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Research Article

PATIENTS WITH SYSTEMIC RISK DISEASES TREATED WITH PROSTHETIC APPLIANCES

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ABSTRACT

Aim: The scope of our study was to:

- Determine the per cent of patients with systemic diseases prosthetically treated,
- Determine the frequency of risk diseases by patients with prosthetic appliances,
- Determine the per cent of patients with risk diseases treated with therapy and patients without therapy, and correlation between them.

Material and Methods: For this study were follow up getting data from patients examined in the clinic for prosthetic dentistry **"Protetika AG"** in Tetova in a period from 2013 to 2015 year. Through the history were providet data for general diseases like: cardiovascular diseases, neuro-physiatric diseases, diabetes mellitus, rheumatic arthrytis, the diseases of CNS, and other pathologies.

Results

The getting results showed that:

- Cardiovascular diseases are present with 46.15%,
- Rheumatic diseases with 21.64%,
- Diabetes mellitus with 9.13%,
- Diseases of CNS with 7.72%,
- Neuro-physiatric diseases with 4.62%.

Conclusion

1. The difference in per cent by results of different authors concerning the risk diseases by examined stomatological patients can be explaned with different standards which exist in different countries from which came authors and studies.
2. The cnowledges about taking therapy from patients with risk diseases are importante becouse of possible interaction between stomatological intervention, anesthesya and drugs prescribet from the side of dentist.
3. Havin data for risk diseases, there is possible to planification intervention in stomatognathic system.

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INTRODUCTION

The diseases of human organism in generally, and systemic diseases specially, with their fast growth and aggressively, as never before represent a serious health problem for population, also for adequate and relevant institutions too (Shaqiri, 2013). These diseases are defined like resistant chronically diseases, with time limit more than 3 months which affect in life of person and need continuing medical treatment (Mary *et al*, 2014). These diseases play a pivotal role in deciding treatment options in dentistry. By these cases, prosthodontics procedures need to be carefully judged and planned according the systemic status of the patient (Singh 2015).

There are various disease that of concern in Prosthodontics. These along with their management have been described as under:

- cardiovascular diseases which make the most divulgated category of sistemic diseases, almost in all countries of the world, which prevalence increase with age, where participate: angina pectoris, infarctus myicardi, endocarditis bacterialis subacuta, congestive heart desorders, hypertension;
- endocrine disorders like diabetes mellitus, which is a clinic syndrome caracterised with hyperglicemia cosed

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from the absolute or relative lack of insuline (Mary *et al*, 2014);
- thyroid diseases;
- adrenal gland diseases;
- respiratory tractus diseases;
- liver diseases like cyrosis;
- hematologic diseases like anemy and leucoplaky;
- bone diseases like osteoporosis, fibrotic dysplasia and osteoitis deformans;
- neuro-psyhiatric diseases like Parkinson and mouth burning syndroma;
- autoimmune diseases like rheumatic arthritys, where ATM are frequently affectet (Mary *et al*, 2014; Singh 2015).
- Concerning the prosthetic treatment by patients with sistemic diseases, in dependence from the kind and digree of suffering from these diseases, dentist prosthetist during the treatment must monitoring the vital sings and to take care about:
- limitet using of vasoconstrictors (*angina pectoris*) and time limit from disease representation till the prosthodontics treatment, and long prosthetics procedures mus be devited and regulated in shortened procedures (*infractus myocardi*). For these patients prone for angina pectoris or infarctus myocardi, the dentist offers of prosthodontics treatment must be ready for distinction and menage of risks, and in this manner to prevent these cases (Singh 2015; Varon, Mack-Shipman 2000a,b; Cruz-Pamplona *et al* 2011);
- to have knowledges in which situations is contraindication to provide with mobile prosthetic appliances and to take oral impression (*endocarditis bacterialis subacuta*);
- to take care, and to be ready for prevention of acute exacerbation of chronic diseases (*congestive cardiac diseases*);
- to apply the protocol for discrease the stres (*hipertension*);
- The primary management goal for the patient with cardiovascular disease during dental therapy is to ensure that hemodynamic changes produced during dental treatments does not exceed the cardiovascular reserve of the patient (Glick, Greenberg 2005; Gilbert, Minaker 1990);
- to use an impression technique that will produce maximum physiologic compatibility of the denture base with supporting structure, careful occlusal correction should be accomplished to remove all interferences, the food table should be small and the patient should be given detailed instructions on eating habits and oral hygiene, frequent evaluation of denture is necessary and patients which are prone to develop infections and vascular complication so an antibiotic prophylaxis before prosthodontics therapy to prevent subsequent infection is advised (*diabetes mellitus*), and patients from all ages prosthetically treated must anderstand that this established metabolic disorder could have an impact on the outcom result of prosthetic treatment (Singh 2015; Varon, Mack-Shipman 2000a,b; Bavitz 2006; Arthritis Foundation; Kansal, Goyal 2013; Talib Amin *et al* 2013; Frier *et al* 2001);
- patients with difficulty in breathing upon exertion and using bronchodilator therapy should undergo medical examination, and use of epinephrine or vasoconstrictors in anesthetics or gingival retraction cord is not advised(*pulmonary diseases*) (Varon, Mack-Shipman 20002a,b);
- that prosthodontists are in a strategic position to intercept early evidence of osteoporosis and educate the geriatric patient towards good nutrition. Designing complete denture requires special consideration for these patients to preserve the underlying tissue structure as much as possible(*osteoporosis*) (Mary *et al* 2014);
- that neurologic emergencies like stroke, syncope and seizures require thorough history and list of medications, and consultation with physician is helpful in treating these patients(*neuro-psyhiatric diseases*) (Singh 2015);
- that cases with rheumatismal diseases which are a musculoskeletal disorder characterized by the inflammation of joints, treatment should be primarily focused on antirheumatic medications as the prosthetic procedures do not cure the joint disease and are therefore secondary, since the disease commonly occurs between acute and chronic stages, the irreversible treatment like fixed prosthesis should not be given until the disease is cured(*rheumatoid diseases*) (Mary *et al* 2014; Bavitz 2006). The problem encountered in the prosthodontics rehabilitation of patients with rheumatoid arthritis of TMJ is manifested with changes in occlusion and jaw relation (Bavitz 2006).

