Araştırma Makalesi / Research Article

Evaluation of Periodontal Status of Individuals Living in Şanlıurfa

Şanlıurfa'da Yaşayan Bireylerin Periodontal Durumlarının Değerlendirmesi

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Abstract

Background: The aim of this study was to evaluate the people living in Sanliurfa region periodontally status.
Materials and Methods: Patients who had a periodontal complaint between January 2019 and October 2019 were included in the study. Then, clinical and radiological examinations of the patients were performed. Age, sex, systemic disease, daily brushing, gingival growth, smoking habit, education level, gingival index, periodontal index, pocket depth, bleeding index, dmft index were evaluated in 31 male and 29 female patients.
Results: According to the results obtained; The mean age of the patients admitted to our clinic was 38.91 ± 1.67, 16.7% of the patients had a systemic disease, 13.3% of them were using continuous medication, 18.3% of the patients never brushed their teeth and 58.3% did not brush their teeth once a day. , 21.7% twice daily, 1.7% three times a day brushing teeth. Gingival enlargement was observed in 11.7% of the patients
Conclusion: When we evaluate the periodontal status of individuals living in Sanliurfa, our results showed that education level and daily brushing rate increase periodontal health. Teaching tooth brushing and oral care methods, encouraging regular dentist control, gaining healthy eating habits and protecting our individuals from bad habits such as smoking have a positive effect on periodontal health. Further research is needed to obtain more accurate results.

Key words: Periodontal pocket, Oral hygiene, Periodontal Diseases

Öz.
Amaç: Bu çalışmanın amacı Şanlıurfa bölgesinde yaşayan insanların periodontal durumlarının değerlendirilmesidir.
Materyal ve Metod: Çalışmamıza Ocak 2019 – Ekim 2019 tarihleri arasında Harran Üniversitesi Diş Hekimliği Fakültesi Periodontoloji Anabilim Dalına periodontal şikâyeti olduğunu belirten hastalar dahil edildi. Daha sonra hastaların klinik ve radyolojik muayeneleri yapıldı. 31 erkek ve 29 kadın hastanın yaş, cinsiyet, sistemik hastalığı bulunup bulunmadığı, günlük fırçalama sayısı, dişeti büyümesi, sigara alışkanlığı, eğitim seviyesi, gingival indeks, periodontal indeks, cep derinliği, kanama indeksi, dmft indeksi değerlendirilmiştir.
Bulgular: Elde edilen sonuçlara göre; kliniğimize başvuran hastaların yaş ortalaması 38.91±1,67, hastaların %16,7'sinde sistemik bir hastalık bulunmakta, % 13,3'ü devamlı ilaç kullanmakta, hastaların %18,3'ü dişlerini hiç fırçalamıyor, %58,3 günde bir kez,%21,7'si günde iki kez, %1,7'si günde 3 defa dişlerini fırçalamaktadır. Hastaların %11,7'sinde dişeti büyümesine rastlanmıştır. Hastaların %33,3'ü sigara kullanmaktadır. Hastaların %53,3'ü ilköğretim, %25'i lise, %21,7'si ise üniversite mezunudur. Hastaların gingival indeks ortalaması 1,64±0,05, periodontal indeks ortalaması 2,05±0,07, cep derinliği ortalaması 2,87±0,16, bop indeksi ortalaması 50,79±3,34, dmft indeksi ortalaması 6,63±0,46 olarak bulunmuştur.
Sonuç: Şanlıurfa'da yaşayan bireylerin periodontal durumunu değerlendirdiğimizde, sonuçlarımız eğitim düzeyi ve günlük fırçalama oranının periodontal sağlığı arttırdığını göstermiştir. Diş fırçalama ve ağız bakımı yöntemlerini öğretmek, düzenli dişhekimi kontrolünü teşvik etmek, sağlıklı beslenme alışkanlıkları kazanmak ve bireylerimizi sigara içmek gibi kötü alışkanlıklardan korumak periodontal sağlığı olumlu yönde etkilemektedir. Daha doğru sonuçlar elde etmek için daha fazla araştırmaya ihtiyaç vardır.

