



## REVIEW ARTICLE

# DENTAL MANAGEMENT AND ORAL COMPLICATIONS IN ELDERLY

### ABSTRACT

People after reaching the age of 40 years, experience a progressive decline in homeostatic control in the ability to respond to stress and change. Today, there are more than 35 million people aged 65 and over in the United States. On the basis of the information provided, a dramatic increase is expected in the number of older adults in the world. Also, these older adults will need increasing levels of dental care in the years to come. Therefore dentists must be aware of the special management needed to treat this group of patients. The aim of this paper is to review dental management and oral complications of older adults.

**Key words:** Dental management, Oral complications, Older, Adults.



## DERLEME

# YAŞLI ERİŞKİNLERDE DİŞ TEDAVİSİ VE ORAL KOMPLİKASYONLAR

### Öz

İnsanlar 40 yaşından sonra stres ve değişikliklere yanıt verme yeteneklerinin homeostatik kontrolünde progresif bir azalma yaşarlar. Amerika Birleşik Devletleri'nde 65 yaş ve üzeri 35 milyondan fazla kişi bulunmaktadır. Elimizdeki bilgilere göre dünyadaki yaşlıların sayısında dramatik bir artış olması beklenmektedir. Bu daha yaşlı erişkinlerin, diş sağlığı açısından sonraki yıllarda gittikçe daha fazla bakıma ihtiyacı olacaktır. Bu nedenle diş hekimlerinin, bu tür hastaların tedavisi için gereken özel yöntemler konusunda daha fazla bilgi sahibi olmaları gerekmektedir. Bu makalenin amacı, diş hekimlerinin daha yaşlı erişkinlerde diş hastalıklarının tedavisi ve oral komplikasyonları gözden geçirmektir.

**Anahtar sözcükler:** Tedavi ve Kontrol, Oral komplikasyonlar, Yaşlılar, Erişkinler.

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## INTRODUCTION

Aging is a worldwide phenomenon (1). The proportion of older people continues to grow worldwide, especially in developing countries (2). These people have longer and healthier lives than the others. The average US life expectancy was 47 years in 1900; by 2000, it had increased to 74 years. In the old population, the number of adults with acute and chronic illnesses increases. The use of medications also increases with age (1). The number of people with 65 years ago and older in USA is 35 million cases. On the basis of the information provided, a dramatic increase is expected in the number of older adults in the world (3,4).

After reaching the age of 40 years, people experience a progressive decline in homeostatic control in the ability to respond to stress and change. The WHO defines the population between 65 to 75 years old as elderly. The term old is used for individuals between 76 and 90 years (5,6).

## ORAL COMPLICATIONS

Age-related changes in the mouth include slower production of dentine, shrinkage of the root pulp, and decreasing bone density of the jaws. Taste and smell decline progressively with advancing age, and thresholds for salt, sweets, and certain proteins get an increase (7-11). Food may taste bitterer, and more sugar is required. Salivary gland function usually does not change with age, and the loss of bone and tongue muscle texture makes the tongue appear to be enlarged (7). Also oral cancers squamous cell carcinomas are reported in persons older than 50 years of age. Hodgkin's disease occurs in two peaks: early adulthood, and around the fifth decade of life. Non-Hodgkin's lymphoma is reported in all age groups. Benign and malignant salivary gland neoplasms are more common in older adults (4,7,9,12,13).

Tooth loss in older adults is caused by periodontal disease and dental caries. Recurrent caries (involving margins of restoration) and root surface caries account for the vast majority of lesions found in older adults (14-17). These include diminished tooth sensation, root exposure, gingival recession, of saliva, and decreased salivary flow (18,19). The most common age-related changes in teeth are occlusal attrition, pulpal recession, fibrosis, and decreased cellularity. With aging, the teeth undergo staining, chipping, and cracking, and they become more susceptible to fracture (19). Older adults often fe-

el no pain with advancing caries and show evidence of gingival recession and loss of periodontal attachment and bony support (18).

