PREVALENCE AND CLINICAL SIGNS OF XEROSTOMIA IN DENTURE WEARERS

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ABSTRACT

Aim of the study The aim of this study was to asses xerostomia prevalence in a group of removable denture wearers and association of dry mouth sensation with age, sex, cigarettes and other general diseases.**Material and methods** This study was conducted on a group of patients who presented in The Faculty of Dental Medicine, for a period of two years. These were 68 patients, including 38 men and 30 women..**Results:** This study, which was based on a questionnaire with multiple elements and detailed history and clinical examination, provides data on a sample of dry mouth edentulous population of different age groups, with different combinations of dentures. **Conclusions**: The results of this study confirm the results obtained in previous studies on the interrelationship between xerostomia and the general factors such age, sex, systemic diseases, etc. In this study, dry mouth proved to have a significant impact on the normal course of oral function in denture wearers patients.

Key words: xerostomia, denture wearers

INTRODUCTION:

Xerostomia is a sensation of a dry mouth caused by a change in saliva consistency or a reduction in saliva production, occurs when saliva volume decreases by 50% or more. Prevalence is approximately 30% in people aged 65 and older.

MATERIAL AND METHOD:

This study was conducted on a group of patients who presented in Prosthetic Clinic Mihail Kogalniceanu, for a period of two years. These were 68 patients, including 38 men (56 %) and 30 women (44%) with mean age of 59.5 years. The group of patients was clinically examined after a complete history of the disease, assessing the need for prosthetic treatment and replacement of complete dentures.In this assessment were classified two categories
1.not satisfactory and requires replacement
2.satisfactory

Criteria for evaluating the dentures were made and modified by Kapur (1967), Rayson et al. (1971) and by Bernier et al and were:

◊ stability: stability of each denture was evaluated and classified as follows:
good- very mild or no tilting present at digital pressure on denture
satisfactory- moderate tilting present at digital pressure on denture
weak- accentuated tilting present at digital pressure on denture

◊ retention: retention of each denture was evaluated on the following criteria:
good- good vertical tensile strength and sufficient resistance to lateral forces
satisfactory- mild to moderate resistance with resistance to vertical traction and no resistance at lateral forces
weak-no resistance to vertical traction and no resistance at lateral forces

◊ occlusion: was classified into the following two groups:
good- muscle and intercuspal position coincides with a slight variation of 1-5mm

weak- the error between the two positions is less than 5mm

◊ articulation: was established by asking patients to achieve lateral movement of about 5mm, from habitual centric position. If denture remained in place, the articulation was good, if not considered poor.

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Dry mouth perception was determined using a questionnaire which reported more socio-demographic data such as age, sex, information about the number of cigarettes smoked per day, the presence of general diseases known in the literature as being related to xerostomia such as diabetes, hypertension,lupus erythematosus,

The positive response to at least one of the questions was considered to support the diagnosis of dry mouth. The questions were:

1.Do you usualy feel your mouth dry,?

2.Do you feel your mouth dry during meals?

3. Having trouble swallowing?

4. Do you drink liquids with meals to ease swallowing?

5. The amount of saliva that you have constantly is too small or you have not noticed this?

Clinical diagnosis of xerostomia was established on the basis of a series of clinical signs, used in literature, in like, as clinical signs of dry mouth.

◊ clinical examination of the oral mucosa revealed erythematous changes, fissured tongue or tongue papillae atrophy

► light palpation of the mucosa with the index pulp results in its adherence to the mucosa, rather than slide

► delay or lack of saliva from the salivary gland ducts of the parotid or submandibular after drying the opening hole glands using cotton pellet

The evaluation of dentures functions was performed in terms of their stability and occurrence of pain or not during the daytime, declaring patients / are satisfied, fairly satisfied or dissatisfied.

RESULTS AND DISCUSSIONS:

After examining the patients in the study group and centralize data obtained regarding smoking, 33 patients (47.5%) of patients said they were smokers, 21 (31.4%) of them former smokers and the rest of 14 patients are non-smokers (21.1%).

Most of the participants were found to wear both maxillary and mandibular dentures, meaning 36 (53.4%), other 19 (27.5%) were found to wear the maxillary denture and 13 (19.1%) wearers of mandibular denture.

From clinical evaluation of prosthetic patient study group showed that 22 patients (31.9%) were satisfied with their dentures and 68.1% were dissatisfied and eager to change dentures.

Tabel 1- distribution of study group by age

Study group-age	**Without xerostomia 70,1%**	**With xerostomia 29.9%**
40–49 years-8	6 *(75.9%)*	2 *(24.1%)*
50–59 years-22	16 *(71.6%)*	6 *(28.4%)*
60–69 years-23	15 *(64.3%)*	8 *(35.7%)*
>70years-15	11 *(74%)*	4 *(26%)*

► **age**: in terms of patient age, it does not seem to influence the sensation of dry mouth in the sense that both patients aged between 40 and 49 and those over 70 years had a percentage very close but we can

see growth the percentage of those with xerostomia, with increasing age.

Tabel 2- distribution of study group by smoking

Study group-smoke	**without xerostomia 70,1%**	**with xerostomia**
Current smokers-33	22(*69.4%)*	11(*30.6%)*
Former smokers-21	14(*66.4%)*	7(*33.6%)*
Non smokers-14	11(*77%)*	3(*23%)*

► smoking: in terms of smoking, both current smokers, as well as the current and former smokers were found to have similar percentages both in the absence and presence of dry mouth, as can be seen in the table above.

