

The Impact of Systemic Diseases on the Effect of Conservative Periodontal Disease

Saimir Heta, Ilma Robo*, Eduart Kapaj, Sonila Robo, Nevila Alliu

Albanian University, Department of Stomatology, Tirana, Albania

*Corresponding Author: *Ilma Robo*, Albanian University, Department of Stomatology, Tirana, Albania.

Abstract

Aim: Systemic diseases cause well-expressed local effects in the oral mucosa or gingiva. In conditions where these declared patients suffering from systemic diseases undergo conservative periodontal treatment, the expectation in the prognosis of periodontal disease differs specifically to the patient depending on the severity and stage where the systemic disease is located.

The aim of this study is to evaluate the clinical outcomes of non-surgical periodontal therapy specifically for cardiac, diabetic, nephropathic, and gastrointestinal patients.

Materials and Methods: In a total of 206 patients, divided according to the susceptibility of systemic diseases: cardiac patients, diabetic patients, nephropathic patients, gastrointestinal patients. Patients included in the study were divided according to age, gender and socio-health status prior to non-surgical periodontal treatment. The parameters of the response to periodontal therapy were assessed by recording indices before and after treatment.

Results: According to the female ratio: male susceptibility to heart disease is 16%: 23%, diabetic 19%: 17%, nephropathy 17%: 4% and gastrointestinal 3%: 0.5%. The correlation between cardiac disease: diabetes is 30% and nephropathy-diabetes is 24%. Pre- and post-treatment survey rates for cardiac patients are 28% to 45%; diabetics 30% to 74%; nephropathies 16% to 23% and gastrointestinal 71% to 100%.

Conclusions: Vulnerability to systemic diseases speaks of high values that combined with susceptibility to periodontal diseases, in relation to the fact that these diseases are related to the aggravation of periodontal diseases expressed in the value of the hemorrhage index. Recovery after non-surgical periodontal therapy is more sensitive in gastrointestinal patients, expressed in high difference in concentration in the values of periodontal sexes, followed by diabetic patients, cardiac patients and then by nephropathies.

Keywords: diabetes, cardiovascular disease, gastrointestinal, nephropathy, periodontal therapy

1. INTRODUCTION

The destructive and reconstructive nature of some of the periodontal diseases orients the non-surgical periodontal treatment in the preservation of the periodontal structures to the level where the periodontal disease has expressed the destructive effect. Oral bacterial flora strikes periodontal structures through destructive products in order to create the right environment for survival, while macrophages, immune markers must react to attack, but within the body's limits it generally allows, based on systemic disease. from which the patient suffers. (1, 2)

Control of systemic diseases affects the level of the immune system in the body's response

during the healing process. These elements affect the reaction of periodontal tissue after the intervention of non-surgical periodontal therapy. The results of non-surgical periodontal therapy are measurable and clinically controllable, and are even assessed as different stages of aggravation, or improvement of systemic disease. (3-7)

Clinical examination of the gingiva, measurement of the depth of the gingival sulcus, gingival hemorrhage index, supplemented by radiographic examination are some of the elements that can be used to establish the diagnosis of current periodontopathy. (8-12)

The aim of this study is to evaluate the clinical outcomes of non-surgical periodontal therapy

specifically for cardiac, diabetic, nephropathic, and gastrointestinal patients. The clinical presentation of the diseases from which these patients suffer is accompanied by the collection of results according to the indices selected before treatment and 1 week of non-surgical periodontal port treatment.

In the systemic systemic diseases, heart disease, diabetes, hypertension and gastrointestinal diseases are selected, always focusing on the fact that these diseases have a typical clinical picture of the patient's oral cavity for a long time, therefore, depending on the time. diseases have appeared in the oral cavity. (1)

Selected systemic diseases specifically express the clinical picture of the oral cavity and despite the stable protocol of oral therapy, affect wound healing and the duration of full periodontal healing. To achieve the ultimate goal, non-surgical periodontal therapy for these patients has stages of treatment protocol with the aim of protecting the periodontal tissue at the achieved level of periodontal tissue destruction. (13-15)

2. MATERIALS AND METHODS

Patients in the study were aware that suffering from systemic diseases selected complemented the purpose of the study. This group of diseases included heart disease, gastrointestinal disease, kidney disease and diabetes. Each patient

Table1. Table 1 shows the distribution of patients in the male-to-female ratio, according to heart disease, diabetes, nephropathy, and gastrointestinal disease.

