



## Original Article

# The Frequency of Systemic Diseases in Patients Refer to Oral Medicine Department, Qazvin University of Medical Sciences from 2009 to 2010

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### ABSTRACT

Systemic diseases have a direct effect on dental tissues and the levels of tolerance for dental interventions. The purpose of this study is the studying of Prevalence of systemic diseases and their relationship with oral diseases. In this cross-sectional study, all available files in the archive of Qazvin Dental School were evaluated by census from 2009 to 2010. For Descriptive analysis of data, statistical parameters such as mean, standard deviation and range were used.  $X^2$  correlation and One Sample T test were used for estimation of correlation between characters and significance difference of individuals in each character respectively. From 2083 patient records reviewed, males were 63 percent and females were 37 percent (mean age  $55 \pm 11$  years). Approximately 81 percent of people had diploma and lower diploma degree. Age range 20-49 years, 83.3 percent ( $n = 1736$ ) subjects were included. 67.5% of those were without medical history and other subjects 32.5% had mental and physical illnesses in different cases. Prevalence of systemic diseases among the population was 32.5%. six the most common disease were heart- coronary disease (5.8%), gastrointestinal diseases (5%), diseases of the glands (4.7%), types of allergies (3.4%), internal disease (3.1%) and renal disease (2.4%) respectively. Cancer disease (0.1%) had the minimum frequency in this study. Among patients referred to the dentist, a significant percentage of patients had systemic disease. This case indicates the importance of education and leading of dental students in how their performance and behaviour with patients.

**Key words:** systematic disease, frequency, dental school.

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### INTRODUCTION

Systemic diseases are diseases that can generally affect the body [1]. It was well proven that comprehensive clinical history taking by a dentist is preferred on dental care [2]. Furthermore, the modifying of the treatment process of oral - dental diseases (in clinical conditions) will be required for better and safer provision of oral care for patients [3], Because clinical conditions may be due to direct effects on dental tissues, immune system and interactions with medicines would delayed oral-dental care. In addition, systemic diseases reduce the patients' tolerance for dental interventions or their ability to adequately protection the mouth and teeth [2]. Prevalence of systemic diseases, especially among people over 65 years old in the public sector (35.2% vs. 28.1%) was significantly higher than the private sector. Also, prevalence of diseases with multiple drug treatment in the public system was higher than the private system (5.7% vs. 2.7%) [4]. Systemic diseases prevalent in India Trinidad and Tobago have been reported 42%, so hypertension 12.6%, diabetes 6.1%, asthma 5.8%, arthritis 4.7% and various allergies 8.3% had the most frequency. Also, significance differences in sex, racial and age were evident for some diseases [5]. Many people are suffering from one or more systemic disease, but they are unaware of its existence itself. Javier et al (2012) indicated that many people referred to the dental clinic are unaware of the existence of high blood pressure in their bodies. They showed that 29% of patients in clinics are suffering from high blood pressure. This was more evident among patients older than 45 years. Prevalence of systemic

diseases varies according to geographic location, ecological conditions and population genetic structure. The survey of systemic diseases in Jordan showed that the most common diseases was Gastrointestinal disorders (11.9%), other diseases such as bleeding disorders (9.3%), kidney disorders (8.7%), respiratory disease (8.3%) and hypertension (6.4%), were next in ranking respectively (6). Prevalence of systemic diseases sometimes associated with the sex of individuals. In this case, can cite the study of Radfar et al (2007) in the Buffalo University, New York [3]. They showed that often ratio of systemic diseases in women and men are 2 to 1. Among the systemic diseases in most human societies, cardiovascular disease (especially Hypertension) had the higher prevalence [7]. Therefore adopted an appropriate treatment in dental clinic patients was quite impressed with systemic disease. For this reason, determine the type and frequency of these diseases will be Dental Research priorities and the goal of this research.

## MATERIALS AND METHODS

This research was designed in a retrospective cross - sectional study. Medical records of all patients referred to the Qazvin Dental School, was studied from 2009 to 2010. In this study, the required information was extracted from patient files and was recorded in the questionnaire. This information-included age, sex, occupation, education, smoking, medications and the probable diseases listed in the file. Initiation data were entered in SPSS and statistical analysis were used. The mean, standard deviation and range were used for descriptive statistical analysis of data. The X<sup>2</sup>correlation was used to calculate the correlation between characters.

## RESULTS AND DISCUSSION

From 2083 cases reviewed, 63% (1321 cases) of women and 37 percent (721 cases) was associated with men. The age average of subjects was 55 ± 11 years, the minimum and maximum age were 3 and 87 years respectively those 20-29 years old age group with 31.9% frequency (664 cases) had the most frequency. 30-39 years old age group with a frequency of 29.1% (606 cases) were the next order. The 80-89 years old age group with 0.2% frequency (4 cases) had the lowest frequency. In assessment of education subjects, 47.9% (997 cases) had graduate degrees below that were the most frequency. Diploma degrees 33.6%, bachelor's degrees 17.9, master degrees 0.4% and PhD 0.2% were obtained. 67.5% of people (1407 cases) had no medical history and they had no physical and psychological discomfort in the time to clinic (Table 1). Others 32.5% (676 patients) had various cases of physical and mental illnesses. 5.8% of patients (121 people) had cardiovascular diseases that had the most frequency. Digestive diseases with a frequency of 5% (105 people) and endocrine diseases with a prevalence of 4.7% (97 patients) were second and third rank respectively.

