

Editorial

Oral and Systemic Health in the Elderly

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The oral cavity undergoes essential age-related changes involving the mucosa, the dental and periodontal tissues, and the musculoskeletal system. In explain in detail, the oral mucosa thins and becomes less elastic and permeable, secondary to the decrease in epithelial keratinization and the degeneration into fibrosclerotic collagen of connective tissue reticular and elastic fibers. Arteriosclerosis of small arteries and arterioles perfusing soft tissues and a decreased volume and number of capillaries is commonly detected. Adipose tissue atrophies change the face's morphology and determine the emergence of salivary glands [1,2]. Additionally, the salivary glands may undergo senescence atrophic processes, frequently determining hyposcilia, which is further worsened by pharmacodynamics or side effects of certain drugs [1,2]. Since the secretion of an adequate amount of saliva assists in properly performing oral functions, including mastication, and speech articulation, its age-related flow rate reduction also diminishes swallowing efficiency. Similarly, gustatory and olfactory sensitivity is also reduced in many cases. Concomitantly, the alveolar bone may undergo progressive resorption resulting from periodontitis and tooth loss [3,4].

Indeed, despite progress in dentistry and the recent evidence revealing that tooth loss generally occurs later in life, edentulism remains a major problem in older people [1]. Natural teeth correlate with higher life expectancy, and chewing activity is considered beneficial for cognitive function [1]. As a counterpart, tooth loss significantly impairs masticatory performance and may cause unconscious food intake modifications, often leading to skipping meals and subsequent malnutrition. Indeed, along with the described taste and smell hypofunction, systemic diseases affecting eating habits and dysfunctions of the cognitive and affective spheres [5,6], the impairment of the early digestive tract may be considered the leading cause of limited quality and quantity of nutrition [7]. Additionally, tooth loss may impede social activities due to poor oral appearance, loss of self-esteem, and possible embarrassment, thus contributing to loneliness and further social isolation of the older subjects.

Age-related changes in the oral cavity, combined with general health status deterioration [2,4] and polypharmacy [8–10], may constitute the starting point for the onset of various oral pathologies. Coherently, apart from frequent edentulism and dry mouth, the available evidence on the oral health among geriatric subjects reveals a worrying situation, as the augmented prevalence of dental caries increased by 60%, along with oral infections, oral cancer, and periodontitis [5,8,11,12]. Moreover, dental abscesses and periodontitis have been directly involved in infectious diseases in distant organs [4]. In addition, several systemic inflammatory, degenerative, and neoplastic diseases [4] seem to be related to periodontitis, as well as oral and periodontal manifestations of systemic conditions, diseases, and disorders that have been widely described [8] in geriatric patients. Oral–systemic interconnections may rely on the strict relationship between oral, gut, and lung microbiomes since the oral cavity constitutes access to the digestive and respiratory systems, on immune response, and, above all, on local and systemic inflammation [13].

Furthermore, coupled with age-related pathologies, cognitive decline, and disabilities, several unhealthy lifestyles, mainly smoking, alcohol consumption, and incorrect oral hygiene habits, also affect oral health conditions in the geriatric population [8]. Specifically,



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the main reasons most older adults are unable or unwilling to take care of their oral cavity [14] may be ascribable to the high cost of dental care, fear of having to endure discomfort or during dental procedures, prioritization of other medical care, lack of self-sufficiency not allowing appropriate oral hygiene procedures, as well as psychological factors related to laziness, listlessness, depression, and lack of motivation to maintain a high standard of one's quality of life and self-care.

The advancement of medicine has reduced mortality rates; thus, 1 in 11 people is estimated to be at the age of 65 or more, with a continuously anticipated increase in the elderly population [2,7,8,14]. Consequently, the need for elderly dental care has escalated, and dentists and other oral healthcare workers should increase their awareness of common oral health conditions and pathologies in geriatric patients and deepen their knowledge of interconnected oral and general health to provide successful oral, periodontal, and dental care for older adults. The critical repercussions on nutrition and psychological and social well-being of oral structures and related functions deterioration, along with the systemic conditions and diseases secondarily affecting the oral cavity, should also be taken into account in geriatric oral care preventive strategies, decision-making, and treatment planning. Moreover, age-related pathologies and functional decline must be considered for safe and effective oral healthcare provision in this vulnerable population, especially for older subjects with psychomotor impairment.

The general health of the elderly derives from the mutual participation of multiple factors such as physical efficiency, cognitive and affective state, and social and the person's image since health must not be considered simply as the absence of disease or infirmity but as "a state of complete physical, mental and social well-being", as per the WHO definition. In this perspective, oral health plays a fundamental role in the achievement and maintenance of general health, especially in the elderly. Oral age-related physiological changes and disorders may actually lead to functional, aesthetic, and, consequently, social limitations and adversely affect the quality of life of the geriatric population so a comprehensive evaluation is indicated. Coherently, geriatric dentistry may also assume peculiar social importance since the health of the elderly patient is affected by both biological and psychosocial problems and dental procedures should be reinterpreted by adapting them to the needs of the elderly patient [2].

Oral hygiene should be considered one of the keystones of oral health management of elderly patients from the perspective of both prevention and treatment, with oral and systemic favorable relapses. In addition, the maintenance and restoration of teeth and oral function in the elderly is essential for the preservation of oral function and for the known significant impact on overall health and well-being [14,15].

Moreover, in line with the World Health Organization's "Call for Public Health Action" disclosed in 2010 regarding the oral health of the geriatric population and with the purposes of the "United Nations Decade of Healthy Aging (2021–2030)" aiming at a global collaboration among clinicians, academics, civil society, and media to improve older patients and their families live, interdisciplinary [16,17], evidence-based approaches to elderly oral healthcare, providing comprehensive and focused preventive measures [10,16], resolute and simplified dental and periodontal procedures [18,19], and prosthetic rehabilitations [20], also aiming at improving oral education in caregivers, are strongly advocated.

Furthermore, teledentistry tools and applications may be particularly valuable implements for improving older patients' awareness and literacy regarding oral health and related care, reinforcing risk factor control, discussing patients' concerns, facilitating follow-ups and control, saving time and money and being generally well received by elderly patients themselves, as well as families and caregivers [7].

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