Periodontal wound healing - Repair and Regeneration

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The result of wound healing is in all essentials the effect of the various types of cells which repopulate the wound. With regard to periodontal wound healing it has been shown that the only cells which have the potential to form new root cementum with inserting fibers (i. e. a new connective tissue attachment) are cells derived from the remaining periodontal ligament. Based on this knowledge the biological principle of Guided tissue regeneration (GTR) was developed. PDL-cells can following surgery be guided into the wound area adjacent to the curetted root surface by preventing the ingrowth of other competing types of cells, and hereby a new connective tissue attachment can be obtained.

In this lecture, the biological principle of GTR will be explained and some of the key studies presented which resulted in the development of this principle.