

ORAL THRUSH IN DIABETIC PATIENTS-AN INDIAN PERSPECTIVE

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ABSTRACT

The prevalence of diabetics shows the substantial changes with respect to different geographical location. In Indian subcontinents the estimates were much higher than the projected figures; due to data paucity the estimations are implausible. We compare the sub-continent countries such as Bangladesh, Nepal, Bhutan, and Sri Lanka. In South Indian scenario the prevalence was lead to 13.5 per cent in Chennai (South India), 16.6 per cent in Hyderabad, and 12.4 per cent Bangalore. Yet despite the increase in diabetes with ENT complications there remains a paucity of studies investigating the precise status of the disease because of the geographical, socio-economic, and ethnic nature of such a large and diverse country. In this area of research gap we studied oral thrush prevalence among diabetic patients in Bangalore city. A cross sectional study was conducted at BMCRI attached hospitals. A pre-designed and pre-tested Performa was used to collect baseline data at OPD. Informed consent was taken. Total 100 patients known diabetic patients was recruited cross sectional basis with obtained written consent. The prevalence of oral thrush in male patient was 8.0% and female was 2.0%. Risk factors and elevated glycemic level, PPBS, RBS and HbA1c were statistically associated with oral thrush in diabetic patients. Oral thrush is very common in diabetic patients, early inception of therapy could be reduces the incidence of oral thrush.

KEYWORDS: Oral Thrush, Prevalence, Manifestations, Complications

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INTRODUCTION

The WHO has reported (by 2030) diabetic mellitus has occluded up to 79.40 million individuals in India as such as compared to china (42.30 million) and USA (30.30 million) .The substantial changes considerably noted that, diabetes is significantly affected health domain of both urban and rural affected population. In Indian contrast many unfold worsen episode were seen in both urban and rural population, as per the figure interestingly as we noted that the prevalence of type-II diabetic is more and significantly affected the urban population. However the population led to their life on sedentary basis and they were using high calorie junk food and over obesity. So far it is worth noting that, the prevalence could be increases due to the lack of exercise, sedentary life, over obesity and many risk factors. These considerations imply that patterns of diabetes incidence that are related to the geographical distributions, As per the report of NIHFV's the prevalence of diabetes in rural population is one –quarter that of urban population for India and other sub-continent countries such as Bangladesh ,Nepal ,Bhutan and Srilanka. As far as prevalence is concerned total 20.62 percent has accounted for type-II diabetes. Yet despite the increase in diabetes with ENT complications there remains a paucity of studies investigating the precise status of the disease because of the geographical, socio-economic, and ethnic nature of such a large and diversified country. In this proximity of research gap we attempt to study the prevalence of oral thrush among diabetic patients in Bangalore city. Thrush is a type of yeast infection (candida albicans), which led to affects warm, moist areas of the different body such as the vagina, penis, mouth and certain areas of skin ³. Thrush is

more common manifestation in people with diabetes as caused by the elevated hyper glycemc level. A higher amount of glucose in the saliva can develops the oral thrush in diabetes patient. Elevated blood sugar considered as one of the influenced predictor for oral thrush. Eventually it will promote the growth of thrush and also weakened the immune system. Many authors have been opeid that smoking , alcohol consumption, chewing of tobacco leaves can causes the oral thrush , significantly symptoms like appearance will be found in mouth such as nasty, bitter taste, redness or bleeding inside the moth, creamy white colored patches in mouth , painful and sore mouth and cracks at the corner of the lips.

MATERIALS AND METHODS

A cross sectional study was conducted at BMCRI attached hospitals. A pre-designed and pre-tested Performa was used to collect baseline data at OPD. Informed consent was taken. After The consent questions were asked in local language (Kannada) and then they were recorded accordingly. Laboratory parameters viz., glycemc level for past one year, SGOT, SGPT, PPBS, RBS, HB level and Blood (SBP and DBP) was recorded at minimal error. Risk factors like smoking, alcohol, chewing tobacco leaves were collected from pretested questionnaires. Collected data was done in Epi. Info version 3. 5. Univarait analysis was used to test the significance.

