Perio meets implant dentistry
A time-tested relationship

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The preservation of the natural dentition is the prerequisite in daily patient care. In advanced periodontal disease, the successful realization of implant therapy requires knowledge in patient expectations, clinical diagnostics, proper surgical skills and delegation of basic services to dental hygienists. Implant treatment in severe periodontitis demands a two-step, time-tested approach, evaluating the outcomes of basic periodontal therapy before implant placement.

Integrated dentistry: Success for today and tomorrow
The successful positioning of dental partnerships in the fast-growing health market impli-cates predictable treatment strategies to save permanent teeth. According to orthopedic, cardiac or vascular medicine, an on-time decision-making for implant therapy is recommended to counterbalance functional and aesthetic discomfort in advanced endodontic and periodontal breakdown settings.

Patient’s current and future expectations drive our practices into the necessity to provide synergistic periodontal and implant treatment solutions. The advantages are:
• Optimizing implant success by proceeding with periodontal therapy.
• Enhanced economic profit due to by-effects from delegated scaling and root planing.

• Promotion of oral and body health of both dental patients and staff members.

The need to preserve healthy teeth and gums, the ever-expanding influences of web, TV and magazines and an increase in low-cost implant treatment render implant dentistry internationally attractive. The transition of dental practices into the implant market is reasonable, especially for growing dental partnerships.

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Implant therapy in advanced periodontal disease

The survival rates of teeth with severe periodontal damage published in evidence-based studies are rarely valid for patients inquiring treatment in dental offices (Fig. 4). Shortcomings in oral hygiene, lack in supportive care, oral dysfunctions, stress, smoking and general disorders abbreviate the function times of periodontally compromised teeth sustainably.

The advice to replace affected teeth with implants in advanced periodontal settings within the maxilla implicates on-time patient information of the second and third molar removal: implant placement and prosthetic bridgeworks are scheduled in the functional mastiatory area until to the first molar. In the mandible, the second molars can be preserved due to their beneficial root anatomy. They should be restored, but not included in implant planning. Following the removal of the first molar in the maxilla, implant therapy is often preceded (if the supporting bone is less than 4 mm) or accompanied by a simultaneous sinus lift. The implant treatment plan in periodontally compromised patients results in a reduced dentition (Fig. 5):

- Fixed bridgeworks in the maxilla and mandible up to the first molar
- Maxilla: preservation of premolars and first molars, tooth removal and implant therapy with sinus floor elevation at furcation involvement level III (Fig. 6)
- Mandible: preservation of second molars, restoration, no inclusion into bridgeworks
- Volume thickening with free autogenous gingival grafts in initial thin biotype settings (Fig. 7)
- Short implants in both esthetically and functionally less demanding situations as an alternative to surgical augmentation (Fig. 8)
- Low bone quality (DS/D4), lateral hard-tissue deficiencies and increased mechanical loading are contraindications for short implants. According to conventional implant rehabilitation, the horizontal width of the alveolar bone crest is the fundamental for functional stabilization, vascularization and nutrition, thus for implant survival and clinical success (Fig. 9).

Inflammation and hygiene

Clinical healthy and stable implant cases are completely covered within the alveolar bone by osseointegration. They also are attached to the periimplant gingiva and thereby become functionally included into the body’s metabolism. This explains the high overall survival rates of oral implants between eight and more than 15 years.

The combination of a thin biotype gingiva with lack of soft tissue protection, functional overload due to stress, habits or a missing front canine equilibration and loss of biofilm protection by periodontal diseases often causes mid-term damages (two years after functional loading) of the implant-to-bone interface. Like periodontally affected teeth with lack of hygiene access and augmented biofilm accumulations, implants develop a potential risk of inflammation when bacteria enter the implant-to-bone interface (Fig. 10).

If the close hard and soft tissue sealing disappears irreversibly, foreign-body infections occur within the oral cavity which are more harmful for the implant-supporting bone and the body health than periodontal diseases. The best protection against periodontal inflammation is not avoiding implants: a careful implant placement strategy with consistent thickening of the surrounding tissues and relief from functional overload precedes any comprehensive periodontal therapy (hygiene) are the best therapeutic helpers for implant survival and oral health (Fig. 11).