Many older adults report dry mouth, and some have diminished salivary output. Systemic diseases such as diabetes mellitus can cause dry mouth. Radiation therapy for head and neck cancer can decrease salivary flow. Medications taken by older adults also can cause this problem. More than 400 drugs have been reported to cause dry mouth (18). The following groups of drugs have been noted to cause xerostomia: tricyclic antidepressants, sedatives and tranquilizers, antihistamines, antihypertensives, cytotoxic agents, and antiparkinsonian drugs (19). Prolonged salivary dysfunction leads to numerous oral and pharyngeal problems in older adults. These problems include dry and friable oral mucosa, fissured tongue, decreased antimicrobial activity, diminished caries, periodontal disease, fungal infection, burning, pain, and difficulty with mastication and swallowing (19). Changes in mastication, swallowing, and oral muscular posture occur with aging. These changes may not have adverse effects on healthy older adults. However, when compounded by systemic diseases (e.g., stroke, Parkinson's disease) and drug regimens, serious complications associated with chewing and swallowing, such as choking or aspiration, may occur (8,19). Denture related lesions are most common. Lesion prevalence increased with advancing age, wearing of dentures, and use of tobacco (9, 20, 21).

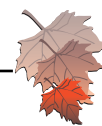
## DENTAL MANAGEMENT

As life expectancy increases, more attention is being paid to disease prevention so that the quality of life in old age can be improved. However, link among oral health, systemic disease, and quality of life in the elderly needs to be better-defined. Dental health-care workers must be cognizant of the oral conditions associated with systemic disease and the use of medication, a major concern in older adults.

## PATIENT MANAGEMENT

An older adult with vision loss may be unable to fill out a health questionnaire. The history of the patient should be obtained in whatever way possible; such as by oral interview.

The clinical examination may be more difficult in some older adults. Some patients may have difficulty in opening their mouths, being able to hold still, and following the dentist's instructions regarding mouth or head positioning. The



dentist may need to spend additional time and use sedative agents to complete the clinical examination. Blood pressure should be assessed on all new dental patients, including those already identified as hypertensive, and at all recall appointments. In this type of people the current upper limit for normal blood pressure is 140/90 mm Hg (22).

Patients with congestive heart failure or chronic obstructive pulmonary disease may have difficulty breathing in a supine position during dental work. These patients fare much better if they are placed in an upright or semisupine position (4).

Orthostatic hypotension at this time may lead to syncope (fainting) and a fall that could cause serious injury. Patients should be placed in an upright position slowly and should be allowed to sit for a minute; then, they should be supported by the dentist or dental assistant when getting out of the dental chair (23). As a general guideline, no more than two cartridges of 2% lidocaine with 1:100,000 epinephrine should be used during any dental appointment in older adults with cardiovascular disease (23).

Selection of a postoperative oral analgesic requires knowledge of systemic health and medicines taken by the older adult patient. These agents should not be used in older adults with gastrointestinal disorders such as ulcers, gastritis, or hiatal hernia (24). NSAIDs, aspirin, and acetaminophen in high doses should not be used with patients who are taking Coumadin or other anticoagulants. Tylenol (acetaminophen) should not be used in patients who have liver or kidney disease (25-28).

Older adults with specific cardiac lesions who are at risk for bacterial endocarditis should receive prophylactic antibiotics for most dental procedures. Older adults who are about to receive dental implants must use antibiotics at the time of surgical placement of the implant, to prevent postoperative infection and failure of the implant (4,29).

## CONCLUSION

It is necessary to recognize the risk factors, to treat the oral diseases properly and to organize an effective oral/dental care system for the older adults. Dentistry should provide an aggressive educational program in evaluation of old population by a dentist. Other health care professional need to provide older adult patients with an oral screening assessment and must refer those with oral disease to dentistry.

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