



Patient Knowledge of the Link Between Diabetes and Periodontal Diseases

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INTRODUCTION

Published literature supports the concept that diabetic individuals with poor glycemic control are at an increased risk of developing periodontal diseases.¹⁻⁵ The consequences associated with periodontal diseases and subsequent potential loss of teeth are important factors to consider in regards to the overall quality of life of patients with diabetes. Given the notion that knowledge of possible complications associated with disease is a precursor to positive health behaviors the following study was designed and implemented to assess diabetic individuals' knowledge of possible oral health complications associated with their disease.

OBJECTIVES

1. Determine the knowledge of individuals with diabetes of the potential risk of periodontitis as a result of their disease.
2. Identify if a relationship exists between the frequency of positive oral self-care behaviors and diabetes related knowledge.
3. Ascertain if diabetic individuals are receiving education regarding the risk of periodontal diseases from members of their health care team.

MATERIALS AND METHODS

The study was approved by the University of New Mexico (UNM), School of Medicine, Internal Review Board. Persons meeting pre-determined eligibility requirements were asked to participate in the study as they presented for health care appointments at three different participating health care sites within UNM. Sites participating in the research were selected with the intention of including health care professionals that are part of diabetic patients' health care team and included: a medical site (physician), a dental site (dental hygienist) and a patient education site (certified diabetes educator). A recruitment script was provided for all co-investigators as a means to standardize the process of subject enrollment. Fifty two individuals were asked to take part in the study, three were ineligible and four declined to participate (n=45). Data were collected via a 22-item, self-reported questionnaire. The survey questions that served as a standard to judge knowledge of the association between diabetes and oral health/periodontitis were modified from two questions in a study conducted by Moore and colleagues.⁶ Data analyses including frequencies and tests of association were conducted by the statistical software program MINITAB® Release 14.

RESULTS

1. The majority (91%) of the subjects reported a belief that oral health could be affected by diabetes.
2. The knowledge of the oral-diabetes link is not associated with frequent tooth brushing and flossing, but is associated with having a dental cleaning within the previous 12 months and the use of an oral physiotherapy (OPT) aids (p<.05).
3. Less than half of the participants were advised by a health care provider that they should practice preventive oral-self care behaviors or received information regarding the relationship between diabetes and periodontal diseases.

Association of diabetes oral health knowledge and oral self-care behaviors

Positive Oral Health Behaviors	+OSCB group/ -OSCB group n(%)	Responses to question: Does your dentist/dental hygienist know you have diabetes? +OSCB group/ -OSCB group n(%)	p-value	Responses to question: Do you believe that having diabetes can affect your oral health? +OSCB group/ -OSCB group n(%)	p-value
Had a dental cleaning within the last 12 months	21(46.6)/24(53.3)	Yes 19(90.4)/9(37.5) No 2(9.5)/15(62.5)	.0004	Yes 20(95.2)/21(87.5) No 1(4.7)/3(12.5)	NS .6109
Brush teeth more than once a day	21(46.6)/24(53.3)	Yes 16(76.1)/12(50) No 5(23.8)/12(50)	NS .071	Yes 20(95.2)/21(87.5) No 1(4.7)/3(12.5)	NS .6109
Floss teeth once a day or more	21(46.6)/24(53.3)	Yes 16(76.1)/12(50) No 5(23.8)/12(50)	NS .1226	Yes 21(100)/20(83.3) No 0(0)/4(16.6)	NS .1114
Use interdental cleaning devices (toothpick, proxybrush, oral irrigator, etc.) once a day or more	24(53.3)/21(46.6)	Yes 14(58.3)/14(66.6) No 10(41.6)/7(33.3)	NS .7587	Yes 24(100)/17(80.9) No 0(0)/4(19)	.0401

+OSCB = Positive Oral Self-Care Behavior group; -OSCB = Negative Oral Self-Care Behavior group

Advice/education given regarding diabetes and oral health according to health care site n(%)

Responses to the questions assessing advice/education received from members of diabetes care team	Response	DH 10(22.2)	NE 18(40)	PE 17(37)	Total Sample 45(100)	p-value
Told should brush, floss, and see a dental professional often due to diabetes	Yes	6(60)	3(16.6)	7(41.1)	16(35.5)	NS .201
	No	3(30)	10(55.5)	7(41.1)	20(44.)	
	Not Sure	1(10)	5(27.7)	3(17.6)	9(20)	
Received information about the relationship between diabetes and periodontal diseases	Yes	8(80)	5(27.7)	7(41.1)	20(44.4)	NS .075
	No	2(20)	10(55.5)	8(47)	20(44.4)	
	Not Sure	0(0)	3(16.6)	2(11.7)	5(11.1)	

DH=Dental hygiene clinic NE= NE Heights medical clinic PE= Patient education programs

CONCLUSION

Findings support the need to investigate the motivational and behavioral methods related to preventive oral health practices and incorporate such strategies into diabetes educational programs and clinical settings.



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