

Awareness Regarding Periodontal Health Among Diabetic Patients

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ABSTRACT

Background: Diabetes is a metabolic disorder which affects multiple organs and systems of body including oral tissue if not treated. Diabetic patients have increased in number over time the probable reason could be the changing life style, dietary habits etc. oral care is very important in diabetic patients.

Aim: To assess the knowledge, perception, awareness regarding periodontal health status among diabetic patients.

Method: A Self-reported questionnaires on knowledge regarding periodontal health status were distributed among the participants and collected back. The samples were selected using stratified random sampling method. Study population consisted of 200 participants aged above 18 years. Inclusion criteria included diabetic patients. Prevalence of caries among participants was also recorded. Collected data was analyzed using SPSS package version 17.

Results: The overall knowledge on periodontal disease was found less among diabetic patients. 87.5% patients reported they brush daily. Majority of patients said they don't know about any gingival/periodontal disease. 67% samples brushed their teeth once daily.

Conclusion: Most of the diabetic patients are unaware about the importance of oral hygiene. Patients should be monitored regularly and explained about the various oral hygiene aids. Health care providers should take an effort on importance of periodontal health status in diabetic Patients.

Keywords: Oral Health, Periodontal Status, Diabetes, Knowledge.

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INTRODUCTION

Diabetes mellitus is a metabolic disorder which occurs due to absolute or relative lack of insulin. Diabetes mellitus is characterized by acute and chronic complications like retinopathy, neuropathy, micro vascular and macro vascular complications.¹ the prevalence of diabetes is found to be increasing, the increase in incidence could be due to change in lifestyle.² According to world health organization the number of people suffering from diabetes is expected to rise from 171 million in 2000 to 366 million in 2030. Based on the available data approx 220 million people or 2.8% of the population worldwide suffer from diabetes. If the incidence continues to increase with the same rate in 2030 the number of diabetic will be double.³

Diabetes not only affects general health but also oral health. Khan et al suggested that oral role has a immense role in social and personal development of an individual.⁴ Diabetic patients are more prone to periodontitis than non diabetic patients.⁵ Sandberg GE et al reported that 83% of diabetic patients were found to be unaware of the link between periodontal disease and diabetes.⁶ Lack of knowledge and awareness can affect the severity of disease. Brushing, flossing and regular dental visit helps in preventing the disease.⁷ So, we aimed to study the knowledge,

perception, awareness regarding periodontal health status among diabetic patients.

MATERIALS AND METHODS

A cross sectional descriptive study was conducted. A total of 200 participants aged above 18 years both males and females were selected for the study. All types of educated, uneducated, patients with different socioeconomic status were included. Ethical clearance and prior informed consent was obtained from patients. Written informed consent was obtained from participants. Patients with mental disorder were excluded from the study. Inclusion criteria included those patients who were diagnosed with diabetes at least 6 month before study and minimum 2 teeth should be present in oral cavity.

Bilingual questionnaire consisting of questions based on type of diabetes, duration, brushing habits, oral hygiene practices used, visit to dentist were selected. The questionnaire prepared consisted of multiple choices. The validation of the questionnaire was done. The languages preferred for questionnaire were both Hindi and English. Questionnaire was distributed among participants and importance of answering was explained. All the

patients who were willing to participate in the study were included. Patients were explained about the fact that there is no obligation in answering and they can discontinue whenever they wanted.

