Bundesverband der implantologisch tätigen Zahnärzte in Europa

European Association of Dental Implantologists

Guidelines 2016

Update on short, angulated and diameter-reduced implants

11th European Consensus Conference (EuCC) 2016 in Cologne

6 February 2016

Authors: Jörg Neugebauer, PhD, DMD
Hans-Joachim Nickenig M.Sc., PhD, DMD
Joachim E. Zöller, PhD, MD, DMD
Department of Cranio-maxillofacial and Plastic Surgery
and Interdisciplinary Department for Oral Surgery and Implantology
Centre for Dentistry and Oral and Maxillofacial Surgery,
University of Cologne, Germany
Director: Professor DDr Joachim E. Zöller

Chairman: Dr J. Neugebauer (Germany)
Protocol: Dr F. Vizethum (Germany)
Participants: Ch. Berger (Germany)
Dr W. Bolz (Germany)
Dr A. Bowen (Spain)
Professor Dr D. Deporter (Canada)
Professor DDr R. Ewers (Austria)
Dr P. Fairbairn (United Kingdom)
Professor Dr A. Felino (Portugal)
Dr Th. Fortin (France)
Dr V. Gowd (India)
Professor Dr M. Kern (Germany)
Professor Dr P. Kobler (Croatia)
Professor Dr V. Konstantinovic (Serbia)
Professor Dr M. Marincola (Italy)
Dr H.J. Nickenig (Germany)
Professor Dr H. Özyuvaci (Turkey)
Professor Dr N. Schmedtmann (Germany)
Professor DDr J.E. Zöller (Germany)

1. Methods

1.1 Objective

The purpose of these guidelines is to offer recommendations for clinicians engaging in implant dentistry, enabling them to correctly assess potential indications (and any limitations thereof) for short, angulated or diameter-reduced implants.

BDIZ EDI
An der Esche 2
D-53111 Bonn
GERMANY
Fon: +49-228-93592-44
Fax: +49-228-93592-46
office-bonn@bdizedi.org
www.bdizedi.org

1.2 Introduction

This consensus paper covers only titanium implants typically placed in accordance with the indications recommended by the European Consensus Conference (EuCC, Germany, 6 February 2016).
All consensus recommendations in this paper should be considered as guidelines only. The patient's specific situation is always an important consideration and may justify a deviation from the recommendations of this consensus paper.

1.3 Background

Avoiding bone augmentation through reduced-dimension implants and optimum utilization of available bone volume is often recommended being a minimally invasive treatment option [45].To ensure an acceptable treatment outcome, dimension and insertion type must be considered in addition to the number of implants.

1.4 Literature search

The Cochrane Library, EMBASE, DIMDI and Medline literature databases were used to conduct a systematic search of recently published data on the use of short, angled or diameter-reduced implants. Selective search criteria were used, including terms such as "short implants", "angulated implants", "angled implants", "tilted implants", "outcome grafting procedure", and "implant -failure". The publications identified by the search were screened by reading their abstracts, and those irrelevant to the subject were identified and excluded. Publications found to be potentially relevant were obtained in full-text form. Multiple review papers with meta-analyses and randomized controlled trials (RCTs), and other prospective and retrospective systematic clinical studies were available on the subject.

1.5 Procedure for developing the Consensus Conference guidelines

A preliminary version of this document on which the EuCC based its deliberations was prepared by *Dr J. Neugebauer* of the Interdisciplinary Policlinic for Oral Surgery and Implantology and Department of Oral and Maxillofacial Plastic Surgery at the University of Cologne/Germany. The preliminary report was then reviewed and discussed by the sitting committee members in five steps as follows:

- Reviewing the preliminary draft
- Collecting alternative proposals
- Voting on recommendations and levels of recommendation
- Discussing non-consensual issues
- Final voting

The full text of all (potentially) relevant citations was obtained if necessary and reviewed. Numerous reviews, but few RCTs (randomised controlled trials) or other systematic clinical trials are available on this topic.

2. Problem

The application of standard implants in patients with atrophy of their alveolar ridges or large pneumatization of the maxillary sinus cavity often requires the use of hard tissue augmentation procedures [18, 17]. These procedures are established, and widely used with

BDIZ EDI
An der Esche 2
D-53111 Bonn
GERMANY