

## Stem cell therapy for oral disease and dental pulp stem cell clinical application

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In the new millennium, where biology and biotechnology have replaced chemistry, we are exploring "biological solutions to biological problems. Stem cell treatments are a type of genetic medicine that introduces new cells into damaged tissue in order to treat a disease or injury. Many medical researchers believe that stem cell treatments have the potential to change the face of human disease and alleviate suffering.

Oral Sub-Mucous Fibrosis (OSMF) is a chronic disease of insidious onset featuring the deposition of excess fibrosis tissues in the sub-mucosal layer of the pharynx, palate, fauces, cheek, lips, pharynx and esophagus. Due to this, lumen size of the vessels decrease and also a decrease in number of capillaries occur culminating in a decrease in blood supply to the epithelium in the affected region. The underlying muscles of mastication are also affected (Mokal et al. 2005) and it restricts the mouth opening. A more serious complication of the disease is the risk of the development of oral carcinoma (Nair et al, 2004). To date there is no report suggesting spontaneous regression and no widely accepted treatment. Despite the application of several treatment modalities, none of them have produced satisfactory results. I have treated about 6 cases of OSMF which is very common in Asian countries only with stem cells and have more than 5 years follow up. We have also treated a oral condition called osteoradionecrosis, and alveolar bone regeneration using dental pulp stem cells. Allogenic DPsc in bone regeneration is being done. First time we have used dental pulp stem cells for the treatment of a diabetic foot ulcer (critical limb ischemia) and the ulcer has healed well. My lecture will bring new focus on dental pulp stem cell and evidence of angiogenesis with histopathological and radiological evidence.

### Biography

The author has 20 years of teaching experience in India in leading dental colleges and is involved in stem cell research for the past 6 years. I have already presented poster presentation in 6th ISSR, USA on stem cell work.

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