

ORAL HEALTH KNOWLEDGE AND PRACTICES IN SAUDI DIABETIC FEMALE PATIENTS

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ABSTRACT

The present study was done to collect baseline information on knowledge, attitudes and practices of Saudi female diabetic patients regarding their oral health in order to enhance their dental health education. The improvement in health status of these diabetic patients was expected to prevent the adverse effects of diabetes on periodontal tissues.

The results of this assessment showed clearly that majority of these diabetic patients lacked knowledge about the relationship between diabetes and periodontal health.

Key words: Oral health knowledge, Saudi diabetic patients

INTRODUCTION

In Saudi Arabia, diabetes mellitus is recognized as a major health problem. Earlier reports indicated that nearly 20% Saudis above the age of 30 years had Diabetes Mellitus¹ while the latest report showed that the overall prevalence of Diabetes Mellitus among adult Saudis of both sexes in rural as well as in urban communities is 23.7%.² Despite these recognized high rates of Diabetes Mellitus among the Saudi population very little efforts have been made to evaluate the oral health status among diabetics.³

Prevention of dental disease in diabetics depends on education and health promotions strategies such as early diagnosis, proper oral health, diet counseling, glycaemic control and smoking cessation counseling. Increase in the number of people with diabetes in Saudi Arabia up to 23.7% makes it necessary for further research to assess diabetic - oral health relationship and to develop a strategy to control this problem.

METHODOLOGY

The survey was conducted on Saudi diabetic female patients, who attended King Abdul Aziz Hospital Diabetic Center and Dental College in King Saud University for routine check up. Population selection was based on the fact that it was a convenient sample and not a representative one. Every patient signed an informed consent. A total of 100 diabetic patients were interviewed by one examiner (F.A). Inclusion criteria

was the female patient suffering from type I or type 2 diabetes for at least 6 months.

A prepared questionnaire was given to each diabetic patient. The questions included were demographic data, diabetic items, oral hygiene habits and awareness about the relationship between oral hygiene habits and health of periodontal tissues in diabetic patients.

RESULTS

Table 1 shows the level of education of Saudi female diabetic patients. The information about the level of awareness whether diabetes has an effect on the gums is provided in Table 2. Results about habits of cleaning the mouth are provided in Table 3. The frequency of visits made to the dentist are shown in Table 4. Types of complaints noted by the patients are given in Table 5. The level of general information about the plaque is shown in Table 6. It was noted that there was increase in the level of awareness with the increase in the knowledge of oral health.

TABLE 1: SHOWS THE LEVEL OF EDUCATION OF FEMALE DIABETIC PATIENTS

Middle school & below	30%
High school level	40%
Diploma holders	11%
University level	6%
Uneducated	13%

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TABLE 2: SHOWS THE LEVEL OF AWARENESS

Does diabetes affect your gums	Yes, 46%	No, 43%	May be, 11%		
Does diabetes affect your general health	Yes, 92%	No	May be, 8%		
Do you try to increase your knowledge about your diabetes	Yes, 84%	No, 16%			
Source of knowledge	Television, 15%	Physician, 40%	Dentist, 17%	Community lectures, 27%	Internet, 1%

TABLE 3: SHOWS CLEANING HABITS

Frequency of brushing	No brushing, 80%	Once a day, 47%	Twice a day, 31%	Thrice a day, 15%	Irregular, 7%
Brushing technique	Up and down, 44%	Circular, 35%	As prescribed by Dr. 5%	Any, 16%	
Inter dental cleaning	Floss, 5%	Picks, 37%	Miswak, 40%	Mouth wash, 2%	Nothing, 16%
Tooth paste type	Specific type 26%	Any type 74%			
Type of tooth brush used	Hard, 9%	Medium, 54%	Soft, 4%	Don't know, 23%	

