9.

ises *lida* kers and iber s on the ous

who ces, hly of on the

dal hiff The alm *da*, ers

not ing als dal ous als our Proceedings of The Annual Research Sessions, University of Peradeniya, Sri Lanka, Vol. 7, October 30, 2002

## DOES DIABETES MELITUS CONTRIBUTES TO HIGHER CARRIAGE OF CANDIDA AMONG THE DENTURE WEARERS ?

A. M. MUKTHAR, G. S. WIDANAPATHIRANA, G. J. PANAGODA<sup>\*</sup> AND R. L. WIJEYEWEERA<sup>\*\*</sup>

Department of Microbiology, University of Kelaniya, \*Divisions of Microbiology and \*\*Paedodontics, Faculty of Dental Sciences, University of Peradeniya

Diabetes mellitus is a well-known disorder of metabolism characterized by chronic hyperglycaemia. The disease affects more than 30 million people worldwide and is encountered in all sections of the population. *Candida* species occur as innocuous commensals in the oral cavity of and contributes to opportunistic infections of man (Samaranayake & Holmstrup, 1989). Investigations have demonstrated that denture fitting surfaces act as reservoirs for *Candida* isolates. Further, studies have shown that the carriage rate of *Candida* on the fitting surfaces could be influenced by the poor oral hygiene. However, there are no studies to indicate the contributory role of host factors such as diabetes mellitus on the carriage of *Candida* isolates on denture surfaces of denture wearers. Therefore, the main aim of this study is to evaluate the possible influence of diabetes mellitus on the carriage of *Candida* on denture surfaces.

A total of thirty eight patients with denture induced stomatitis were selected for the current investigation and they were either full or almost full upper denture wearers. Of the thirty eight patients, twenty two patients were identified as diabetes and sixteen patients were identified as non-diabetes. The dentures were sampled for the presence of *Candida* isolates using both rinsing and imprint cultures, on two different occasions. The results of the both culture methods indicated that the prevalence of *Candida* isolates among denture wearers of diabetes patients was higher (7.7 x  $10^5$  cells/ml, 587 CFU'S and 5.4 x  $10^5$  cells/ml, 372 CFU'S than their non-diabetes counterparts (P). Further, the current study also showed that the prevalence of *Candida* on denture surfaces was higher in patients with poor oral hygiene than their satisfactory oral hygiene counterparts.

In conclusion, the present study indicate that the diabetes mellitus may be a contributory host factor in increasing the carriage of *Candida* on the denture surfaces. Thus, diabetes may increase the severity of denture induced stomatitis than the non-diabetes patients.