

# Immediate implant loading in periodontal affected patients using autologous restorative material

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## **Abstract.**

Usually, an extracted tooth is considered to be a potentially infectious material, which should be disposed in medical waste containers. Another school of thought is that the tooth dentin matrix has a long osteoinductive function and, along with cementum, contains a number of bone growth factors which includes Type I collagen and bone morphogenic protein (BMP). [1]

An autogenous demineralized dentin matrix of the extracted tooth from a patient can be considered bone graft material because of a minor or no host rejection immunity response.

The various sizes of graft material granules is adapted to the unique procedure protocols and range from 75 µm to 500 µm. [2-3]

A new method, using a combination of an autogenous, fresh demineralized tooth graft (after a non-traumatic tooth extraction) and an injectable platelet rich fibrin preparation (PFR), has shown a higher primary implant stability when inserted after three months. [4]

Other studies have shown that a six-month post grafting with a good implant support was confirmed to increase radio-opacity with homogeneity on panoramic radiographs and CBCT (Cone beam computed tomography) imagistics. [5-6]

Autogenous demineralized dentin matrix, a useful and safe material which can substitute for a free autogenous bone graft, shows bone healing through both its organic and inorganic components.

## **References**

1. Young-Kyun K. Bone graft material using teeth. *J Korean Assoc Oral Maxillofac Surg* 2012;38:134-8)
2. Young-Kyun K, Junho L, In-Woong Um2, Kyung-Wook K, Masaru M, Toshiyuki A, Masaharu M. Tooth-derived bone graft material. *J Korean Assoc Oral Maxillofac Surg* 2013;39:103-111
3. Sang-Yun K, Young-Kyun K, Yeoung-Hyun P, Joo-Cheol P, Jeong-Kui K, In-Woong U, Ji-Yun K. Evaluation of the Healing Potential of Demineralized Dentin Matrix Fixed with Recombinant Human Bone Morphogenetic Protein-2 in Bone Grafts. *Materials* 2017, 10, 1049; doi:10.3390/ma10091049
4. Lydia N.M, Marwan M. El Said. Evaluation of “Autogenous Bioengineered Injectable PRF – Tooth graft” combination (ABIT) in reconstruction of maxillary alveolar ridge defects: CBCT volumetric analysis. *The Saudi Journal for Dental Research* (2017) 8, 86–96
5. Eun-Seok K. Autogenous fresh demineralized tooth graft prepared at chairside for dental implant. *Kim Maxillofacial Plastic and Reconstructive Surgery* (2015) 37:8 DOI 10.1186/s40902-015-0009-1