

## Regeneration in Prosthodontics – A Challenge

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### Abstract

The ultimate goal of prosthodontic treatments should be to regenerate the missing teeth together with the periodontal structures. Many prosthodontists have thought “I could have achieved a better treatment outcome if regenerative therapies were more readily available.” To date, prosthodontists have been managing missing teeth/alveolar bone by “replacement prosthodontics” using artificial materials such as dentures and dental implants. Recent development of stem cell-based regenerative medicine has introduced the concept of “regenerative prosthodontics” to our field, particularly in cases of missing teeth with severe alveolar bone resorption. This is mainly possible with the help of stem cells. Stem cells are undifferentiated biological cells that can differentiate into specialized cells and can divide to produce extra stem cells. They are originated in multicellular organism. They may be embryonic or adult stem cells. The stem cells of the dental pulp are the mesenchymal stem cells (MSC). They are the most commonly used stem cells. However, bone marrow-derived mesenchymal stem cells are a commonly used cell type for utilization in cell-based regenerative approaches in prosthodontics. They help to build the bone structures of the craniofacial region, particularly the maxilla and mandible. Stem cell therapy is one the most recent advances in the dental field. Its use establishes a 100% success rate. Thus, knowing its value is of prime importance. The presentation includes various challenges in relation to regenerative therapies being used as well as recent trends n regenerative prosthodontics.

### Biography

Arpit Sikri [BDS (Gold Medallist), MDS (Prosthodontics), PGDHM, DWCOI] is currently working as Associate Professor & Post Graduate Teacher in the Department of Prosthodontics, Bhojia Dental College & Hospital, Baddi, Himachal Pradesh, India. He had earlier worked as Senior Resident in the most prestigious dental institute of the country i.e. Maulana Azad Institute of Dental Sciences, New Delhi, India. He had also worked as Senior Lecturer in Santosh Dental College, Santosh Deemed to be University,

Ghaziabad (Delhi NCR) & Senior Lecturer in Sudha Rustagi College of Dental Sciences & Research, Faridabad, Haryana, India. He is the youngest dental surgeon of India to have completed his Post Graduate Diploma in Hospital Management from National Institute of Health and Family Welfare and that too with distinction. He has been recently appointed as “General Secretary” of Oral Maxillofacial Implantology Council of India (OMICI) by DenTrenz Careers. He had been the President of NDDSF (dental society) from Punjab State.