Anahtar Kelimeler: Periodontal cep, Ağız hijyeni, Periodontal hastalıklar.

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Introduction

Periodontal diseases are chronic inflammatory diseases of the periodontium. If the disease progresses, it may cause loss of periodontal ligament and loss of alveolar bone surrounding the tooth(1). Periodontal diseases are one of the main causes of tooth loss and are considered one of the two biggest threats to oral health (1,2). There are about 800 bacterial species identified in the oral cavity (3). It is assumed that the complex interaction of host response with bacterial infection modified by behavioral factors such as smoking may cause periodontal diseases (4).

Periodontitis and inflammation of the periodontium cause bone damage and loss of teeth as a result of the inflammatory process in the gum spreading to the periodontal tissues (5). Periodontal disease usually begins with gingivitis caused by the accumulation of recycled bacteria, if bacteria are removed. Periodontal disease is classified as mild, moderate and severe. Most adult dental assessments include periodontal probing, a measurement from the top of the gums to the bone. 1-3 mm measurements are considered healthy, 4-5 mm mild periodontal disease and 6 mm moderate periodontal disease. Any measurement greater than this is severe periodontal disease (6-9). There are many epidemiological, clinical and in vitro studies explaining the adverse effects of smoking on periodontal health and the events that make up this situation. The risk factor of smoking for periodontal disease has been revealed. Many studies have described the strength of the relationship between smoking and periodontal disease, the dose-response of the relationship, the temporal ranking of smoking, the consequences of periodontal disease, and biologic susceptibility(10).

It was observed that individuals with low educational status had negative effects on oral health such as smoking, poor nutrition, poor hygiene, and high alcohol consumption (11).

The aim of this study was to investigate the smoking habits, educational status, gingival index, periodontal index, pocket depth, BOP index and dmft index values in patients with periodontal problems. To determine the conditions that cause periodontal diseases for the protection of oral and dental health and to take necessary measures to prevent tooth loss.

Materials and Methods

This study was performed on patients who applied to Harran University Faculty of Dentistry. Accept the study to be examined 18-68 (38.91±1.67) age group were included with the approval. The patients were determined means of age, sex, educational status, systemic disease, continuous drug use, daily brushing, smoking habits and gingival enlargement. The patients who participated in the study; gingival index, plaque index, pocket depth, bop index and DMFT (D: caries, M: pulled because of caries, F: fill, T: total) values determined by who standards(Table 1). The examinations of the patients were performed by dentists who had standardization and measurement training.

Bop index (Loe, 1967): In order to determine the inflammatory status of the pocket base and pocket epithelium, all patients' mesial, mid-buccal, distal, mid-palatinal regions were evaluated according to the presence of bleeding in the sulcus 30 seconds after pocket depth measurement (Loe, 1967). BOP (+): Bleeding, (-): No bleeding

Gingival index (Löe and Silness, 1963): Mesial, mid-buccal, distal and mid-palatinal gingival index measurements of all teeth were taken. 0: Healthy gums. 1: Slight inflammation, slight discoloration, edema have probing no bleeding.2: Moderate inflammation, gingival bright, red, edematous, probing bleeding. 3: Severe inflammation, marked redness and edema, spontaneous bleeding(Loe and Silness, 1963).

Plaque Index (PI, Silness & Loe):Plaque index measurements were taken from all four regions of the patients including mesial, mid-buccal, distal and mid-palatinal.0: No record.1: Cannot be observed with the naked eye, but the sonde tip is in the gingival sulcus plaque. 2: It is covered with plaque in the gum area from thin to medium thickness and naked. 3: Soft add is more, thickness fills the gingival sulcus (Silness and Loe, 1964).