TABLE 4: SHOWS FREQUENCY OF VISITS TO DENTIST

Frequency of dental visits	Every one year, 5%	Every 3-6 months, 3%	On need, 92%	
Reasons for irregular dental visits	Long waiting list in governmental hospitals, 67%	Cost in private, 87%	Phobia from dentist, 14%	Other reasons, 7%
Clenching or Bruxism	Yes, 14%	No, 70%	Don't know, 16%	
Smoking	Yes, 3%	No, 97%		
Negative smoking	Yes, 74%	No, 26%		

TABLE 5: SHOWS VARIOUS DISTURBANCES IN MOUTH

Bleeding gums on brushing	Yes, 30%	No, 70%
Itching gum	Yes, 18%	No, 12%
Sensitivity in teeth	Yes, 13%	87%
Dry mouth	Yes, 7%	No, 93%

TABLE 6: SHOWS LEVEL OF GENERAL INFORMATION

Do you know what is the cause of gum disease	Yes, 30%	No, 20%	Not sure 50%
Do you know what plaque is?	Yes, 17%	No, 63%	Not sure 20%
Do you know what periodontal pocket is?	Yes, 4%	No, 96%	
Do you know what calculus is?	Yes, 70%	No, 30%	
Do you think the cause of your periodontal problems is diabetes?	Yes, 40%	No, 26%	May be, 34%
Do you think the cause of your periodontal problem is plaque?	Yes, 18%	No, 42%	Not sure, 40%
Do you think cleaning of your teeth once in a year is good enough?	Yes, 7%	No, 63%	I don't know, 30%

DISCUSSION

The results of this study showed clearly that diabetic patients lacked knowledge about the relationship of diabetes with periodontal disease. This was in agreement with Sandberg et al, Kamel et al, Kamran et al.^{6,7,8} Regular tooth brushing once or twice a day basis was done by 78% diabetic patients which is in agreement with Thousand et al.⁹ They found it varies from 74% to 94% among diabetic patients. Our patient's preferred tooth picks than any other kind of intercleaning agent and this was also in agreement with Thorstensson et al.⁹ Lack of information, and financial difficulties were reasons for non-adherence with oral hygiene regimens. Education of diabetic patients was very important to prevent periodontal and oral diseases. The first sign of periodontal disease is bleeding gum- 30% of the diabetics were having bleeding upon brushing. This showed that the patients were at risk of developing periodontal disease. This finding was in agreement with Greenstein.¹⁰

There was an increase in the level of knowledge as the level of patient's education increased. However, as no clinical examination was conducted, so it could not be concluded whether knowledge had an effect on the oral health.

Regular professional care, regular maintained visits including sub gingival plaque removal, is necessary for the treatment of periodontitis. Unfortunately the present study showed that 92% diabetic patients visited their dentist only when they had problems and this is in agreement with the findings of Mullally & Linden.¹⁰ They found that those patients who had irregular

dental visits showed more plaque or calculus, more bleeding sites and deeper mean probing depths. Thus, good plaque control and regular maintenance visits are critical factors in the prevention and treatment of periodontal disease. It was found diabetic patients in Diabetic Center of King Abdulaziz Hospital were well informed regarding their body health through their physicians on routine visits. 92% of diabetic patients stated that they knew, how diabetes affects general health. However, the knowledge on relationship between oral health and diabetes was poor. The source of information, if present came from the physicians and only little information came from the dentist. This was due to the irregular compliance with dental visits and as also shown in the presents study patients were only going to the dentist on emergency basis and not as a routine check up. This is in agreement with Pohjamo et al.^{11,12} Regular visits to the dentist should be encouraged in all Diabetic Centers or at least oral health information should be given to the patients in Diabetic Centers. Dental practitioners should also educate diabetic patients about the oral complications of diabetes.

There was some limitations in this study such as small sample size. All patients were females. For further study a larger sample size with both male and female patients should be included. It will also be very beneficial to add oral examination of all these patients.

CONCLUSIONS

The primary finding of this study was a lack of knowledge about the relationship between diabetes

and periodontal disease. The results were consistent with studies conducted worldwide.

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