

Frozen extracted teeth as a source for dentoalveolar, periodontal or maxillofacial endogenous bone grafting of defects

Tooth extractions have been done for centuries to treat dental and other oral pathologies. Traditionally dentists regard most extracted teeth as unusable and generally extractions are wasted. Freshly extracted teeth have been used successfully for selected alveolar osseous replacement, maxillary sinus augmentation, alveolar ridge preservation, and selected periodontal defects. Transplanting extracted teeth to other sockets is done with partial success, but most extracted teeth are not used and are discarded. Periodontal bony defects, maxillofacial and dento-alveolar surgeries, use both biologically and non-biological derived bone replacements.

Osseointegration and osseointegration is achieved with inorganic calcium salts, like calcium sulfate, and decalcified freeze dried bone, often alone or in combination with autogenously derived blood and plasma products. Cryopreservation of cells is used for spermatozoa, stem cells and other viable cell lines, is in biological research, *in vitro* assisted fertilization, cell-line rehabilitation and hematology.

The proposition is made here to: Salvage extracted healthy teeth, preserve them with cryogenics, and later in life use these teeth thawed and ground into a powder, in combination with autogenous derived plasma or blood, as a bone-filler for osseointegration and osseointegration. Most biological degradation is halted with cryogenics, and fresh extractions (after immediate freezing and timely thawing), could be a confident, reliable and highly desirable source of calcified material later for bone grafting.

Calcium hydroxyapatite in the enamel, in calcified collagen of the dentine, pulpal cells and periodontal cells are all intrinsic parts of teeth. All these cells and tissues retain factors for growth not alien to their original host, and remain antigenically unique to the individual who produced them. Accordingly, healthy extracted teeth salvaged through freezing, is an acceptable source of autogenous non-allergenic material. This should prove successful for those many situations in which periodontal, dento-alveolar or maxillofacial situations demand bone grafting.

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