Statistical Analysis:

For statistical analysis data were entered into a Microsoft excel spreadsheet and then analyzed by SPSS (version 24.0; SPSS Inc., Chicago, IL, USA). Student's t-test and anova test were used for statistical analysis. Continuous variables were given as mean ± standard deviation and categorical variables were given as frequency and percentage. P <0.05 was considered statistically significant.

Results

Sixty patients who applied to Harran University Faculty of Dentistry periodontology department were included in the study. Obtained data were presented by examining age, sex, systemic condition, continuous medication, daily brushing number, gingival growth, smoking habit, education level, gingival index, plaque index, pocket depth, bop index, dmft index.

The mean age of the patients admitted to our clinic was 38.91 ± 1.67, 16.7 % had a systemic disease, 13.3% were using continuous medication, 18.3% did not brush their teeth at all, 58.3% once a day, 21.7% twice a day, 1.7% of them brush their teeth 3 times a day. Gingival enlargement was found in 11.7% of the patients. 33.3% of the patients were smokers, 53.3% of the patients were primary, 25% were high school and 21.7% were university graduates. The mean gingival index was 1.64 ± 0.05, the mean plaque index was 2.05 ± 0.07, the average pocket

depth was 2.87 ± 0.16 (milimetre), the mean bop index was 50.79 ± 3.34, and the mean of dmft index was found 6.63. ± 0.46.

Gingival index, plaque index, pocket depth, bop index and dmft index were compared in smokers and non-smokers. Although an increase in dmft and pocket depth was observed in smokers, no statistically significant difference was found (p> 0.05).

Table 1. The patients who participated in the study; age, gingival index, plaque index, pocket depth, bop index and dmft index.

	Mean	Standard deviation values	Minimum values	Maximum values
Age	38,9	1,67	18	68
Gingival index (Löe and Silness, 1963)	1,64	0,55	0,72	2,5
Plaque index (Silness and Löe, 1964)	2,05	0,07	0,5	3,16
Pocket depth	2,87	0,16	0,83	6,16
Bop index (Loe, 1967)	50,79	3,34	0	100
Dmft indeksi	6,63	0,46	2	15

In the analysis made by gender; Gingival index, plaque index, pocket depth, BOP index and Dmft index were compared. lower values were obtained in females than males. Statistically, only a significant result was found in pocket depth and plate index (p <0.05).

Table 2. Comparison of p values of gingival index, plaque index, pocket depth, Bop index, Dmft index.

	p values according to gender	p values according to education level	p values according to the number of daily brushing	p values according to smoking habits
Gingival index	0,072	0,725	*0,009	0,858
Plaque index	*0,015	0,449	*0,007	0,993
Pocket depth	*0,048	*0,000	0,336	0,163
Bop index	0,902	0,958	*0,009	0,19
Dmft index	0,868	0,807	*0,662	0,396

*Statistically significant difference was found in the comparisons (p <0.005).

According to the daily brushing number; gingival index, plaque index, pocket depth and Bop index values decreased regularly when daily scrub count increased. However, an irregular condition was observed in the dmft index. Statistically significant differences were found in gingival index (p = 0.009), periodontal index (p = 0.007), and bop index values between the groups (p = 0.009).

In the analyzes made according to the education level; there was a decrease in the pocket depth and plaque indexes as the education level increased, but only a statistically significant difference was found in the pocket depth (p <0.05).

Discussion

Periodontal diseases frequently are not noticed in their initial stages (12). When periodontal disease progresses, it causes symptoms such as swelling and bleeding. tooth mobility occurs due to loss of periodontal tissues. therefore, a painful condition occurs in the tooth (13).

Clinical periodontal treatments include supragingival and subgingival plaque and calculation removal for treatment, as well as scaling and root planning after a periodontal evaluation, including probing depths and the location of the gingival margin (level of clinical attachment). If treatment is not successful, antimicrobial agents or surgical treatment may be necessary. Behavioral approaches are used to address long-term tertiary protection, including oral hygiene, adherence to recommended periodontal interventions, and counseling for control of risk factors (eg quitting smoking and coping with stress) (14).