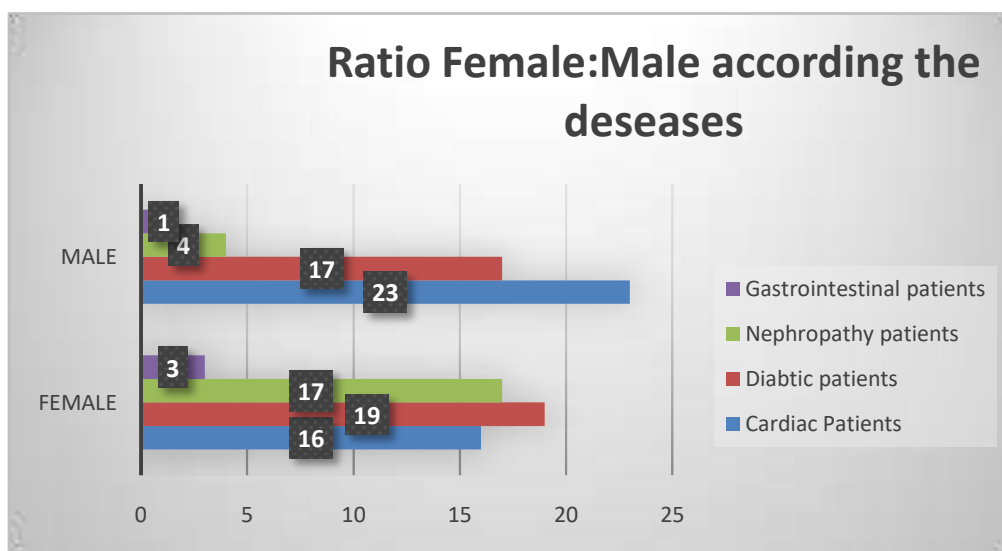
Patients	Cardiac Patients	Diabetic Patients	Nephropathy Patients	Gastrointestinal Patients
Female	16%	19%	17%	3%
Male	23%	17%	4%	0.5%
Total	39%	37%	21%	3.3%

involved underwent oral clinical examination, which included examination of the structures of the tooth and oral mucosa, always adhering to the procedure of air tissue drying and then eye inspection of the differences in the relief of the oral mucosa. Once acquainted with the purpose of the study, the patient was asked to consent to further proceed with the collection of clinical data on oral status before and after periodontal non-surgical treatment.

The study was conducted on a total of 206 patients, divided specifically according to the systemic patients selected from which the patient suffered specifically: 80 were cardiac patients, 76 diabetic patients, 43 nephropathic patients, 7 gastrointestinal patients, included in our study, as they met the criteria engagement. Patients included in the study were divided according to age, gender and socio-health status prior to non-surgical periodontal treatment. The parameters of the response to periodontal therapy were assessed by recording indices before and after treatment.

3. RESULTS

After collecting the data in the base table of the excel, they were processed in order to display the results of the study according to the tables below.



Graph1. Graph 1 shows the distribution of patients in % according to the male ratio: female, according to heart disease, diabetes, nephropathy and gastrointestinal.

Table2. The relationship between heart disease-diabetes and nephropathy-diabetes

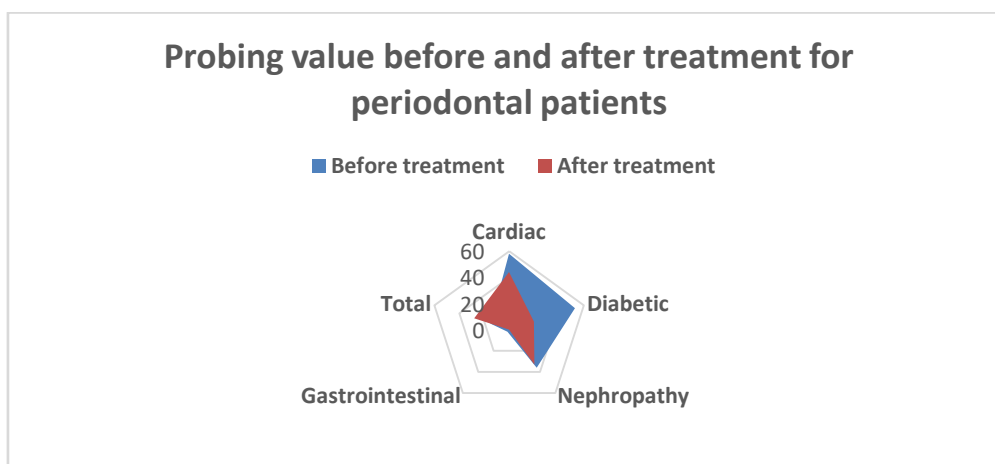
Patients	Cardiac-diabetic Patients	%	Nephropathy-diabetic Patients	%	No.-%
Female	38	19%	16	17%	54-26%
Male	22	11%	7	7%	29-14%
Total	60	30%	23	24%	83-40%

Table3. Values of the probing for cardiac, diabetic, nephropathic and gastrointestinal patients before treatment