The successful management of patient begins right from the medical history to the treatment plan in which much consideration has to be given to the systemic status of individual. Prosthodontist neglecting the systemic status in the history will step into more serious complication at the cost of individual life (Singh 2015)

Aim

The aim of our study was that through collected data from clinical examination to:

- Determine the per cent of patients with systemic diseases prosthetically treated,
- Determine the frequency of risk diseases by patients provided with prosthetic appliances,
- Determine the frequency of patients with risk diseases treated with therapy and those without therapy treatment, and to verify the correlation between them.

MATERIAL AND METHODS

For this study were follow up the getting data from examined patients in the specialised dental clinic **"Protetika Ag"** in Tetova from 2013 to 2015 year, which came in our clinic for expressing their complaints concerning the stomatognatic system. From this group, 943(52.83%) of them were males, and 842(47.17%) were females, and the age of examinated patients were from 13 to 82 year old, with average age from 48.2 year. Through the history were providet data for diseases like:
- cardiovascular diseases,
- neuro-psyhiatric diseases,

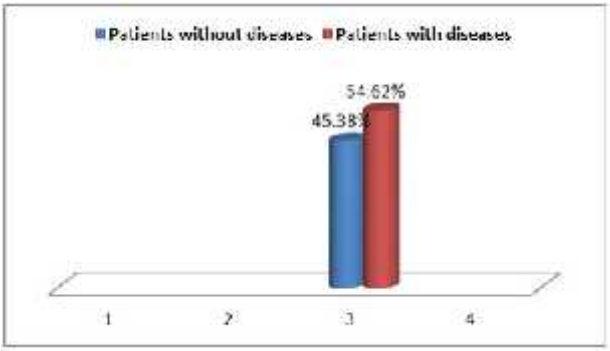
- diabetes mellitus,
- rheumatoid diseases
- CNS diseases and
- other pathologies.

The getting data were evidenced in a patient chart using the modificated forme of evaluation of oral health according WHO(*World Health Organization*)**,** adapted and modificated accordin of nature of our study**.** The getting data after their statistically elaboration are showed with graphics and tables, while data with importance are showed with T-test, coefficient of probability (p) and coefficient of correlation (Rxy)

RESULTS

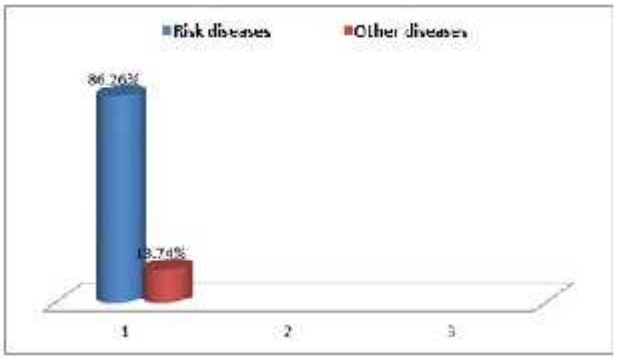
The per cent of examinated patients with risk diseases showed with graphics and tables were providet from the medical history of each patient separately.

In graphic 1 are showd results for "healthy" treated patients, and them suffering from different diseases. From this graphic we can see that from the houl numbet of examinated patients, 975(54.62%) were patients suffering at list from one disease, and 810(45.38%) were "healthy" patients.