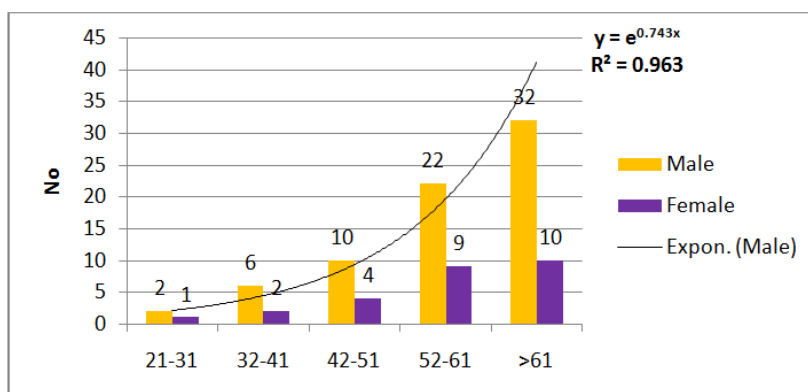


Figure 1: Age and Gender Wise Distribution of Patients

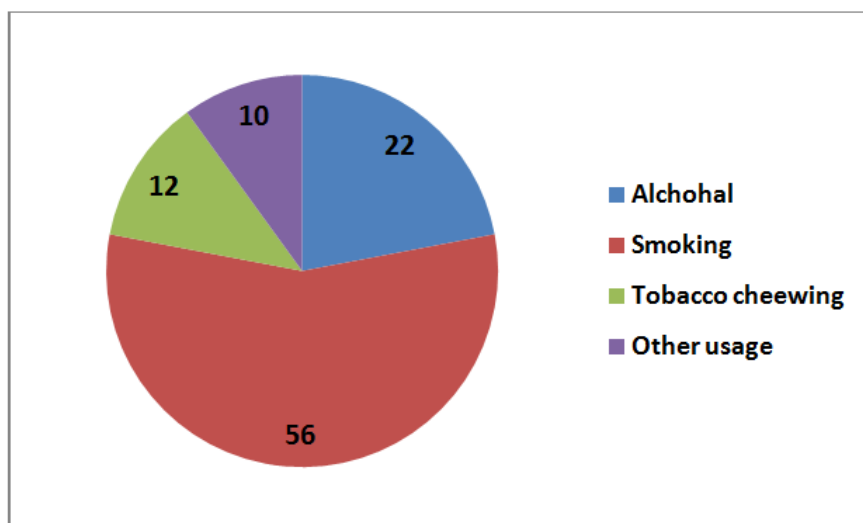


Figure 2: Risk Factors of Oral Thrush in Diabetic Patients

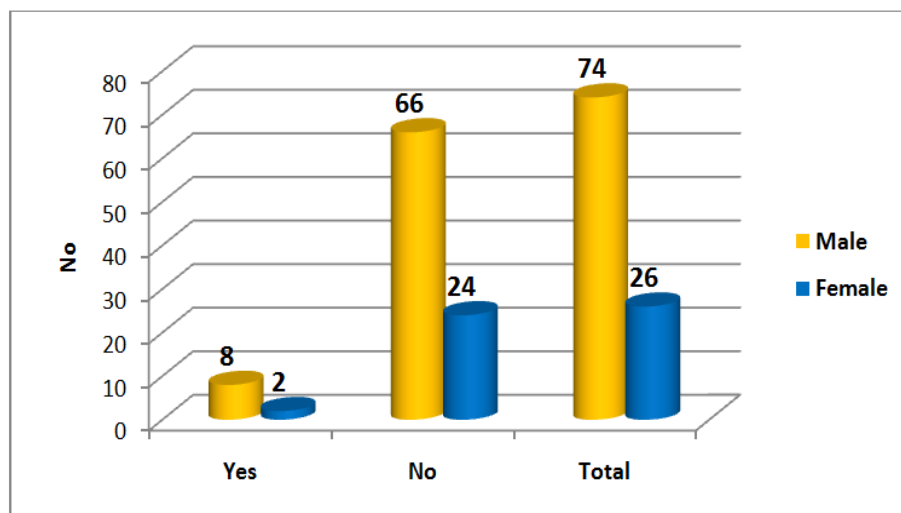


Figure 3: Prevalence of Oral Thrush

Table 1: Significance Level of Laboratory Parameters of Oral Thrush Diabetic Patient

SL	Laboratory Parameters	Mean ±SD	IQR	P-Value
01	HB-Level(mg/Dl)	10.52±3.21	8.11-11.52	0.00
02	PPBS	265.33±8.55	211-289	0.00
03	RBS	192.02±15.22	186-201	0.00
04	HBA1c	6.32±2.14	4.26-8.22	0.00
05	SGOT	56.85±0.89	45-58	0.00
06	SGPT	44.86±1.25	36-48	0.00
07	Albumin	3.63±0.52	2.1-5.02	0.00

The inflammatory diseases and persistent soft tissue in oral cavities were related with diabetes mellitus; although awareness of the illness or complications is not known by the people at globally. Interestingly we have observed that paradoxical changes of Candida were seen most of the patients, this highlights that risk factors smoking, alcohol consumptions , drug abuse were found to be significantly associated with incidence of oral thrush. Many authors have been reported that older age and elevated BMI rate were significantly associated with (p<0.01) the occurrence of the oral thrush. Oftenly it was reported diabetic patients at younger age and annoying with risk factors. Early identification and effective management may reduce oral manifestations. Present study the prevalence of oral thrush was 8.0% in males and females 2.0% respectively. Risk factors like smoking (56.0%), alcohol (22.0%) ,tobacco chewing (12.0%) and other usage was (10%) and risk factors were found to be statistically significant (p<0.01) associated with oral thrush in diabetic patients presented in Figure 2 The mean age of the patient was 56.22±3.02 years in males 60.55±3.62 in females. Older age group was also positively associated with oral thrush.

DISCUSSIONS

Oral candidacies and other consequences particularly in diabetic patients, controlling the level of serum glucose, drinking enough water in diabetic patients with xerostomia, A statistically significant correlation was found between the number of colonies and the serum glucose levels in diabetic group (P = 0.0001). Also there was a statistically significant correlation between the risk factors and elevated laboratory parameters, the duration of using tobacco products in diabetic group (P = 0.022).

Oral thrush in patients, especially immunocompromised patients, can be disruptive to dental treatment and may be a barrier to patients' health. Present study Oral thrush has been reported in 9% to 2% of the population.

CONCLUSIONS

In conclusion we believe that the present findings could be useful for the clinicians for early diagnosis. There are plausible factors like chronic oral complications in patients with diabetes may adversely affect glycemic control. Evident from the results the present study concludes that smoking, alcoholic consumption and over obesity is considered as pre determinants of the oral thrush.

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