Tabel 3-distribution of study group by gender

Study group-gender	without xerostomia 70,1%	with xerostomia 29.9%
men -38	29*(75.1%)*	9*(24.9%)*
women-30	19*(63.9%)*	11*(36.1%)*

► **gender**: women have a greater impact of xerostomia, as can be seen from table 3 , the number of 19 women without dry mouth is lower than 29 men without xerostomia.

Tabel 4-distribution of study group by general condition

Study group-dentures	**Without xerostomia 70,1%**	**with xerostomia 29.9%**
bimaxillary-36	24(*67.5%)*	12(*32.5%)*
maxillary-19	12(*64.8%)*	7(*35.2%)*
mandibular-13	11(*85%)*	2(*14.9%)*

► general condition: in patients with impaired general condition was observed a very high percentage of patients with dry mouth caused by disease and medication compared to patients without impaired general condition.

Tabel 5-distribution of study group by functions

Patients satisfaction	without xerostomie 70,1%	With xerostomie 29.9%
Mastication		
disssatisfied-25	5(*21%)*	20(*72.8%)*
satisfied-8	2(*12.8%)*	6(*6,6%)*
fairly satisfied-35	23(*66.1%)*	12(*20,6%)*
Speech		
dissatisfied -10	2(*20.7%)*	8(*77,9%)*
satisfied -5	*9.4%*	*3,7%*
fairly satisfied -53	*69,9%*	*18,4%*
Taste		
unsatisfied -10	*20,7%*	*81%*
satisfied -6	*11%*	*1,5%*
fairly satisfied -52	*68,3%*	*16,9%*

► **satisfaction:** Table 5 summarizes the relationship between dry mouth and stomatognat system functions.It can be seen that most patients with xerostomia proved to be dissatisfied with the way dentures restore stomatognat system functionality in contrast with those without dry mouth where most declared himself fairly satisfied with prostheses.

Similarly, in table 6 was performed a correlation between dry mouth, denture stability and painful sensations occurring during mastication and speech , xerostomia is as expected accompanied with unpleasant symptoms and prosthetic instability.

Tabel 6-distribution of study group by functions

Patients	Without xerostomia 70,1%	with xerostomia 29.9%
Dentures stability		
Stable-42	38(*79%)*	4(*22%)*
Instable-26	3(*21%)*	*23(78%)*
Pain		
Yes-22	3(*15%)*	19(*73,5%)*

No-46	39(*85%)*	7(*26,5%)*
General satisfaction		
satisfied-11	10(91*,4%)*	1(*7,4%)*
Fairly satisfied-36	23(*65,2%)*	13(*23,5%)*
dissatisfied-21	3(*15,4%)*	18(*69,1%)*

This study, which was based on a questionnaire with multiple elements and detailed history and clinical examination, provides data on a sample of dry mouth edentulous population of different age groups, with different combinations of dentures.

The study showed that the vast majority of the study population had complete maxillary and mandibular dentures, and were current smokers aged 60 to 69 years.

There was a significant association between the prevalence of dry mouth and increasing age, however, the limited number of participants in the age group> 70 was probably a key factor in the low prevalence of xerostomia in group compared with other age groups.

Significant association between age and xerostomia reported in this investigation was supported by several previous studies.

Gender was also reported as an important element in increasing the prevalence of xerostomia and its accompanying signs. In the present study, although the number of men was higher than women, women were those who reported a higher number of xerostomia presence. This may be related to manifestations of menopause in women and that women have the tendency to report pain more frequently and also presence are more communicative regarding their health. Also, dry mouth can be accommodated and mental states such as anxiety or depression.

The results of this study are comparable with those of other studies that have reported a significant link between dry mouth and smoking. Patients with xerostomia, wear just mandibular removable dentures were much lower than the wearers of only maxillary removable denture or bimaxillary wearers. This may be on one side the consequence of the physical properties of saliva have much greater that have more influence on retention on the maxillary denture than mandibular Denture wearers satisfaction is a coordinated with many variables, which makes it hard to detect individuals at risk. This study found no significant differences in terms of patient satisfaction wearers of various types of dentures and their ability to carry out functions of the stomatognat system in relation to the present xerostomia,

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The results of this study showed that 76% of patients with dry mouth symptoms complained of prosthetic instability, compared with 21% of those without symptoms and 73.5% of those with

xerostomia reported the presence of painful phenomena, compared to 15% of those with dry mouth. It is important to note that the presence of prosthetic instability and hurt feelings in patients with xerostomia were mostly caused by defects of dentures and on the other hand, the analysis of unstable dentures of patients with xerostomia has not revealed any major prosthetic construction defect to justify the lack of stability. Lack of stability and retention causing serious behavioral problems in society, the patient being unable to carry out the functions of speech, mastication, physiognomy.

High prevalence of xerostomia among diabetics meets other previous studies that have shown that diabetic patients complete removable denture wearers have a combination of dry mouth and other oral and functional symptoms of xerostomia.

CONCLUSIONS:

1. The loss of teeth is one of the severe compromises of dental function. This is the equivalent of tooth mortality. Tooth loss reflects the attitude of patients, providers, availability and affordability of care and the prevailing mindset on dental treatment.
2. Dry mouth is a medical problem for elderly acrylic denture wearers and clinicians should be alert to possible examination under general and local factors that could cause this condition.
3. The results of this study confirm the results obtained in previous studies on the interrelationship between xerostomia and the general factors such age, sex, systemic diseases, etc. In this study, dry mouth proved to have a significant impact on the normal course of oral function in denture wearers patients.

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