EDITORIAL

# Lateral Extraction Socket Augmentation with Autogenous Tooth Roots

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During initial 6 months of healing after extraction of tooth, the alveolar ridge undergoes a series of dimensional changes that are more pronounced at the buccal aspect and escalate in the presence of a compromised extraction socket. In implant dentistry, the management of extraction sockets has become a topic of considerable clinical significance.[1] Since past few years, preservation of ridge using augmentation procedures is gaining popularity for the management of fresh extraction sockets.[2]

In recent years, researchers had used separated tooth roots in their experimental studies and found that it has biological and structural potential to serve as alternative autografts for localized ridge augmentation procedure for two-stage implant placement.[3,4] In lateral extraction socket augmentation technique, the lateral augmentation of deficient socket is done, where buccal bone thickness is <0.5 mm or there is buccal dehiscence-type defects present. In this procedure, the fresh extraction sockets is augmented with the respective noninfected and nonretainable tooth. The tooth root graft was decapitated at the cementoenamel junction and separated longitudinally to expose the pulp chamber and pulp tissue, and root canal filling material if any was removed and the pulp chamber widened. According to the target area, the tooth root specimens were matched and adapted and fixed using titanium osteosynthesis screws.[5]

Schwarz et al.[5] had assessed the feasibility of autogenous tooth roots in 14 patients for lateral augmentation of deficient extraction sockets and two-stage implant placement and found it to be a feasible treatment approach. In a similar study by Parvini et al.,[1] in 13 patients, stable peri-implant tissues were found in short-term follow-up. The reason for the ridge preservation with the lateral augmentation with tooth root graft in extraction socket may be that dentin reveals a high osteogenic potential for osseous defect regeneration.

The basic concept of tooth root graft was mainly based on series of experimental studies indicating that they have a biological potential to serve as alternative grafts for localized alveolar ridge augmentation. Currently, there are limited human trials on this concept, so the result should be interpreted with caution till more clinical trials with long-time follow-up establishes this concept.

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