Esthetic integration rationale for Implant Rehabilitations

Department of Restorative Dentistry and Biomaterials Sciences
Harvard School of Dental Medicine
German O. Gallucci

During this lecture natural esthetic parameters will be analyzed in the context of their direct clinical application. Risk assessment, treatment planning, surgical protocols and prosthodontic resolutions will be discussed in detail. Biologic and periodontal aspects related to dental and gingival esthetics in the anterior maxilla and its relationship with peri-oral tissue will be developed in details.

Recommended planning steps and treatment procedures will be presented through scientific evidence and illustrated with clinical examples treated at School of Dental Medicine of the University of Geneva (Switzerland), and Harvard School of Dental Medicine (Boston, MA). These will include the fabrication of the radiographic and surgical guides in accordance with the corrected diagnostic set-up, the placement of the implants following a prosthodontic driven approach, the fabrication of provisional restorations, final impressions, abutment selection and specific ceramic veneering techniques.

The advantages of CAD/CAM technology for abutments and frameworks will be presented as well. In this context, their contribution to the enhancement of esthetic results with the use of tissue-colored ceramics will be discussed. Prosthetic treatments such as Fixed Partial Dentures (FPDs) (upon natural teeth or implant abutments) or bonded ceramic veneers have to be perfectly integrated in the pre-existing environment. A harmoniously scalloped gingival line with distinct papillae and free of any abrupt vertical differences in clinical crown length between adjacent teeth, is the primary goal. Shade, opalescence, translucency, transparency, structural composition, morphology and surface texture should ideally be mimicked by the prosthetic work to achieve esthetic integration. In this context, the characteristics of the final restoration have to guarantee ideal optical properties such as light reflection, which is closely related to tooth morphology and surface texture. Natural anatomic elements responsible for this particular tooth surface have been described in dental literature from both anatomic and prosthodontic aspects. The achievement of all parameters above mentioned, will lead us to compose the esthetic integration concept.

Objectives: upon completion of this lecture participants should be able to:
- Familiarize with current trends in esthetic implant dentistry.
- Acquire the esthetic selective approach concept.
- Widen treatment planning options for the anterior maxilla.
- Incorporate reproducible esthetic parameters.