DIS patients.

Complete or Partial denture wearers (n=47) presented to the clinic with DIS from April to September 2011 were included in the study. An interviewer administered questionnaire was used to obtain socio-demographic data, medical and dental history, status of receiving post delivery instructions and denture and oral hygiene habits. Denture hygiene was assessed using modified Hoad-Reddic classification. Clinical type of DIS was recorded in Newton's classification. A scraping from the palatal mucosa and a swab from the denture surface were obtained from each patient and stained with Periodic Acid Schiff stain to determine the presence of candidal hyphae. Concentrated oral rinse technique using 10 ml of sterile phosphate buffered saline was done in order to assess the oral yeast colonisation. Candidal hand carriage was assessed using fingerprints on a plate of Sabourad's agar. Identification of *Candida* was done using colony characteristics and Gram's stain.

There were 87.2% (n=41) Sinhalese, 6.4% (n=3) Tamils and 6.3% (n=3) Moors, out of which 89.4% (n=42) were female and 10.6% (n=5) were males. Their ages ranged from 31-80 years (mean = 56.91; SD = 10.07). Eighty three percent had received post delivery instructions. Unsatisfactory denture hygiene was observed in 70.2% of the upper dentures. Majority (66.0%) used dentures during sleep. Age of the current denture set varied from 1-41 years (Median = 10; Interquartile Range = 5-17). Most frequent clinical pattern of DIS was Newton type II (70.2%). Majority (57.7%) showed candidal hyphae on both palatal mucosa and denture. There were 55.3% (n=26) patients carrying *Candida* in oral cavity and in hands. The odds ratio for carrying *Candida* in hand by oral candidal carriers was 9.5.

Our observations are in agreement with a previous finding. The likelihood of carrying *Candida* in hand by an oral candidal carrier was very high. Factors such as denture hygiene, increased denture age and use during sleep may be associated with DIS. Denture hygiene was generally not satisfactory in majority in spite of high rate of receiving post delivery instructions.