34.4% of the total sample reported smoking. In addition, periodontal destruction was higher in smokers and periodontal destruction was significantly higher in the periodontitis group. Twins with a lifetime history of smoking in older twins have been shown to have higher levels of alveolar bone loss than twins without a lifetime history of smoking (15).

In our study, the rate of smokers was found to be 33.3 %. In parallel with previous studies, the high pocket depth has shown us that alveolar bone loss is higher in smokers. while pocket depth increase was observed in smokers, but no statistically significant difference was found (p>0,05).

The relationship between smoking and periodontal disease severity in patients with periodontitis was also investigated in the studies (16,17). The results of the studies showed that smokers with a higher prevalence of smoking had higher average pocket depth and a lower percentage of radiographic bone support than non-smokers. Similar results have been reported in chronic periodontitis directed to the periodontal clinic: the rate of pockets 4 mm in smokers was 33% and 21% for non-smokers (18,19).

In our study, the rate of smokers was found to be 33.3 %. In parallel with previous studies, the high pocket depth has shown us that alveolar bone loss is higher in smokers. while pocket depth increase was observed in smokers, but no statistically significant difference was found (p>0,05).

Epidemiological studies with a higher proportion of women than men in the study sample have shown that periodontitis is more common in men than women (20). In one study, the prevalence of severe periodontitis was found to be 81% in males and it was in parallel with other studies on this subject. In the studies (21), it was stated that the reason for lower periodontitis in women is due to higher dental awareness and more willingness for treatment in women.

In our study, gingival index, plaque index, pocket depth, and dmft index were found to be less in females than in males, but a significant difference was found in pocket depth (P = 0.048). This shows us that women pay more attention to oral hygiene than men and as a result periodontal tissues are healthier.

The etiology of periodontal disease is of fundamental importance in the prevention of periodontal diseases. Accordingly, in order to inform patients, we must clearly know their level of education and lifestyle. According to Gencalvas et al. , patients think tooth brushing is a preventive method of tooth decay, but it has little effect on the prevention of periodontal diseases. Education level questionnaire, it was determined to be 7 levels and it was observed that there was a positive relationship between higher education level and periodontal diseases (22). According to Richard et al. , who determined that the level of education is a strong indicator of periodontal status; low level of education is associated with low periodontal health awareness (23).

According to our study, gingival index, plaque index, pocket depth, bop index and dmft index of primary, high school and university graduates were evaluated. According to the statistical evaluation between the groups only a significant difference was found in pocket depth ($p<0,05$). It was determined that the pocket depth of university graduates was lower than the high school and primary education graduates.

People with unhealthy lifestyles have poor periodontal status due to the harmful effects of tobacco. According to Rajaj et al., the relationship of tobacco with periodontal health was not only associated with poor oral hygiene but also with poor overall life. There are studies showing a positive relationship between dental health behavior and lifestyle variables (24).

In our study, daily tooth brushing numbers were evaluated in relation to oral hygiene. Gingival index, plaque index, pocket depth, bop index and dmft index values decreased as the number of scrubs increased. Gingival index ($p = 0.009$), plaque index ($p = 0.007$) and bop index ($p = 0.009$) were found statistically significant between the groups. This shows that oral hygiene is vital for oral, dental and periodontal health.

Conclusion

Many factors affect periodontal and dental health. Oral hygiene is the most important of these. If we want to maintain the periodontal health of the patients, oral hygiene education should be given very well. Our results showed that education level and daily brushing rate increased periodontal health. Our aim is to teach tooth brushing and oral care methods, to encourage regular dentist control, to gain healthy eating habits and to protect our individuals from bad habits such as smoking. Further research is needed to obtain more accurate results.

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