

## عنوان مقاله:

An overview of regenerative endodontics

## محل انتشار:

اولین کنگره بین المللی مهندسی بافت و پزشکی بازساختی ایران (سال: 1397)

تعداد صفحات اصل مقاله: 1

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## خلاصه مقاله:

The outcome of root canal treatment in most of the cases is highly favorable, however, the nature of this treatment modality is resectional debridement of the inflamed and/or infected dental pulp tissue. Ideally, the inflamed/infected tissue might be replaced by biologically regenerated vascularized connective tissue or preferably by regenerated dental pulp tissue. According to the American Association of Endodontics, Regenerative endodontic procedures (REPs) is treatment procedures designed to replace damaged pulp tissue with viable tissue which restores the normal function of the pulp-dentin structure. The basic principles of REPs are similar to basic principles of tissue engineering that derives from biological interactions of stem cells, growth factors, and biomaterials in forms of scaffolds. Obviously, if the root canal system is infected the combination of this tissue engineering triad cannot result in regeneration of the desired tissue which is the dental pulp. Therefore, to achieve a favorable outcome the preliminary step of REPs is to eliminate root canal infection but without producing a smear layer. The later may prevent the release of many important growth factors from the dentin. In addition to preliminary disinfection of root canal system, in REPs, the seeded stem cells may stimulate by some bioactive materials such as hydraulic calcium silicate cement. In this panel, the recent findings of the five components of REPs will be reviewed and their effect on the outcome will be discussed.

## کلمات کلیدی:

Dentistry, Endodontic, Regenerative endodontics, REPs

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