Stem Cells: Sources, and Regenerative Therapies in Dental Research and Practice

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Abstract

Stem cells are considered to be among the principle scientific breakthroughs of the twentieth century for the future of medicine, and considered to be an important weapon to fight against diseases, particularly those that have resisted the efforts of science for a long time. Human dental tissue have limited potentials to regenerate but the discovery of dental stem cells have developed new and surprising scenario in regenerative dentistry. Stem cell treatments are one example of the possibility using adult cells sourced from patients' own bodies' means that it can be expected that in the near future such treatments may become routine at dental practices. The hope is that it will become possible to regenerate bone and dental tissues including the periodontal ligament, dental pulp and enamel, and that the creation of new teeth may also become feasible. In view of this possibility of achieving restoration with regenerative medicine, it can be considered that a new era of dentistry is beginning. Thus the aim of this review is to give dental professionals a brief overview of different stem cells sources and the latest findings and their implications for improving oral health and treating certain conditions of the human mouth and face.