

## A study of the prevalence of *candida* among denture wearers having Diabetes Mellitus

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### ABSTRACT

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 contribute to opportunistic infections of man. Investigations have demonstrated that denture fitting surfaces act as reservoirs for *Candida* isolates.

The main aim of this study is to evaluate the possible influence of diabetes mellitus on the carriage of *Candida* on denture surfaces. The dentures were subjected for fungal (candidal) analysis. Patients with poor oral hygiene and diabetes mellitus demonstrated with a higher carriage of *Candida* on their denture surfaces.

A total of thirty eight patients with denture induced stomatitis were selected for the current investigation and they were either full or upper denture wearers. Of the thirty eight patients, twenty two patients were identified as diabetics and sixteen patients were identified as non-diabetics

Two methods were employed to detect the presence of *candida* on the denture surfaces.

1. Culture of denture rinses on Sabaraoud's dextrose agar at 37 °C for 24 hrs.
2. Imprint culture of dentures on Sabaraoud's dextrose agar at 37°C for 24 hrs.

Statistical analysis of the results of *Candida* isolates from the culture of the denture rinse is very significant with a 'P' value of 0.0063. In the imprint culture technique, colony forming units between the two groups was extremely significant with the 'P' value being 0.0002. Bad oral hygiene also showed extremely significant differences between the two groups.

The results clearly shows that there is a clear difference between the two groups confirming universal acceptance that diabetes is one of the predisposing factors that cause *Candidal* proliferation.

There are a large number of factors that may increase the severity of oral *candidal* infections, such as bad oral hygiene and wearing of the dentures continuously, day and night. The current study also demonstrated that other than poor oral hygiene, diabetes mellitus may increase the severity of denture induced stomatitis.