

27TH AMERICAN DENTAL CONGRESS

December 07-08, 2018 | Chicago, USA

Regenerative pulpotomy: A novel strategy for local regeneration of dental pulp

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The major goal of all restorative procedures is to maintain the viability of the dental pulp whenever possible, over the last few decades minimally invasive endodontic techniques have been introduced and have received wider acceptance over conventional treatments. These techniques could serve as viable, less invasive, potential treatment options for the management of teeth with inflamed pulps compared to the conventional approach of a root canal treatment, prevent unnecessary dental extractions. Minimally invasive techniques are based on the ability of the remaining radicular pulp to recover following the removal of the infected coronal pulp tissue and placement of a suitable medicament. Dental pulp stem cells were isolated from irreversibly inflamed pulp tissue, maintaining the potential of cell proliferation and differentiation. Serve as a source of endogenous multipotent cells needed for the regeneration of the pulp-dentin complex. This has changed the general understanding of a clinical diagnosis of irreversible pulpitis and its management, particularly in the era of improved understanding of the healing process and regeneration of the pulp-dentin complex, cases traditionally deemed irreversible may in fact still be savable, thereby shifting the balance of what was irreversible towards reversible, when the correct treatment is applied. Despite these great improvements, mild to moderate cytotoxic effects of various biomaterials when they are placed in direct contact with the pulp tissue, also these techniques themselves never lead to the regeneration of pulp or dentin that was lost in the coronal portion. So a novel strategy for the local regeneration of dentin-pulp complex in the pulp chamber is introduced as "Regenerative Pulpotomy" based on the induction of the outgrowth of pulp cells, capillaries, and neurons from the residual root pulp using a biodegradable autologous scaffold.

Biography

Ahmed Mobarak has completed his MSc in 2015 from Alexandria University, Egypt and doing his doctoral studies in Alexandria University, Egypt. He is an assistant lecturer of endodontics from 2015

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