



## EVALUATION OF THE AWARENESS OF PERIODONTITIS IN DIABETIC PATIENTS IN OSMANIA GENERAL HOSPITAL

### Dental Science

**Dr. P. Santha Kumari**

Professor & Head of the Department, Department of Periodontics.

**Dr. K. Chandana\***

Post Graduate Student, Department of Periodontics. \*Corresponding Author

**Dr. Rakesh Kumar Sahay**

Professor & Head of the Department, Department of Endocrinology

**Dr. B. Vijayalakshmi**

Assistant Professor, Department of Periodontics.

### ABSTRACT

This study was undertaken to evaluate the awareness of Periodontitis in Diabetic patients in Osmania General Hospital, Hyderabad. Total number of 250 Diabetic patients from Out-patient department of Endocrinology, Osmania General Hospital, Hyderabad, Telangana, India were included in the study. This study was a questionnaire type of survey, which included 12 questions related to overall systemic health and dental concerns assessment. Out of 250 patients, 107 were on insulin therapy and remaining on oral hypoglycemic drugs. 23 had habit of regular visit to dentist out of which only 13 patients follow up gingival disease. Most of the patients brush once daily, only 7 patients used auxiliary aids. Most of the subjects in the study were unaware of oral hygiene maintenance and relationship between oral and diabetes, so the oral health education is needed in diabetes subjects to control blood glucose levels.

### KEYWORDS

Periodontitis, Diabetes, Blood glucose, Oral hygiene.

#### INTRODUCTION:

Periodontitis is a multifactorial disease resulting in chronic destruction of the supporting structures of the teeth which includes loss of connective tissue and alveolar bone.<sup>1</sup> Diabetes is a syndrome characterized by hyperglycemia and associated with many complications including nephropathy, retinopathy, neuropathy, cardiovascular complications and delayed wound healing with periodontitis being the 6<sup>th</sup> complication of diabetes.<sup>2</sup> There is emerging evidence to support the existence of a two-way relationship between periodontal health and many systemic diseases including diabetes, may be attributed to aspects of immune functioning, neutrophil activity and cytokine biology.<sup>3</sup>

Present study evaluated the awareness of Periodontitis in Diabetic patients in Osmania General Hospital.

#### MATERIALS AND METHODS:

Total number of 250 patients (age 25-60 yrs, both males and females) from Out-patient department of Endocrinology, Osmania General Hospital, Afzalgunj, Hyderabad, Telangana, India were included in the study. This survey includes questionnaire type of survey and dental concerns assessment. While waiting for their scheduled appointments at various departments, concerning patients completed written questionnaire which included 12 questions.<sup>5</sup> Inclusion criteria was patients with diabetes. Exclusion criteria was pregnant and lactating women, without any systemic disease.

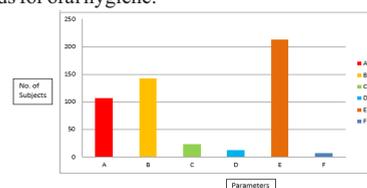
#### QUESTIONNAIRE

NAME:		OP NO:
AGE:		SEX:
OCCUPATION:		DATE:
ADDRESS:		
MEDICAL HISTORY:	A) Duration of Diabetes	1) <5 years
		2) 6 – 10 years
		3) 11 – 15 years
		4) > 15 years
	B) Associated disease	1) Cardiovascular disease
		2) Renal disease
		3) other
		4) None
DRUG HISTORY:	A) Type of Treatment	1) Insulin
		2) Oral hypoglycemic drugs
		3) Combined

FAMILY HISTORY:	A) Marital status	1) Married
		2) single
		3) widow/ divorced
PERSONAL HISTROY:	A) Educational level	1) secondary/< 12 years
		2) Diploma
		3) university/more
	B) Regular visit to the physician for monitoring of diabetes	
	C) Self monitoring of blood glucose	
	D) Regular visit to dentist	
	E) Follow up gum diseases with the dentist	
F) Tooth brushing	occasional	
	Once daily	
	Twice daily	
G) Use of auxiliary aids to clean the teeth		

#### RESULTS:

A total of 250 patients agreed to participate and responded to the questionnaire. Approximate time required for a participant to fill out the questionnaire ranged from 15 min to 20 min. Results of this survey concluded that most of the patients were of <5 years of diabetic history. Most of the patients i.e. 107 patients were on insulin therapy and 143 patients were taking oral hypoglycemic drugs. All the patients examined were with no other associated systemic diseases and deleterious habits. Most of patients were married and illiterate. Out of 250 patients, 157 had regular checkup with the physician and 183 underwent self monitoring of glucose levels. Patients who had regular visit to dentist for oral hygiene checkup were only 23 with only 13 patients having follow up for gingival diseases. Out of 250, 213 patients were brushing once daily with only 7 patients were using auxiliary aids for oral hygiene.



- A- Patients on insulin therapy
- B- Patients on Oral hypoglycemic drugs
- C- Patients on regular visit to dentist
- D- Patients on follow up for gingiva disease
- E- Patients brushing once daily
- F- Patients using auxiliary aids

#### DISCUSSION:

Periodontal disease very oftenly modified by the systemic disease of patients. Evidence suggests the existence of influence of systemic diseases on periodontal health, disease and therapy.

The present study revealed that severity of periodontal disease was influenced by the duration of diabetes which in accordance with the study done by Cerda *et al*<sup>7</sup> and Firatli *et al* had concluded that years since diagnosis of diabetes is more significant than age for severity of periodontal disease in NIDDM. Emrich *et al*<sup>8</sup> stated that the diabetic status was significantly and strongly related to both prevalence and severity of periodontal disease. From the present study also, it can be speculated that poorer the control and longer the duration of diabetes, the greater will be the prevalence and severity of periodontal disease.

The present study revealed that regular visit to dentist for oral hygiene checkup were only 23 with only 13 patients visiting their dentist regularly. The low compliance with regular dental visits shown in the present study is consistent with previous research conducted by Sandberg GE and Allen EM<sup>7</sup>. Thus, diabetic patients' regular visits to the dentist for reinforcement and education on oral health information should be encouraged in all diabetic centers. Diabetic patients should also be educated about the oral and systemic complications of diabetes. The findings of the present study showed only 213 participants brushed their teeth twice daily and majority of participants never used auxiliary aids indicating that oral hygiene measures are not a routine practice in this population. Therefore, to prevent gingival diseases and enhance periodontal health in this high-risk population encouragement of proper oral hygiene methods together with dental education should be undertaken. Similar findings of inadequate oral hygiene in diabetic patients have been shown by other investigators such as Al Habashneh R *et al*, Bakhshandeh S *et al* and Eldarrat Ah<sup>8</sup>.

Our data suggested that awareness about diabetes and its association with periodontal disease may be limited among patients. These results support the need for education on the periodontitis–diabetes relationship for these at-risk patients. The clinical implication of our findings is that dentists, physicians, and other health care providers should recommend that a diabetic patient see a dentist regularly. Dental practitioners have an opportunity and a responsibility to educate diabetic patients about the oral complications of diabetes and to promote proper oral health behaviors. Future education of importance of maintaining oral hygiene as well as control of periodontal disease plays an important role on the influence of management of diabetes.

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