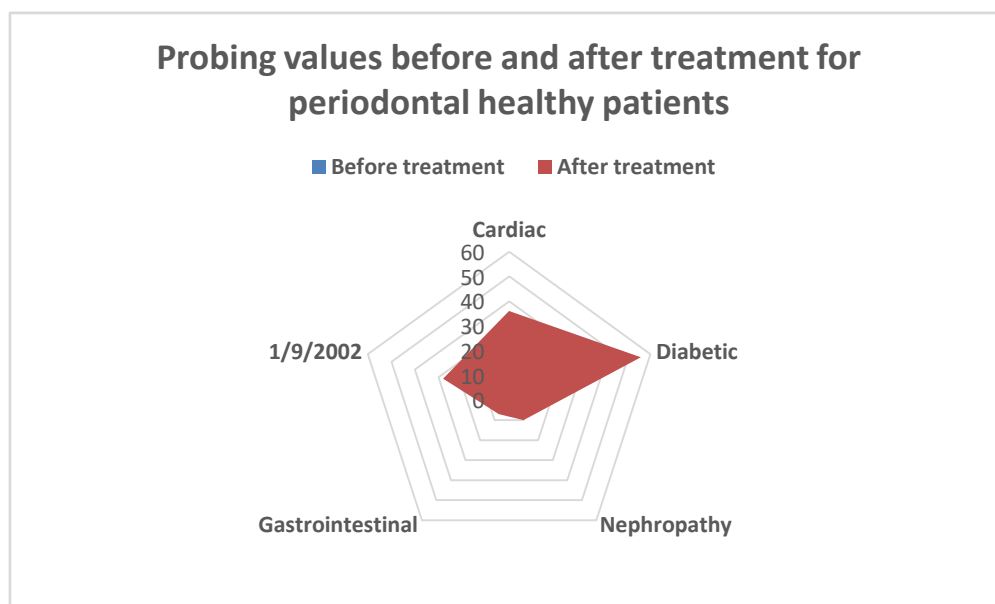
Probing value	Cardiac Patients	Diabetic Patients	Nefropathy Patients	Gastrointestinal Patients	Total	%
Healthy	22-28%	23-30%	7-16%	5-71%	57	28%
III	58-73%	53-70%	36-84%	2-29%	147	71%
Total	80-39%	76-36%	4321%	7-3%	206	100%

Table4. Survey values for cardiac, diabetic, nephropathic and gastrointestinal patients after treatment

Probing value	Cardiac Patients	Diabetic Patients	Nefropathy Patients	Gastrointestinal Patients	Total	%
Healthy	36-45%	56-74%	10-23%	7-100%	107	53%
III	44-55%	20-26%	33-77%	0-0%	97	47%
Total	80-39%	76-36%	43-21%	7-3%	206	100%



Graph2. Probing value for cardiac, diabetic, nephropathic and gastrointestinal patients, before and after treatment for periodontal patients



Graph3. Probing values for cardiac, diabetic, nephropathic and gastrointestinal patients, before and after treatment for periodontal healthy patients

Table 5. Values of the hemorrhage index for cardiac, diabetic, nephropathic, gastrointestinal patients

Values of the hemorrhage index	Before treatment	After treatment
Cardiac	42%	39.5%
Diabetic	45%	13%
Nephropathy	37%	35.5%
Gastrointestinal	32%	5%

The association of heart disease and periodontal disease is already well-known based on the data published in the literature. There are many articles published about the impact of chronic periodontitis on blood fibrinogen levels and as a result can lead to arteriosclerosis. Activation of macrophages in arteriosclerotic plaques. Cardiac disease is thought to be associated with periodontal disease aggravation is hypertension, which affects periodontal tissue more with the effects of the medications the patient is being treated with. 16-19) Hypertrophy by calcioblockers is prone to signs of gingival tissue fibrotization. (20-25) Cholesterol levels associated with fibrinogen fluctuations in the blood are two elements that affect the appearance of arteriosclerosis plaques. (25-32) There are studies that highlight the link between blood cholesterol levels and increased pocket depth in patients with arteriosclerosis. (33-35) But again, blood cholesterol levels are associated with increased pocket depth. in control group patients. (36)

Diabetes shows its effect on oral cavities compared to increasing the amount of glucose in saliva and gingival fluid. The increase in glucose in the oral cavity is affected by the lack of control of blood glucose levels. By having high amounts of glucose in saliva, the possibility of bacterial plaque formation in the gingival margins increases. Diabetic patients have a higher pH of the oral cavity in terms of acid than patients who do not suffer from these systemic diseases. In diabetic patients, the delay in wound healing is always noticeable. This delay is explained by the slow movement of neutrophils toward the inflamed areas, as it is known that the first stage of healing is the phase of clearing the area of neutrophils that perform the phagocytosis of any undesirable element in the wound.

Recent studies point out that, from the data collected, patients suffering from type I diabetes mellitus are more affected by periodontal disease and tooth loss, and that such problems increase over the years and with age. (37)

Kidney disease affects the excretion of harmful elements, which in the case of normalcy should

be filtered by the kidneys themselves. Patients with gastrointestinal problems are associated with the treatment of periodontal disease at the point of caution when prescribing certain medications, as their absorption is affected by medications taken to treat gastrointestinal diseases, keeping stomach acid under pH control.

4. CONCLUSIONS

Vulnerability to systemic diseases speaks of high values combined with susceptibility to periodontal disease, in relation to these diseases there is talk of aggravation of periodontal diseases expressed in the value of the hemorrhage index. Healing after non-surgical periodontal therapy is most sensitive in gastrointestinal patients, expressed in high difference in concentration in the values of periodontal sexes, followed by diabetic patients, cardiac and then by nephropathies.

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