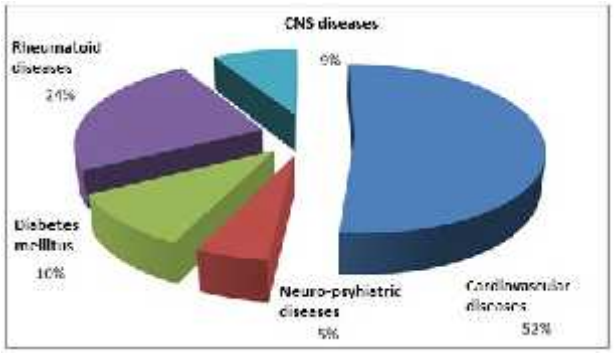
Graphic 1 Patients suffering, and those not suffering from different diseases

Results for patients with risk diseases, and those which suffer from other diseases are showed in graphic 2. From this graphic could be seen that from total number(975) of patients which suffer from different diseases, 841(86.26%) were patients which suffer at list from one risk disease, and 134(13.74%) were patients which suffer from other diseases.



Graphic 2 Patients which suffer from systemic diseases, and those which suffer from other diseases

In graphic 3 we have showed results of patients with risk diseases. From these results is clarely that patients with cardiovascular diseases are in bigest number 450 and in highe per cent 46.15%, followed from patients with rheumatoid diseases with 21.64% (211), patients with diabetes mellitus with 9.13% (89), patients with CSN diseases with 7.72% (46), and patienst with neuro-psyhiatric diseases with 4.62%(45).



Graphic 3 Patients which suffer from different systemic diseases

In table 1 are showed patients with risk diseases treated in our clinic. From results of this table we see that patients with cardiovascular diseases in 341 (75.78%) cases take therapy, meanhwile 109 (24.22%) cases do not take therapy, followed from patients with rheumatoid diseases, which in 76 (30.02%) cases take therapy, and 135 (63.98%) cases do not take therapy, patients with other pathologies in 61 (45.52%) cases take therapy, and in 73 (54.48%) do not take therapy, patients with diabetes mellitus are under therapy in 100%, patients with CNS diseases in 100% with therapy, and patients with neuro-psyhiatric diseases also in 100% under therapy.

Table 1 The per cent of patients with risk diseases

Pathology	Number	Per cent	With therapy		Without therapy	
			Number	Per cent	Number	Per cent
Cardiovascular diseases	450	46.15%	341	75.78%	109	24.22%
Neuro-psyhiatric diseases	45	4.62%	45	100%	0	0%
Diabetes mellitus	89	9.13%	89	100%	0	0%
Rheumatic diseases	211	21.64%	76	36.02%	135	63.98%
Diseases of CNS	46	7.72%	46	100%	0	0%
Others	134	13.74%	61	45.52%	73	45.48%
Total	975	100%	658	67.49%	317	32.51%

DISCUSION

Successful healing of those diseases which influence in the prognosis of each prosthetic appliance, must be the front line during treatment of patients from the side of prosthodontist. The abovementioned results showed that despite different diseases, the need for treatment and rehabilitation of stomatognatic system remain like constant challenge for dentists. This problem was studiet and for that have had debated different authors, so Bokhari *et al* (2009), in their study about uncompensated missing teeth by patients with cardiac diseases in Penjab Institut, ascertain that by stady population 86.95% were withaut prosthetic appliances for their missing teeth, meanhwile 12.65% of patients with cardiac diseases and 13.57% healthly patients have prosthetic appliances for their missing teeth. Also, Sotosek *et al* (2007), in their study about the general health status of stomatological patients, from 2045 examined pacientse has arrived in result that 30.1% of them suffer from any systemic disease, and 42,2% of them are under therapy.

From systemic diseases, Akar *et al* (2010), cardiovascular disease have found in 14.7% of cases, meanhwile in 3.6% of cases have faund diabetes. In Germany according Ueta *et al* (1993), the per cent of sickly with diabetes mellitus is from 4%

to 5%, with high participation of patients in age 50 years et ower. Fenlon, McCartan (1991), from examination of stomatologic patients in population of Ireland, underline that 10.4% of them are with cardiovascular diseases.

CONCLUSION

1. The difference in per cent by results of different authors concerning the risk diseases by examined stomatological patients can be explaned with different standards which exist in different countries from which came authors and studies.
2. The knowledges about taking therapy from patients with risk diseases are importante becouse of possible interaction between stomatological intervention, anesthesya and drugs prescribet from the side of dentist.
3. Havin data for risk diseases, there is possible planification of intervention in stomatognathic system.
4. The value of t-test=11, and the value of coeffitient of probability $p<0.01$, showed for a high statistically and importante significance of results between taking and withaut taking therapy according the risk diseases by examined patients.
5. According to the value of coefficient of correlation (Rxy= 0.155), could be seen that by our results exist a wakened direct connection between the per cent of patients with systemic diseases which are treated with therapy, and patients with systemic diseases not treated with therapy.

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