



Fungal Infection Associated with denture

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Abstract

Candida is a genus of yeast. Many species of this genus are symbiont of animals host including humans. While usually living as commensally in oral cavity, some candida can cause disease. The most significant member of the genus is candida albicans which can cause infection called candidiasis or thrush especially in elderly denture wearers. So the denture seems to be frequently the sources of fungal infection.

The current study aimed to determine the fungal prevalence rate in oral cavity among denture wearers patients in comparison to those without dentures and also to determine the local risk factors includes trauma due to ill fitting denture, nocturnal wear of the denture, heavy smoking and the age of the denture.

The result of this study showed that the prime etiology of candida growth was the material of prosthesis itself. 57% of the denture wearers showed growth of candida while 22% of subjects who had their own dentitions showed candida growth that the prosthesis is the dominant etiological factors in candida growth other local factors must be considered.

Introduction

Despite therapeutic progress, opportunistic oral fungal infection has increase in prevalence especially among denture wearers.

The entrapment of yeast cell in the irregularities of denture base is considered the prime cause of fungal infection^[1].

The effect of acrylic itself on the prevalence of fungal growth has been proved by several studies carried out^[2].

Most of healthy patients wearing dentures had fungal infection.

Certain investigators suggest that denture stomatitis is due to over growth of commensally strain of candida albicans^[3].

Seven candida species were identified in smears from oral mucosa and contiguous denture^[4]. Also investigators proved that over growth

of fungus in denture wearers considered a multi- factorial which is a combination of a systemic factors (excluded) and local factors (the denture itself). Trauma due to ill fitting denture, nocturnal wear of the denture and age of the denture)^[5].

Materials and Method

A total of 60 patients attend to private clinic in Baghdad were subjected to thorough oral mucosal examination.

They were divided into two groups:

Group I: denture wearers. They were 37(17 males and 20 females).

Group II: had their own dentition. They were 23 (14 males and 9 females)

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Demographic data were obtained from the patients by questionnaire paper including gender, age, nocturnal wear, and smoking.

Results

Table (1) Shows the total number was 60 subjects [31 males and 29 females] divided into two groups.

Group I: denture wearers, they were 37.

Group II: had their own dentition they were 23.

Table (2) shows the distribution of fungal growth among the groups and the %

Table (3) shows the gender distribution of fungal growth among the groups and the %

Discussion

Fungal infection associated with denture is a commonly problem in denture wearers.

In this study 60 subjects were divided into two groups.

Group I: denture wearer; they were 37, out of this 22 subjects had fungal infection, this means 59% (the over all percentage). In comparison with study done in Jordan, the over all percentage 52% .While similar study done in Poland the over all percentage was 67%.

Group II : had there oven dentition the total number was 23 subjects; out of this only 5 subjects had fungal infection , this means 22% (overall prevalence).

The current study revealed that growth of *Candida albicans* species more frequently in patients wearing dentures than in those without dentures.

This indicates that the denture (acrylic resin) is a factor in entrapment of micro organism especially *albicans*.

This finding is confirmed by investigation carried out in the USA by fabrication of 19 dentures; one half of the palate was made of acrylic and the other half made in metal.

The metal base proved to be effective in decreasing the fungal growth typically present in complete denture.

In the present study no clear difference were observed between males and females; however gender related prevalence differ among the studies carried out.

Also the current study showed that there are many risk factors may associated with fungal growth; those are trauma from ill fitting denture, nocturnal wear of the denture.

Systemic predisposing factors are extended in this study.

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Table (1)

roup	Total	Males	Females
I	37	17	20
II	23	14	9

Table (2)

Group	Total	Fungal growth in no. of subjects	%
I	37	22	59
II	23	5	22

Table (3)

Group	Males		Females	
	No. of infected	%	No. of infected	%
I	13	60	17	40
II	2	9	3	13