214 patients had more than one different disease (Table 2). Gastroenterology disease with 1.78% had the most frequency. Interior and Allergy diseases with 1.68% and 1.34% were placed in the second and third order respectively. Skin disease had the lowest frequency (0.14%). 8% (165 people) have been smoking and the rest were not smokers. 26% of subjects (560 patients) had a history of drug use and the rest had no drug use history (table 3). Hormonal medication, levothyroxine, contraceptives, and anti-allergy with 62, 60, 55 and 67 cases respectively were the most prevalent among their medications. Other drugs had very low frequency. Cardiovascular disease in the age group of 40-49 years old with 2% (42 patients) had the highest frequency and endocrine disease among patients aged 30-39 years with a frequency of 1.7% (35 cases) were placed in second order. X<sup>2</sup>correlation between age and disease was significant (P-value= 0.0042 and X<sup>2</sup>=431.29). This result suggests that the type of disease and age are highly correlated and can be referred that there was a specific disease for any age group. Frequency of endocrine disorders in women with 4.3% (90 patients) had the highest prevalence and prevalence of cardiovascular disease among females with a frequency of 4.1% (86 patients) was placed in second order. Generally, in all disease groups, frequency of women was higher than that in men. Pearson X<sup>2</sup>correlation between the gender of the patients and disease groups was significant (P-value= 0.0015 and X<sup>2</sup>=100.425). This result suggests that there was a strong correlation between disease and sex and can be referred that there was particular disease for each gender. Between patient education and disease groups, significant relationship was not obtained (P-value= 0.92 and X<sup>2</sup>=109.77). This result suggested that there was no correlation between education level of people and the type of disease and education level was independent from the type of disease.

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Table 1: The frequency of medical history

Medical history	Frequency	Percent
Disease-free	1407	67.5
Allergy	71	3.4
Psychiatry	38	1.8
Interior	66	3.1
Cardiovascular	121	5.8
Endocrinology	97	4.7
Gastroenterology	105	5
Blood	17	0.8
Kidney disease	50	2.4
Joints	11	0.5
Neurology	16	0.79
Infectious diseases	30	1.4
Skin	17	0.8
Cancer	3	0.1
Respiratory	29	1.3

Table 2: The frequency of the second medical history

Medical history	Frequency	Percent
Disease-free	1869	89.7
Gastroenterology	37	1.78
Interior	35	1.68
Allergy	28	1.34
Cardiovascular	28	0.67
Kidney disease	14	0.58
Respiratory disease	12	0.53
Blood	11	0.48
Psychiatric illness	10	0.48
Endocrine disease	10	0.48
Neurological disease	9	0.43
Infectious disease	7	0.34
Joint disease	6	0.29
Hereditary disease	4	0.19
Skin disease	3	0.14

Table 3. Frequency of high consumption of medicines in patients

Medicine	Frequency	Percent
Thyroid medicine	67	3.22
Hormonal medicine	62	2.98
Levothyroxine	60	2.88
Contraceptive medicine	55	2.64
Atenolol	33	1.58
Fe	33	1.58
Corticosteroids	21	1.01
Propranolol	21	1.01
Ranitidine	21	1.01
Cardiovascular medicine	18	0.86
Diabetes Drugs	16	0.77
Ca	14	0.67
Blood Pressure medicine	14	0.67
Anti allergy medicine	12	0.58
Omeprazole	10	0.48
Aspirin	9	0.43
Methimazole	8	0.38
Anticoagulant	8	0.38
Prednisolone	7	0.34

The most important cases in this research are the correlation of the systemic diseases prevalence with age group, gender and graduating levels of patients that was studied little and indirect by other researcher. Results of this research indicated that types of allergies 1.3% and digestive diseases 1.5% in age group of 20-29 years old, endocrine disease with 1.7% and digestive diseases with 1.5%

in age group of 30-39 years old, cardiovascular diseases with 2% and internal frequency with 1.7% in age group of 40-49 years old, had the highest frequency. According to the obtained results, there was highly correlation between diseases and patient's age, therefore for each age group, certain diseases can be imagined. For comparison, there was no similar study found that it directly classified diseases been according to age group, but in results of Talebi et al (2004) about oral health status of children 2-12 years old with cardiovascular disease indicated that there was no significance difference between patients and control group. These results were consistent with our results in frequency of cardiovascular disease among children 1-9 years old. In our research, there was found no cardiovascular disease among children 1-9 years old. However, frequency of cardiovascular disease among children 10-19 years old was 0.1% that needs more research [8].

Generally, in all disease groups, frequency of women more than men so that endocrine disease with 4.3% and cardiovascular disease with 4.1% had the highest frequency in women. Radfar et al (2007) reported these results too that frequency of women was twice as many men in most diseases that needs more research in this case.

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