



SOFT TISSUES AROUND IMPLANTS AND TEETH

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The tissues surrounding dental implants include peri-implant mucosa and peri-implant bone. While peri-implant tissues and periodontal tissues around teeth may have many clinical features in common, there are marked structural differences between the two types of tissues. Thus, the tooth has a mechanical anchorage to the adjacent gingival tissues and alveolar bone by supra-crestal and periodontal ligament collagen fibers. The fibers are invested in the root cementum of the tooth and the bundle bone of the alveolar process. Such a fiber system of a mechanical attachment does not exist in peri-implant tissues. There is no root cementum and periodontal ligament around dental implants and the peri-implant bone and peri-implant mucosa form a direct contact with the implant. The integration of hard and soft tissues with the implant device is the result of a wound healing process extending over several weeks. The established peri-implant mucosa presents with an oral epithelium, which is continuous with a junctional epithelium. The interface between the transmucosal portion of the implant and the peri-implant mucosa is comprised by junctional epithelium and connective tissue, the dimensions of which are similar to that of teeth.

The presentation will provide new information on the morphogenesis of the peri-implant mucosa based on human material. The new terminology of the biological width concept presented at the AAP-EFP classification workshop in Chicago, November 2017, will be discussed. The importance of the differences in fiber-mechanical attachment between peri-implant and periodontal tissues on host response to biofilm formation will also be illustrated. The continuum from healthy mucosa to peri-implant mucositis and to peri-implantitis will be addressed.