

UNIT NO. 4

AGEING AND ITS INFLUENCE ON THE ORAL ENVIRONMENT

Dr Hilary Thean; Dr Wong Mun Loke

ABSTRACT

Failing oral health is not a natural function of age and it is possible for one to have a healthy set of teeth and gums to last a lifetime. Ageing exerts physiological changes in the oral environment predisposing the elderly to dental problems. Root caries is common in the elderly population especially since more of them are retaining their natural teeth for a longer time. Tooth loss is a common problem among older adults. Halitosis is usually a sign of poor oral hygiene but can also be a symptom or early sign of sinus or gastric problems. Untreated dental disease is very common among those over 65 years old, ranging from inflamed gums under old, dirty or ill fitting dentures, to decayed root stumps, periodontitis, and ulcers.

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INTRODUCTION

Growing old or ageing is a natural passage of life. This is usually accompanied by physiological changes within the body including the oral environment. Older does not necessarily mean sicker as far as health is concerned. Therefore, one does not need to grow old and become sick before one dies. Such a notion also holds true for dental disease and oral health. Failing oral health is not a natural function of age and it is possible for one to have a healthy set of teeth and gums to last a lifetime!

Improved medical care and disease preventive efforts over the last four decades have led to significant increases in life expectancy in Singapore. Today, women have a life expectancy of 82 years and men 80. There have also been major shifts in the leading causes of death for all age groups, including older adults, from infectious diseases and acute illnesses to chronic diseases and degenerative illnesses. Cancer and heart disease are now the leading causes of death in Singapore as compared to infectious diseases such as Tuberculosis in the past.

This change in demographics has a significant impact on oral health and oral healthcare. In the past, teeth were not required or expected to stay in the mouth for 80 years because people often passed on before that. Previously, extractions were the only option for treating toothaches. This was followed by

prosthodontic replacement with plastic or porcelain teeth in the form of dentures. With increased dental awareness and the advent of sophisticated dental technology people are retaining their teeth longer and their remaining teeth have probably had some prior dental treatment.

PHYSIOLOGICAL CHANGES IN THE ORAL ENVIRONMENT ASSOCIATED WITH AGEING

Some of the key physiological changes which take place in the oral environment as one ages include:

- Hardening and increased brittleness of teeth and consequently increased susceptibility to fracture.
- Decreased height and density of alveolar (jaw) bone.
- Increased tooth wear (e.g. posterior teeth look flattened; teeth become more sensitive).
- Loss of elasticity of oral mucosa due to diminished blood supply and atrophy of epithelial cells.
- Diminished taste and neuromuscular function resulting in compromised chewing, digestion and swallowing.

Indirectly related to the oral health are other physiological changes that affect one's ability to care for oneself. For example, a decrease in manual dexterity, visual acuity, muscle strength and fine motor movements all contribute to deterioration in oral hygiene and a consequent increase in the incidence of dental caries and periodontal disease.

OVERVIEW OF COMMON DENTAL ISSUES ASSOCIATED WITH THE ELDERLY

Saliva Flow and Composition. Adequate saliva is an indication of good health. It shows that the body is adequately hydrated and there are no medications or other predisposing factors that are affecting that function. Salivary flow and composition is also sensitive to mood and body changes. In a healthy person, abundance of saliva, with the correct composition of enzymes, immunoglobulins and buffers, keeps the integrity of the oral mucosa and teeth and prevents harmful bacteria from entering the body.

Medications such as anti-hypertensives, anti-depressants, anti-histamines, anti-coagulants, anti-cholinergics and anti-psychotics can cause xerostomia. Many elderly individuals are on one or more of these medications for the treatment of chronic disease such as hypertension.

The lack of saliva can affect speech, health of the oral mucosa and increase the risk of dental caries.

HILARY PIK YEN THEAN, Senior Lecturer, Department of Restorative Dentistry, Faculty of Dentistry, National University of Singapore

MUN LOKE WONG, Deputy Director, Youth Health Programme Development 1, Youth Health Division, Health Promotion Board

Dental Caries. This is usually brought under control by adulthood and this continues to be so as one ages unless there is an onset of risk factors such as xerostomic medications or a reduction in manual dexterity; mobility or vision.

Root caries are also common in the elderly population. This is because the gingival tissue (gums) tend to recede with age thus exposing part of the root surface. This root surface is usually protected from the oral environment by the gingiva but with gingival recession, it is now exposed. Root surfaces are softer than the tooth because it is not covered by a tough shell of enamel. This makes the root more susceptible to dental caries, erosion or abrasion.

Periodontal Disease. This is the most common dental disease of adulthood in Singapore. Generally, the disease slowly progresses and its often painless onset is an understatement of the devastation it can cause. Even in well persons, it is common to find some mild manifestation of periodontal disease in the form of inflammation or slight bleeding of the gingival tissues in one or two areas during toothbrushing.

Tooth Loss. This is a common problem among older adults. Not every missing tooth needs to be replaced but if a person has missing teeth it will be good to refer him/her to a dentist to check if the missing teeth are significant for function and requires replacement. Such a visit to the dentist can also help to ascertain if the teeth has been broken with the root still buried under the gingiva. This is important because such a buried root may be a focus for infection.

Halitosis. This is usually a sign of inadequate oral hygiene but can also be a symptom or early sign of sinus or gastric problems. It can also be caused by the diet consumed. Patients presenting with halitosis should be encouraged to locate the cause of it.

Untreated dental disease. This is very common among those over 65 years old. This can range from something apparently harmless such as inflammation under old, dirty or ill fitting dentures to more debilitating conditions such as decayed root stumps, periodontitis, ulcers and malignant tumours.

LEARNING POINTS

- **Failing oral health is not a natural function of age and it is possible for one to have a healthy set of teeth and gums to last a lifetime.**
 - **Ageing exerts physiological changes in the oral environment.**
 - **Root caries is common in the elderly population especially since more of them are retaining their natural teeth for a longer time.**
 - **Tooth loss is a common problem among older adults.**
 - **Halitosis is usually a sign of poor oral hygiene but can also be a symptom or early sign of sinus or gastric problems.**
 - **Untreated dental disease is very common among those over 65 years old.**
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