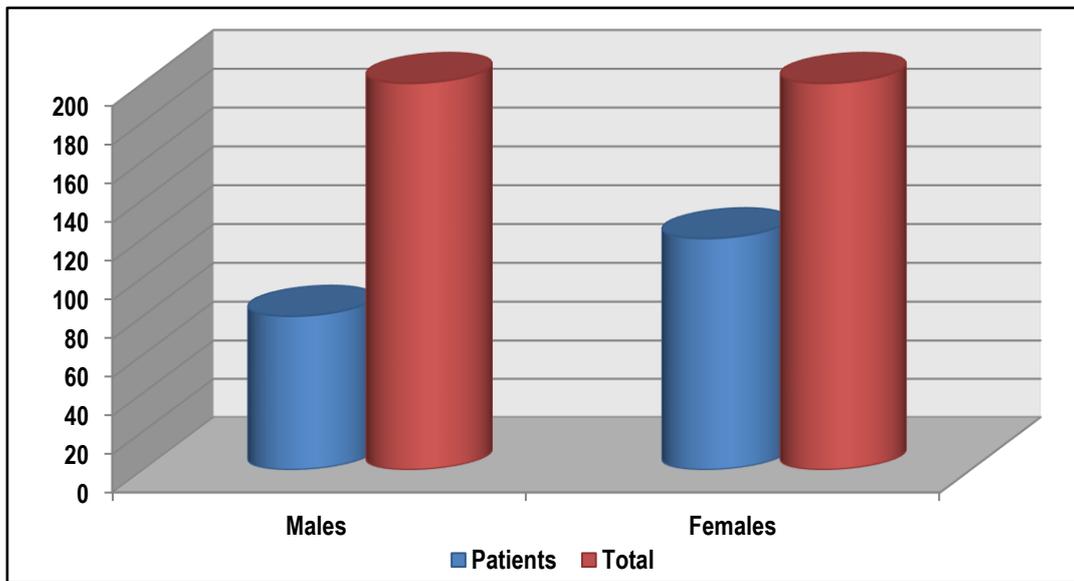
Statistical Analysis

Questionnaire was collected and data was obtained. Data were entered using SPSS package descriptive data were obtained. Chi-square test was used in statistical evaluation of bivariate frequency distributions.

RESULTS

A total of 200 patients who were suffering from diabetes were included in the study. Of the 200 patients 80 were males i.e. 40% and 120 females i.e. 60% (graph 1). Numbers of females were more in our study. Questionnaire containing 10 questions were equally distributed among participants. Of the 200 patients 175/200 said they brush regularly i.e. 87.5% whereas 25/200 i.e. 12.5% said they don't brush (graph 2).

Graph 1: Gender distribution



Graph 2: Brushing Habits

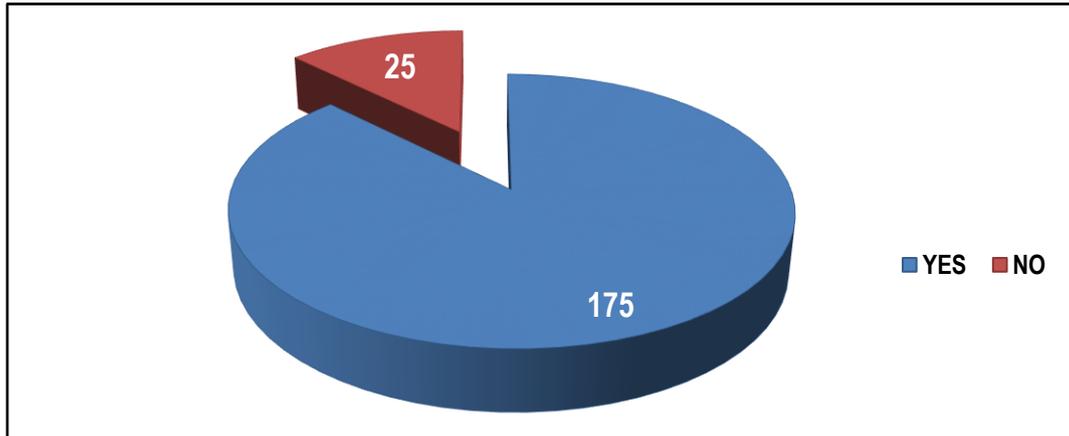


Table 1: Oral hygiene aids used

	Yes	Total Number	Percentage
Toothbrush	175	200	87.5%
Finger	45	200	22.5%
Dental Floss	18	200	9%
Mouthwash	75	200	37.5%
Toothpick	110	200	55%

