

## **Development Of Novel Implant Prosthesis System With New Concept For Easy Maintenance**

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Implant fixtures have been advanced continuously since the development of implants. The advancements of fixture have been greatly increased the long-term survival rate of

implants and simplified implant surgery. But how much improvement has been achieved in the implant prosthetic system? We still use a screw retained or cement retained implant prosthesis that were developed in the 20th century. Although the implant prosthesis has been improved by the advancement of the manufacturing precision and materials, the connection method between a prosthesis and an implant fixture remains unchanged.

There are considerable complications related to prostheses in implant treatment. Complications such as periimplantitis caused by residual cement and screw loosening are the most frequent occurrences in clinical practice at present. Screw retained prosthesis can be retrieved if necessary, but it has limitations in non-esthetic prosthesis and screw holes. In case of cement retained prosthesis, the prosthesis doesn't have retrievability, and may cause periimplantitis by residual cement.

If there are no side effects mentioned above and a prosthetic system can offer easy removal, it is possible to perform efficient maintenance and be clinically convenient. I have developed a freely removable and connectable implant prosthetic system and succeeded in commercialization after five years of researches. It is connected by screw and cement at the first delivery of the implant prosthesis but can be freely removable and connectable without intervention of them during maintenance periods. In this presentation, I will explain about the development process of this new system, the research and commercialization process, and the merits of clinical use. In the future, I expect that the application of the new concept in implant prosthesis will become more active, and I hope that this development will be the first step of implant prosthesis advancement.

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