Development of new periodontal tissue regeneration therapy using autologous adipose tissue-derived stem cells

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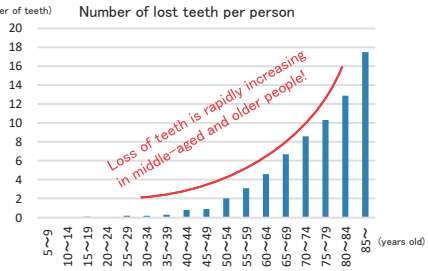
Project Outline

This project aims to develop a new periodontal tissue regeneration therapy using mesenchymal stem cells separated from abdominal subcutaneous adipose tissues (ADMPC).

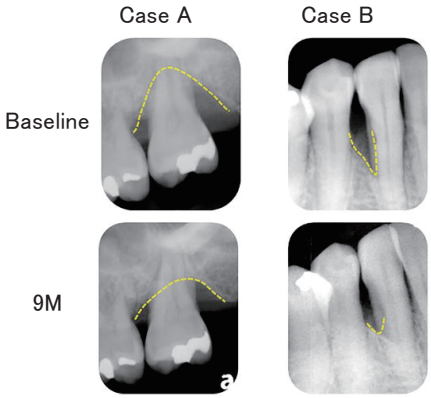
Periodontal disease:
About 80% of adults are affected.



Fact-finding investigation for dental problem in 2016

Periodontal disease is disease in which periodontal tissues that support teeth are destroyed because of the body of bacteria attached at the boundary between teeth and gums (dental plaque) and is the number one cause of loss of teeth, affecting about 80% of adults. Unfortunately, the lost periodontal tissues cannot be regenerated simply by removing the cause.

Clinical study



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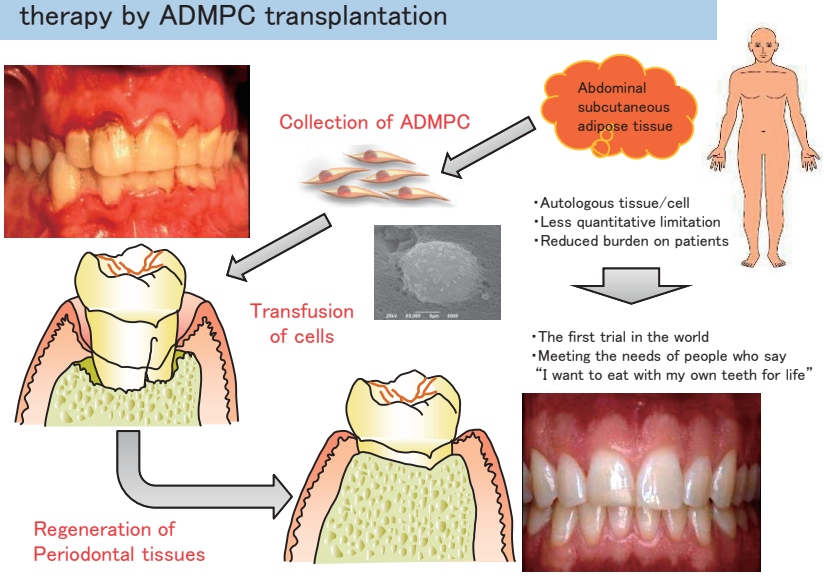
Development of periodontal tissue regeneration therapy by ADMPC transplantation



We are trying to develop a treatment method to facilitate the regeneration of periodontal tissues by the autologous transplantation of ADMPC taken from abdominal subcutaneous adipose tissues of each patient with periodontal disease into the lost parts of the periodontal tissues.
Until now, we have clarified the safety and efficacy of this therapeutic through clinical study to establish a new periodontal tissue regeneration therapy that can be applied to severe periodontal diseases.

Target disease: Periodontal disease Patent information: Granted (registered on February 8, 2013)
The project aims to establish a patient-friendly periodontal tissue regeneration therapy that is an unprecedented method not only in Japan but also in the world by using ADMPC collected less invasively and safely from patients.
Although the market size was 80 million yen in 2012, there are many latent patients, and it is expected that the market size will be about 80 billion yen or more in 2050. We hope the therapy becomes widely used through the collaborative development with or licensing out to the business enterprise.