Science & technique of clinical success in composite restorations

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Changes in population age and dental health may be among the most important factors influencing clinical considerations in restorative dentistry. The decreasing prevalence of dental caries and the increasing demand for high esthetics of retained teeth in the oral environment can be important factors in clinical decision making. The development and improvement of resin composite materials and bonding systems are major advances in restorative treatment. Composite resins, together with various types of bonding systems, constitute a tooth-colored alternative to metal restorations. The combination of restorative techniques and the selection of tooth-colored restorative materials that simulate the physical and other characteristics of natural teeth provide a framework that ensures optimal development of esthetic restorations.

The most recent advance in adhesive technology is the introduction of universal adhesives distinguished by their compatibility with different types of adherends and their use in total-etch, selective-etch, and self-etch modes. The versatility of this adhesive allows clinicians to tailor their approach to common cavity conditions by considering and optimizing variables such as enamel and dentin size, depth, position, and proportion. Good conformity to the entire tooth surface is believed to reduce marginal discoloration and pulpal irritation associated with microleakage. A system that forms a sufficiently strong bond with the tooth and withstands stress has long been desired. However, such restorations will always deteriorate over time due to biological and biomechanical deterioration. Therefore, it is clinically important to fully understand the degradation of these restorations over time in the oral environment.

This presentation will outline the basic techniques of restorations and their clinical efficacy. Clinical considerations regarding the handling of resin composite materials will also be discussed with clinical examples and videos.

<Curriculum Vitae>

1987	Nihon University School of Dentistry – D.D.S.
1991	Nihon University Graduate School of Dentistry – Ph.D.
1994 – 1996	Indiana University School of Dentistry (Research Scholar)
2003	Assistant Professor, Department of Operative Dentistry, Nihon University School of Dentistry
2005 –	Professor and Chair, Department of Operative Dentistry Nihon University School of Dentistry
2018 – 2020	President, Japan Society for Adhesive Dentistry