Implant strategies in the esthetic zone

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Abstract :

The aesthetic integration of implant-supported prostheses requires the development and stabilization of an adequate emergence profile with reference to the periodontium of the collateral teeth. The development and stability of this osteo-mucosal complex is dependent on both surgical and prosthetic parameters. A perfect three-dimensional position of the implant in a sufficient vertical bone volume, to ensure the support of the gingival architecture, is a prerequisite. The soft tissue is always augmented. The presence of thick, well-keratinized peri-implant gingiva has proven to be a key factor in ensuring the stability of the peri-implant tissue over time. The systematic use of temporary and definitive implant abutments with anatomical and concave trans-gingival profiles ensures shaping and preserves the vascularization and thickness of the developed vestibular gingiva.

Our choice of surgical strategies in the anterior region is determined by the initial situation, which must be carefully evaluated.

If the periodontium of the teeth to be replaced is only slightly altered, good management of the extraction socket must allow it to be preserved. Depending on the initial conditions, protocols for immediate implantation and esthetics, alveolar filling and partial extraction therapies will limit post-extraction alveolysis and stabilize the initial architecture.

In clinical situations where the initial periodontium is already altered, it will be necessary to perform a three-dimensional reconstruction of the hard and soft tissues that will tend to approach the natural state. The practitioner will then have to inform the patient about the biological limits of the implant treatment and have realistic objectives adapted to the situation. It seems possible to identify a common treatment sequence that should be meticulously implemented. A succession of mucosal additions combined with guided bone generation can be performed on the same site, as the treatment plan evolves and according to the desired objectives, to reconstruct an "esthetic" volume. After a sufficient healing period, which must be respected, access to the implant neck is achieved by minimally invasive plastic surgery techniques.

Finally, the thick keratinized mucosa, supported vertically by the reconstructed bone, will be shaped progressively with anatomical provisional prostheses and ovoid pontics, before the placement of definitive screw-retained zirconia ceramic restorations