



Impacts of the rapid increase in aged patients on implant dentistry

Tae-Geon Kwon, DDS, PhD
2026 President-Elect of the KAOMS

Department of Oral and Maxillofacial Surgery, School of Dentistry, Kyungpook National University, Daegu, Korea

The aging of society is significantly impacting implant dentistry, particularly in developed countries where the elderly population is increasing rapidly. Recent healthcare advancements have not only decreased mortality rates but also enhanced life expectancy, leading to a growing demographic of older adults, especially in nations like Japan and Korea. By 2025, Korea is predicted to become a “super-aged society,” with over 20% of its population being 65 years or older¹.

Statistics indicate a notable rise in older patients seeking dental services, particularly those above 60 years of age. For instance, the percentage of patients older than 60 increased from 13.9% in 2008 to 37.8% in 2023 at Kyungpook National University Dental Hospital. The number of visiting patients older than 80 years comprised 1,154 persons in the year 2008 and 10,324 persons in the year 2023, which showed a nearly nine-fold increase in this age group. Furthermore, the average age of patients undergoing dental implant surgery rose significantly from 40.4±16.5 in 2008-2010 to 61.1±14.5 in 2021-2023 at our hospital. This reflects the shifting demographics in dentistry.

As the general health of older populations improves, some individuals exhibit characteristics typically associated with younger adults. Some aged populations have younger physical and mental health than former generations. At the same time, the development of the medical care system reduced the possibility of disability or could delay or could delay the initiation of aging, which can cause “compressed morbidity”².

Tae-Geon Kwon

Department of Oral and Maxillofacial Surgery, School of Dentistry, Kyungpook National University, 2177 Dalgubeol-daero, Jung-gu, Daegu 700-412, Korea
TEL: +82-53-600-7574
E-mail: kwondk@knu.ac.kr
ORCID: <https://orcid.org/0000-0003-2799-0510>

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I. Challenges of Implant Treatment for Aged Patients

Although older age is not considered a limiting factor for implant treatment³, it is crucial to recognize the challenges faced by elderly patients, including loss of independence, multiple systemic diseases, and frailty.

Many aged patients contend with major health issues that can complicate implant procedures, such as hypertension, diabetes, and osteoporosis. According to the national statistics in Korea, hypertension and diabetes occur in nearly 2/3, and 1/3 of the population age over 70, respectively^{4,5}. Osteoporosis affects over 20% of the population aged over 50⁶. Therefore, these popular systemic diseases need to be considered before implant surgery. In particular, in patients with uncontrolled diabetes, the administration of antithrombotic agents and long-term use of bone resorption inhibitors require special attention. Implant surgery for patients with multiple systemic diseases is the new normal.

Frailty, both physical and cognitive, can severely impact an elderly patient’s ability to maintain oral hygiene, leading to long-term dental health issues⁷. The frailty condition is accompanied by cognitive impairment. This mental and physical debilitation in elderly patients impairs sufficient self-care ability for oral hygiene. This necessitates a comprehensive approach to dental care and hygiene among older adults. The decline in the ability to maintain oral hygiene influences long-term oral health. Elderly patients who fall into the dependent stage need adequate life-long dental care and oral hygiene prophylaxis⁸.

II. Strategies for Successful Implant Surgery Among Aged Patients

To ensure successful implant surgery in this age group, it is vital to minimize surgical morbidity. This can be achieved through the use of advanced technologies like three-dimen-

sional surgical guides for implant placement, flapless techniques, and adjusting the number and type of implants used to fit the individual patient's needs. It is better to place the minimal number of implants at the best possible or most strategic position rather than aiming for a large number of implant insertions^{9,10}. Implant prosthetics that need minimal maintenance are recommended. Training and education programs aimed at providing age-appropriate information for dental health, which can enhance long-term outcomes for elderly patients with dental implants.

In conclusion, as societies continue to age, oral and maxillofacial surgeons and dental specialists must adapt their practices to address the unique needs of older patients, ensuring they receive safe and effective care.

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Conflict of Interest

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