Are We Doing Enough for the Geriatric Patient?

"The real voyage of discovery consists not in seeking new landscapes but in having new eyes."

—Marcel Proust

Practicing dentists see a lot of dental disease and associated sequelae. Dental caries is the most common, with the elderly—particularly the frail—being the most vulnerable patient cohort. On a routine basis, we remove caries, consider appropriate restorative materials or tooth replacements, and apply with precision and efficiency an esthetic and, we hope, enduring result. Yet, do we truly appreciate the costs, risks, and persistence of the caries problem as a global issue, or how debilitating caries is to the geriatric population? Do we embrace current strategies for prevention? Or are we so immersed in our daily clinical activities that we fail to see the enormity of the caries problem or the potential of conservative management?

This editorial poses three questions related to the management of caries in the elderly. First, do we fully appreciate the economic burden of managing caries? Second, do we assign appropriate caries risk potential when we assess and create treatment plans for our geriatric patients? Third, do we appreciate that caries in the elderly requires unique management strategies? The answers beg the larger question: as a profession, are we doing enough to mitigate the burden of caries in the elderly? Economic, professional, and moral imperatives demand that we try to do more.

The annual economic liability of dental diseases worldwide has been estimated at $298 billion, or about 4.6% of total global health care costs.[1] Dental diseases are collectively the fourth most expensive noncommunicable disease to treat in most industrialized countries, and one of the most prominent noncommunicable diseases worldwide, following cardiovascular disease, diabetes, cancer, and chronic obstructive pulmonary disease.[2,3] In 2010, the Global Burden of Disease Study reviewed the prevalence of 291 diseases from 1990 to 2010 and determined that untreated caries in adults was the most prevalent condition, affecting 2.4 billion people, or 35% of the world's population.[3] Caries is not a problem we can dismiss as an issue of patient compliance; rather, it is a public policy and clinical management issue requiring a renewed commitment from the dental profession.

Caries differentially impacts lower socioeconomic groups and socially isolated groups, making the growing elderly population especially vulnerable. The percentage of the population older than 65 is increasing in industrialized countries. Moreover, the elderly population is retaining more of their teeth.[4] As a result, we have seen a general trend of increasing incidence of caries in the elderly, with a peak at approximately age 70, mostly related to gingival recession and root caries.[5] Root caries occurs eight times more frequently in the elderly than in young adults,[6] and overall caries risk in the elderly is equal to or greater than the risk in school-age children.[7] Yet, we likely do not assign appropriate caries risk when we create treatment plans for elderly patients.

Overall caries risk among all age groups is generally underestimated,[8] and the elderly are less likely to receive a caries risk assessment than younger adults.[9,10] In a recent 7-year university study of over 20,000 patients, those aged older than 65 years were less likely to receive a caries risk assessment than younger age groups.[9] This failure to engage the elderly may be related to ageism, lack of understanding, or negative attitudes toward the elderly that are prevalent among health care workers.[11,12] Clinicians also consistently underestimate the therapeutic potential of conservative interventions such as toothpaste with 5,000 ppm fluoride or fluoride varnish.[8] It is quite probable that we also underestimate the caries risk potential after common procedures in the elderly, such as fixed dental prostheses or removable dental prostheses, as these procedures significantly increase the risk for caries on abutment teeth.[13–15] Our professional obligation to the elderly should include appropriate caries risk assessment of pretreatment status and the added risk of planned restorative interventions.

Preventive strategies in the elderly are efficacious since root caries are more responsive than coronal caries to conservative management.[16] For example, the application of 5,000 ppm fluoride twice daily has been shown to reverse many root caries lesions.[17] In addition, the use of specific agents such as triclosan-containing toothpastes dramatically limits recurrent caries around crowns over a 3-year period.[18] The application of fluoride varnish at regular intervals has also shown efficacy in preventing root caries.[16] Fluoridated water for the elderly has been shown to significantly increase the chances of retaining more teeth,[19] and lifestyle changes can decrease caries. For example, dietary compliance has been shown to decrease caries by 30% compared with participants not following dietary guidelines.[20] We need to be aggressive in supporting preventive interventions in

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public policy and clinical management strategies to decrease the morbidity associated with caries in the elderly.

The profession is confronted with compelling challenges when treating elderly patients—adherence, xerostomia, high-carbohydrate diets, diminished dexterity, existing compromised dentition, and numerous comorbidities. However, prevention, counseling, and reinforcement strategies can decrease the caries burden among our neediest and most vulnerable patients. The prevention strategy is especially critical to reinforce in dental education since new dental graduates will encounter more elderly patients with caries and other dental disease sequelae. Our profession must commit to new eyes to manage the elderly dental predicament.

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