## Changes in Implant Prosthesis Fabrication Methods (Comparison of Various Cement-less Implant Prostheses)

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Implant therapy, above all, it is desirable to choose a connection method that can be easily inserted and removed in the future, considering the maintenance and management issues that may arise after delivering the final prosthesis. Therefore, most dentists have been applying the combination type (SCRP: Screw- and Cement-Retained Prosthesis) prosthesis. However, recently different forms of connections (Highness digital implant prosthetic system, TDP system, SFIT, SAFE FIT, Click fit, SNUC abutment, OSSTEM DR system...) are being introduced in Korea, and their clinical applications are increasing amidst dentist's gradual interests.
Why are there such changes in the fabrication method of implant prosthesis? It is the responsibility of dentists to choose the appropriate connection method for implant prosthesis under various clinical situations. The biggest drawback of cement-retained prosthesis is that it is difficult to completely remove residual cement. This is especially true when the abutment margin is positioned sub-gingivally. It is also difficult to deal with maintenance issues that may arise after delivering the final prosthesis. For these reasons, the screw-retained implant prosthesis connection method had been selected, but this also has various laboratory and clinical problems. It is difficult to obtain a well-fitting prosthesis due to the solidification shrinkage after the casting process and it is difficult to properly get rid of the oxide film that appears during the casting process, and the total production cost is on the expensive side. Most dentists choose to fabricate combination type prosthesis for these reasons. However, the combination type prosthesis requires enduring the cumbersome cementation process. Additionally, when fabricating the splinted prosthesis, another concern arises depending on the angulation of the implants.

The Highness digital implant prosthetic system, Toplan TDP system, Dentis SAFE FIT, SNUC abutment and OSSTEM DR system mentioned above can be considered as a screw-retained zirconia prosthesis that can be fabricated without using cement. The biggest characteristic of these cement-less implant prosthesis is that the delivery process is very easy and fast, which can be of great significance to clinicians. Furthermore, it can be said that they are the implant prosthetic system most optimized for the recently popularized digital workflow.
The reason for considering various connection methods for implant prosthesis from the past to the present is, first, focusing on "How to reduce the problems associated with cement?", and second, attempting to leave screw holes on the occlusal surface to easily resolve maintenance problems when they arise. Lastly, it can be thought that evolution has come while considering ways to more easily apply digital workflow.
In order to fabricate the most optimal prosthesis in various clinical situations, it is not enough to solve with just one or two implant prosthesis connection methods. It is necessary to have the ability to apply various methods in clinical practice by fully understanding them. In this lecture, I aim to understand the various types of cement-less implant prosthetic systems that have recently gained attention and to discuss the characteristics of each. I really hope this will be very helpful in your clinical practice.

Profile

* Graduated from Kyung Hee University's College of Dentistry
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