The Digital Age: The Evolution of One-Day Dental Solutions and Implant Treatments

Dr. Young Ku Heo

Over the years, clinical solutions optimized for various procedures—such as sinus augmentation, reconstruction of alveolar defects, peri-implant disease management, and guided tissue regeneration—have been continuously developed in the dental field. These approaches are now evolving into a new paradigm of integrated treatment by merging with digital technologies that connect diagnosis, surgery, and prosthetics into a seamless workflow.
Within the next decade, AI-powered digital systems and dental robotics are expected to become fully embedded in clinical practice, leading to greater automation and precision throughout the treatment process. As a result, we anticipate a dramatic shift in the technological landscape, bringing dental care into a new era of enhanced efficiency, safety, and predictability.
In this vision of the future, the "One-Day Clinic" model—where diagnosis, implant surgery, and final prosthetic delivery are completed in a single visit—is expected to become more widespread. To realize this model, clinicians must rely on implant systems that allow immediate loading as well as digital workflows capable of same-day prosthesis fabrication.
Immediate loading begins with the implant itself. Successful same-day treatment requires a multifactorial approach: a variety of surgical protocols based on bone quality, proper primary stability, sufficient bone-to-implant contact (BIC), well-designed implants, and minimally traumatic surgical techniques must all be harmonized. For both partially and fully edentulous patients, precise digital diagnostics and prosthetic planning are essential to support fast and accurate restoration.
This includes capturing accurate digital impressions, integrating facial and anatomical data, and applying patient-specific prosthetic design strategies. This lecture will introduce clinical workflows that connect all of these elements, providing clinicians with practical strategies for managing immediate loading cases more efficiently and systematically in daily practice.
Ultimately, this session will offer a comprehensive overview of new-generation implants and digital clinical protocols designed to support immediate loading, and will share future-oriented insights for clinicians navigating the rapidly evolving world of dental implantology.

Learning Objectives

* Understand how digital technologies are shaping modern implant workflows, including digital impressions, prosthetic design, and integrated planning for faster and more predictable treatment outcomes.
* Learn the clinical requirements for immediate loading and one-day prosthetic delivery, including surgical protocols based on bone quality, primary stability, and workflow strategies for both partially and fully edentulous patients.

Profile

* Degree: Doctor of Dental Surgery, Dankook University, Dental School , South Korea
* Ph.D. and Professor at the Graduate School of Dentistry, The Catholic University of Korea
* Completed Prosthodontics Program and Master's Degree at Boston University Henry M.

Goldman School of Dental Medicine

* Present, CEO of Neo Biotech Co., Ltd.
* Present, Director of the Global Academy of Osseointegration (GAO)
* Present, Adjunct Professor at Dankook University / Yonsei University College of Dentistry