

Consensus paper of the 6th European Consensus Conference (EuCC) of BDIZ EDI

Short and angulated implants

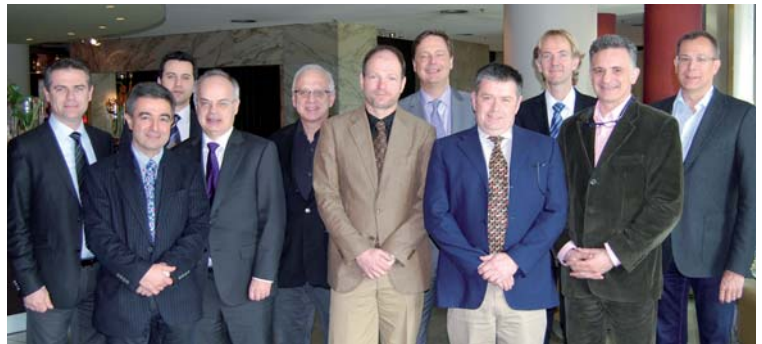
In early March in Cologne, the 6th European Consensus Conference (EuCC), under the guidance of the European Association of Dental Implantologists (BDIZ EDI), issued a consensus paper to serve as a guideline for dealing with reduced-length and angulated implants. The EuCC includes clinical practitioners and academic researchers from Germany and other European countries who bring special knowledge or experience to the discussion.

The purpose of the guideline is to offer recommendations for clinicians engaging in implant dentistry, enabling them to correctly assess potential indications (and any limitations thereof) for reduced-length or angulated implants. Reduced-length implants are increasingly being discussed as a treatment alternative in situations characterized by limited vertical bone height, considering the extensive requirements of surgical and reconstructive implant treatment. Based on biomechanical considerations (e.g. the crown-implant ratio), less than favourable loading conditions must be expected to act on the implant and implant bed with short implants than with standard implants. Advanced implant features (design and surface) and the use of specific treatment options are believed to minimize the risk of treatment.

The EuCC held that the benefit-to-risk ratio of short implants (< 8 mm in length) cannot be clearly assessed in terms of suitability for practical use at this point because no randomized controlled trials or other systematic clinical studies are extant. The process of selecting appropriate patients and indications for such treatment should therefore include a critical appraisal of treatment alternatives (bone augmentation plus medium or long implants).

According to the consensus paper, any inclusion of short implants should be contingent on well-proven surgical and implant-restorative treatment concepts including a mandatory long-term follow-up regime with special attention to possible crestal bone loss. Implant length also influences the ratio between crown length and implant length, which must be taken into account when designing the implant-supported restoration. The general recommendation on reduced-length implants is that "the implant surgeon and restorative dentist should have adequate clinical experience".

The EuCC arrived at a similar verdict regarding angulated implants, which are increasingly being discussed as an alternative treatment option in situations with



European Consensus Conference 2011 in Cologne (from left to right): Dr Spyros Karatzas (Greece), Professor Fouad Houry, Dr Mustafa Ramazanoglu (Turkey), Dr Thomas Ratajczak, Professor Joachim E. Zöller, Dr Alexander Bär, Dr Dirk Duddeck, Dr Philipp Bennett (Great Britain), PD Dr Hans-Joachim Nickenig, Professor Vitomir Konstantinovic (Serbia) and Christian Berger.

limited vertical bone height, considering the extensive requirements of surgical and reconstructive implant treatment. Here, too, the EuCC noted that no randomized controlled trials or other systematic clinical studies are available on the subject. Whenever possible, the use of angulated implants should remain confined to situations of favourable bone quality (better than D3) in the anterior maxilla and mandible. This presupposes appropriate 3D planning and guidance. As greater implant angulations result in greater forces acting on the implant-bone and implant-abutment interfaces, extreme angles should be avoided. Moreover, single crowns and cantilevered bridges on angulated implants should be avoided in favour of primary splinting. Here, too, the EuCC explicitly emphasizes that the implant surgeon and restorative dentist should have adequate training and clinical experience.

The working document on which the EuCC based its deliberation was a preliminary draft authored by PD Dr Hans-Joachim Nickenig and Professor Joachim E. Zöller, Interdisciplinary Policlinic for Oral Surgery and Implantology and Department of Oral and Maxillofacial Plastic Surgery at the University of Cologne.

AWU ■