

Gerontolence and Modern Dentistry: A New Horizon for Oral Health

Miguel Ricardo Quevedo Bisonni |

***Corresponding Author:** Miguel Ricardo Quevedo Bisonni, Adjunct Professor at the Faculty of Medicine and Dentistry, University of Santiago de Compostela (USC), Spain.

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Advances in medicine, biotechnology, and healthy lifestyle practices have allowed human beings to reach increasingly longer lifespans, with a quality of life far superior to that of previous generations. This achievement—which reshapes our understanding of aging—has given rise to a new demographic group: the so-called gerontolences.

The term gerontolence, coined by the World Health Organization (WHO), refers to the transitional stage between adulthood and old age, generally encompassing individuals from around 65 years of age until physical or cognitive limitations begin to affect their autonomy. It represents the full expression of active aging: people who maintain strong social engagement, pursue personal projects, remain physically active, and show a keen interest in their overall well-being.

As a result, these patients seek not only to preserve their oral health but also to maintain high-level aesthetics, consistent with their dynamism and self-perception of vitality. They desire a smile that supports their social life, their activities, and their enduring sense of identity.

To meet these expectations, contemporary dentistry relies on innovations that are transforming clinical practice. Digital dentistry—including intraoral scanning, 3D printing, and fully digitized records—has redefined how we diagnose, plan treatments, and communicate with our patients. Added to this is the emergence of artificial intelligence applied to dental diagnostics, supporting early caries detection, orthodontic analysis, and radiographic interpretation, always under the clinical and ethical oversight required for responsible algorithmic use.

Population aging brings new challenges to oral health, such as higher rates of periodontal disease, partial edentulism, and increasingly complex rehabilitative needs. In this context, advances in minimally invasive dentistry, from conservative biomaterials to remineralization protocols, enable the preservation of dental tissues while offering biologically respectful solutions tailored to long-term patient needs.

Implant dentistry is undergoing its own revolution. The use of virtual surgical guides and digitally assisted surgery has enhanced precision, predictability, and treatment safety—critical factors for patients seeking reliable, long-lasting results. In parallel, new biomaterials—such as next-generation ceramics, bioactive compounds, and modified titanium alloys—optimize aesthetics, integration, and the durability of restorative and implant treatments.

Modern dentistry also recognizes the crucial role of oral health within the broader framework of general health. The relationships between periodontal disease, diabetes, cardiovascular conditions, and chronic inflammatory states strengthen the need for interdisciplinary, patient-centered care.

Other innovations shape this transformation as well: tele-dentistry as a tool for education, remote monitoring, and more equitable access to care; refined strategies for the management of dental pain and anxiety, including advanced sedation and non-pharmacological techniques; and the growing commitment to sustainable dentistry, with practices focused on reducing waste, using eco-friendly materials, and promoting responsible resource consumption.

All these developments converge toward a shared objective: to support gerontolence patients with comprehensive, safe, aesthetic, and life-appropriate solutions. Today's—and tomorrow's—dentistry must be prepared to care for individuals who live longer, live better, and expect their smiles to evolve alongside them.

We stand before an exceptional opportunity to redefine our practice and reaffirm our role within global health. The challenge is significant, but so is our profession's capacity to innovate, adapt, and lead in this new era of human longevity.