

좌장 : 백승호 원장

Future of Periodontal Reconstructive Therapy :
Guided Tissue Regeneration or Growth Promoting Substances ?

Ulf ME Wikesjo, DDS, PhD

Loma Linda University, Loma Linda, CA

BIOLOGIC STUDIES HAVE OUTLINED DYNAMICS of healing following periodontal reconstructive therapy and factors that influence outcome of healing. Briefly, formation of a new connective tissue attachment rather than epithelialization of formation of the tooth-gingival flap interface is dependent of the unhindered stepwise completion of a series of interactions among the root surface, plasma factors, tissue factors and the connective tissue of the gingival flap. Any modulation which protects and stimulates these processes may, conceivably, enhance healing.

More recently, we have evaluated influence of (1) guided tissue regeneration, (2) growth factors (insulin-like growth factor II, basic fibroblast growth factor and transforming growth factor beta-1), and (3) recombinant human bone morphogenetic protein-2 (rhBMP-2) on periodontal regeneration on the critical size supraalveolar periodontal defect model. Clinical and custom expanded polytetrafluoroethylene membranes, a growth factor cocktail, and rhBMP-2 were used in separate experiments. Our data reveal a substantial biologic potential for reconstruction of periodontal architecture. It appears critical that a suitable environment of healing is provided to utilize this potential. Numerous factors such as infection of the maturing fibrin clot, mechanical stability of the wound, space provision, and when indicated, appropriately selected and designed biomaterials may significantly influence outcome of therapy. Our data also suggest that growth promoting substances such as rhBMP-2 have a significant potential to enhance periodontal healing. Inclusion of such substances in periodontal reconstructive therapy may radically recast current concepts.