
PLATELET RICH FIBRIN

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Periodontal tissue is destroyed in the course of Periodontitis by disproportionate immunologic responses to a triggering agent, such as bacteria in biofilm. It has been reported that molars with furcation involvement caused by periodontitis, have a higher rate of periodontal breakdown and respond less favorably to periodontal therapy than molars without furcation involvement or single-rooted teeth.

Multirouted teeth offer unique and challenging problems for the periodontist. The furcation area, because of the interrelationships between the size and shape of the teeth, the roots and their alveolar housing, and the varied nature and pattern of periodontal destruction create situations in which routine periodontal procedures are somewhat limited and special procedures are generally required. It has been shown that the best chance for success lies in early recognition and treatment of furcation involvement. Grade II furcation is any involvement of the interradicular

bone without a through-and-through ability to probe. Various materials have been used to resolve furcation defect including autografts, demineralised freeze-dried bone allografts (DFDBAs), bovine-derived xenografts, barrier membranes and combinations of membranes and bone grafts. Although these regenerative materials are being used today, the introduction of biomimetic agents such as enamel matrix derivatives, platelet rich plasma (PRP), platelet-derived growth factor and bone morphogenetic proteins have shown better outcomes in furcation treatment.

Platelet-rich fibrin (PRF), developed in France by Choukroun et al, is a second generation platelet concentrate. Its advantages over the better known platelet-rich plasma (PRP) include ease of preparation/application, minimal expense and lack of biochemical modification (no bovine thrombin or anticoagulant is required). PRF is a strictly autologous fibrin matrix containing a large quantity of platelet and leukocyte cytokines.

Resorbable tissue replacement (R.T.R) is a biocompatible synthetic alloplast material of the highest purity. RTR granules have a β -Tricalcium phosphate crystalline (β TCP) structure. It is extremely hydrophilic, so it is drawn into the surgical site and can be easily contoured to fill any bony void. This makes RTR ideal for the treatment of periodontal defects, ridge augmentations,

and extraction socket therapy (post-extraction ridge preservation).

The coronally advanced flap is a simple pedicle flap that can be utilized for root coverage, and does not require graft harvesting. A potential limitation of the coronally advanced flap is the limited gain in the apico-coronal dimension of the keratinized tissue which is an important parameter in preventing the recurrence of gingival recession.

