



Editorial

Developing a Consensus: Abutment/Crown Design for Single-Tooth Implant Restorations

Early in 2017, an enthusiastic conclave brought together a diverse group of clinicians from the United States and Europe to discuss challenges related to abutment/crown design for single-tooth implant restorations. Although recent dental meetings had shown a plethora of full-mouth reconstructions with implants, this group felt that some of the greatest challenges of decision-making appeared related to single-tooth implant restorations. The conversations were robust and the banter heated, and before parting ways, the clinicians decided to meet again in a formal gathering in April 2017 at the New York University College of Dentistry. The group intentionally avoided sponsorship in order to keep any inherent bias out of the specific discussions and recommendations.

The original team extended invitations to other experts who were thought to adequately contribute to these self-directed clinical queries. In all, 18 clinicians participated in that April meeting. The overarching objective was to determine the best morphology or geometry of the implant abutment/crown complex and to determine guidelines to restore an implant with optimal esthetics and minimal negative consequences on the stability of the peri-implant tissues. Clinical practice guidelines are “systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances.”¹

The group of gathered clinicians reviewed the American Dental Association Clinical Practice Guidelines Handbook (2013), but due to a paucity of scientific evidence, they were unable to carry out the systematic assessment of these clinically relevant questions in order to recommend clinical guidelines. Further, the group also reviewed the Appraisal of Guidelines Research and Evaluation (AGREE) checklist to assist in the development of relevant manuscripts as practice guidelines. It became clear that the majority of the reviewed dental literature had not fully adopted AGREE protocols in reporting outcomes. The team remained committed to reviewing the literature thoroughly and arriving at a consensus based on the available literature and clinical experience. *The International Journal of Periodontics & Restorative Dentistry* offered to include the proceedings from that consensus meeting within this issue.

Four subgroups were formed to answer specific clinical questions focusing on the restoration-implant interface. One subgroup acknowledged the importance of avoiding multiple abutment connections and disconnections. These authors outlined protocols detailing clinical and technical steps for this soft tissue management control, recommending limiting the soft tissue disruptions but recognizing a need for further research in this domain. A second subgroup critically reviewed the restorative emergence profile,

which is significantly influenced by spatial implant position and periodontal phenotype. Therefore, these authors provided a decision tree to help in achieving an ideally designed single-implant restorative emergence profile that supports the gingival architecture, optimizing esthetics and assuring the ease of oral hygiene measures.

The third subgroup examined esthetic indices and peri-implant soft tissue color. In that regard, these authors offer a comprehensive guide to help clinicians choose the optimal abutment type and restorative material. The fourth subgroup focused on clinical criteria for selecting the implant neck design and abutment connection. Even without strong evidence from the literature, these authors describe clinical decision-making parameters to achieve optimal esthetic results, ultimately advocating for platform switching.

Together, these studies aim to stimulate in-depth conversations and entice clinicians to report data using a standardized format so that future consensus meetings can result in the development of clinical guidelines.

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Reference

1. Institute of Medicine. Clinical Practice Guideline: Directions for a New Program. Washington DC: National Academy Press, 1990:38.