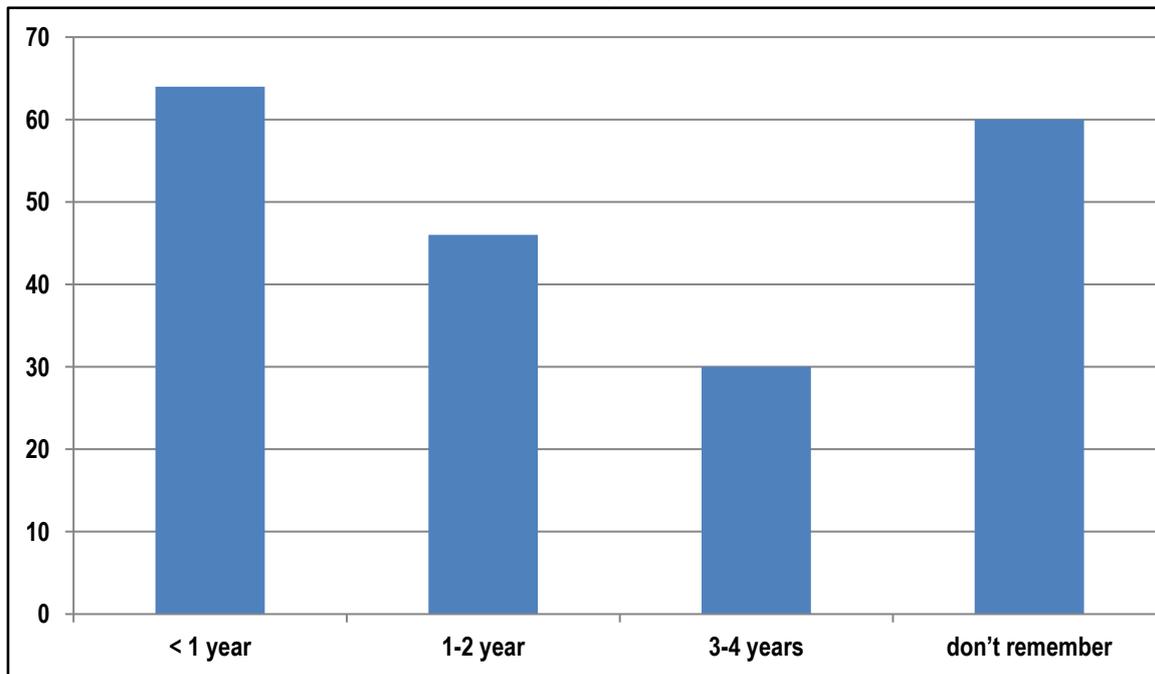
Table 2: Frequency of tooth brushing

	Yes	Total Number	Percentage
Once a day	134	200	67%
Twice a day	26	200	13%
Once a week	15	200	7.5%

Table 3: Knowledge regarding periodontal disease

Periodontal disease	Yes	No	Don't know
Gingival bleeding	50 (25%)	20 (10%)	130 (65%)
Gingival inflammation	46 (23%)	20 (10%)	134 (67%)
Gums soreness	48 (24%)	46 (23%)	106 (53%)

Graph 3: Frequency of dental visit



When asked about the cleaning method used, 175/200 i.e. 87.5% patients said they prefer toothbrush along with toothpaste, 45/200 i.e. 22.5% said they feel comfortable in brushing with finger, majority of the patients said they frequently use toothpick i.e. 55%, 75/200 i.e. 37.5% used mouthwash occasionally whereas the use of dental floss was least common among people i.e. only 9% (table 1). When enquired about the frequency of brushing, majority of the patients said they brush once daily i.e. 67% (134/200), only 26 patients said they brush twice daily i.e. 13% and 15/200 said they brush once in a week (7.5%) (table -2). Dental visit was not in the priority list of the patient. 60/200 patients said they don't remember the last time they visited dentist, 64/200 said they visit once in a year, 46/200 said they try to visit dentist once in 2 years whereas 30 of them visited dentist in 3 to 4 years (graph -3). Knowledge regarding periodontal disease among diabetic patients was found less. 50/200 i.e. 25% said yes they are aware about gingival bleeding, 20/200 i.e. 10% said No whereas 130 i.e. 65% said don't know. When asked knowledge regarding gingival inflammation 46/200 (23%) said yes, 10% said No and 134/200 (67%) said they don't know. 24% were aware about gingival soreness, 23% said no and 53% said they don't know (table-3).

DISCUSSION

Diabetic mellitus is often associated with various complications. Various studies in past have reported that there exist a strong association between diabetes and periodontal disease.⁸⁻¹⁰ oral health in spite of being so important is often ignored by people due to busy lifestyle or sometimes due to lack of awareness. Sidra M et al suggested that maintaining a good oral hygiene is

considered to be integral part of oral health.¹¹ Diabetic patients very commonly suffer from gingival and periodontal disease. Some authors reported that patient education is the most effective way to lessen the complications of diabetes.¹²

In present study the numbers of female patients were more as compared to males. Present study revealed there is lack of awareness among diabetic patients regarding diabetes and periodontal disease. Knowledge on diabetes was not recorded in present study. This study revealed that most of the patients i.e. 87.5% brushed their teeth regularly. Faten M. R et al reported similar result in their study (83%).¹³ 22.5% still used finger for cleaning teeth. surprisingly only 9% used dental floss. 37.5% patients said the occasionally used mouthwash. Bowyer et al. suggested that adults with diabetes are less aware of oral care and health complications associated with diabetes.¹⁴ Only 32% patients said they visited dentist every year. Our results were similar to those reported by various other authors.^{6,15} Awareness regarding periodontal disease was found to be very low in our study which were in contrast to those reported by Faten et al.¹³

CONCLUSION

Awareness on diabetes and its relation with periodontal disease was found less in our study. Most of the patients used tooth brushes for maintain oral hygiene. However less number of patients regularly visited dentist. Proper counseling and motivation can guide the patients towards more healthy life. Importance of oral hygiene in diabetic patients should be emphasized. Limitations of our study was results were not analyzed based on gender and age of the patient.

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