

Dental pulp stem cell: Is a boon to dentistry

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The existence of adult stem cell in dental pulp was revealed by Granthos et al -2000. Human dental pulp tissue contains heterogeneous potential for tissue engineering and regenerative medicine. Our goal is to understand the state of the art in the dental pulp stem cell research and to develop predictable protocols, evidence based steps and outcomes of bone regeneration by using DPSC, bioactive scaffolds, growth factors and future application in craniofacial tissue engineering. Defects due to congenital, traumatic, iatrogenic should be repaired and replaced as natural as possible with minimal tissue morbidity. Dental pulp is the mesenchymal type of multi potent stemcell and potential to differentiation into osteocytes, build invivo an adult bone with havers channels with vascularization. Posses immunoprivilages can be grafted into allogenic tissues. Easy access to the collection site with less morbidity. DPSC have an extensive differentiation and proliferation capacity, can be cryopreserved, interactivity with several biomaterial, makes them ideal for tissue reconstruction. It is a boon for dental profession, the DSPC can be collected from the extracted wisdom teeth, premolars for the therapeutic purpose and from shedding deciduous teeth. Extirpating the dental pulp from the tooth is simple. In future research will focus to extirpate the pulp without removing the tooth from oral cavity by creating a sterile atmosphere, same tooth can be preserved with minimal morbidity. The same dental pulp stem cells can be differentiated, proliferated and cryopreserved for the future needs. DPSC is a boon for entire medical world not only for dental surgeon.

Biography

S. Mohanavalli, MDS, has completed post graduate degree in Oral & Maxillo Facial surgery in 2001 from Tamil Nadu Govt Dental college -Dr MGR Medical University-Chennai, INDIA. Associate professor in the department of maxillofacial surgery in SRM Dental college from 2001 onwards. She has published 5 article in reputed journals, presented scietific papers in various conferences. Examiner and Question paper setter for under gduates and post graduated students. Post graduate guide since 2006 onwards. Research area is tissue engineering-dental pulp stem cells.

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