



Prevalence of Xerostomia in Patients Referred to Shiraz Dental School, Shiraz, Iran during 2006-2013

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Dear Editor-in-Chief

Xerostomia (dry mouth) is dryness of the mouth that may be associated with a change in the composition of saliva or decreased salivary secretion. Saliva lubricates and protects the oral tissues against irritating agents and behaves as a buffer system to protect the mouth. It has a basic role in keeping the physical-chemical integrity of the enamel (1). Consequently, decrease in saliva results in dental caries, oral candidiasis, sialadenitis, dysgeusia, intraoral halitosis and dysphagia (2).

Xerostomia is a very common symptom with conservative estimate of about 20% in the general population (3). It is more common in mouth breathing and often is a common adverse reaction of many kinds of medications (4). Dehydration, radiotherapy and several diseases can bring about hyposalivation or a change in the consistency of saliva. Sometimes, the cause cannot be identified and the complaint may have a psychogenic reason. Diagnosis is based on history and clinical examination (1, 2).

Since the prevalence of xerostomia is different among populations, we examined its prevalence in patients referred to Dental School of Shiraz University of Medical Sciences.

In this cross-sectional study, the files of all visited patients who referred to Shiraz Dentistry School during 2006-2007 were collected. Among them, those who complained of xerostomia were selected for more evaluation. Patients were divided into 4 subgroups: (A) the patients aged between

20-40; (B) between 40-49; (C) between 50-59; and (D) more than 60. Any systemic findings, drug consumption and habits such as drinking alcohol, smoking and using narcotics were recorded. Ethical approval was obtained from Medical Ethics Committee of Shiraz University of Medical Sciences. The Persian version of Fox (5) questionnaire was used to determine xerostomia severity. Inclusion criterion was tongue blade positive test. Data were collected and were analyzed using SPSS software ver. 17 Inc., Chicago, IL., USA. Chi-square and Student test α was less than 0.05. During 7 yr of evaluation, 860 patients aged between 2-87 yr were visited in Oral Medicine Department, Shiraz Dental School, Shiraz, Iran. Among those, 67 (7.8%) subjects complained of xerostomia. 24%, 43% and 33 % of the subjects had mild, moderate and sever xerostomia, respectively. As shown in Table 1, revealed that xerostomia was more prevalent in females than in males ($P=0.001$). According to age distribution, the oldest group (D) suffered from xerostomia more than others did ($P=0.001$). A high correlation was noticed between psychological disorders and xerostomi. Patients with a history of tricyclic antidepressant consumption showed a higher rate of xerostomia than others did (28.4%). Antihypertensive medications usage also presented a positive relation with xerostomia (22.4%) followed by H2 Blocker's agents (16.4%), narcotics usage (3%) and unclassified drugs (49.3%).

Table 1: Relationship between age & sex in the studied patients

Parameter	Prevalence of xerostomia		P-value
	number	percentage	
Sex	female	54	P=0.001
	male	13	
Age (yr)	(A): 20-39	16	P=0.001
	(B): 40-49	8	
	(C): 50-59	16	
	(D): >60	27	

Many patients with xerostomia gave a history of diabetes mellitus (7.5%), anemia (10.4%), Sjögren's syndrome (6%), rheumatoid arthritis (6%), radiotherapy (4.5%) and other unclassified diseases (55.2%).

The present study revealed that 7.8% of people who referred to Shiraz Dentistry School reported oral dryness sensation. This result is almost in accordance with the prevalence of xerostomia was 10 % (6). However, the prevalence ranged from 0.9 to 64.8% in the selected population. Apparently, the wide range of prevalence of xerostomia in the literature may be attributed to the variations in the number and content of the questions and guidelines for the diagnosis of the disease. Xerostomia was more prevalent in 70–79 age-ranged patients than other (7). These findings accord with our results. The incidence of this condition increases with age (6), while other has shown no association between symptoms of xerostomia and age (8). This last finding does not agree with our results; patients over 60 suffered more from xerostomia than others. Finally, although xerostomia is common in elderly patients, it is not frequently assessed and treated at the right time. Since oral and general health is affected by serious complications of dry mouth, xerostomia has been decreased quality of life. Therefore, the assessment of salivary gland hypofunction, early diagnosis, prevention and treatment of xerostomia and its complications should be incorporated into everyday clinical dental practice.

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References

- Almeida Pdel V, Grégio AM, Machado MA, Lima AA, Azevedo LR (2008). Saliva composition and functions: a comprehensive review. *J Contemp Dent Pract*, 9(3):72-80.
- Nagler RM (2004). Salivary glands and the aging process: mechanistic aspects, health-status and medicinal-efficacy monitoring. *Biogerontology*, 5(4):223-33.
- Davies AN, Shorthose K (2007). Parasympathomimetic drugs for the treatment of salivary gland dysfunction due to radiotherapy. *Cochrane Database Syst Rev*, 18(3):CD003782.
- Boyce HW, Bakheet MR (2005). Sialorrhea: a review of a vexing, often unrecognized sign of oropharyngeal and esophageal disease. *J Clin Gastroenterol*, 39(2):89-97.
- Fox PC, Busch KA, Baum BJ (1987). Subjective reports of xerostomia and objective measures of salivary gland performance. *J Am Dent Assoc*, 115(4): 581-4.
- Lončar M, Mravak-Stipetić M, Risović D (2011). The effect of low level lasertherapy on salivary glands in patients with xerostomia. *Photomed Laser Surg*, 29(3):171-5.
- Mozafari PM1, Dalirsani Z, Delavarian Z, Amirchaghmaghi M, Shakeri MT, Esfandiyari A, Falaki F (2012). Prevalence of oral mucosal lesions in institutionalized elderly people in Mashhad, Northeast Iran. *Gerodontology*, 29(2):e930-4.
- Nederfors T (1996). Xerostomia: Prevalence and pharmacotherapy. With special reference to beta-adrenoceptor antagonists. *Swed Dent J Suppl*, 116: 1-70.