



Bundesverband der
implantologisch
tätigen Zahnärzte
in Europa

European
Association of
Dental
Implantologists

Consensus Paper

3rd European Consensus Conference (EuCC) Cologne 2008 on Peri-implantitis : Prevention – Diagnosis – Therapy

2 February 2008

Participants

Christian Berger, Professor Herbert Deppe, Professor António Felino, Dr Uli Fürst, Dr Pia-Merete Jevøe-Storm, Dr Thomas Hanser, Dr Jörg Neugebauer, Dr Stavros Pelekanos, Dr Stefan Reinhard, PD Dr Peter Schüpbach, Dr Christoph Sliwowski, Dr Freimut Vizethum, Professor Andrzej Wojtowicz, Professor Joachim E. Zöller

Protocol

Dr Jörg Neugebauer, Dr Freimut Vizethum

Definition

Peri-implantitis is defined as the term for inflammatory, pathological reactions in the surrounding soft and/or hard tissue of an osseointegrated implant.

Pathogenesis of the infection

- Step 1: mucositis which can lead to hyperplasia and pocket infection
- Step 2: bone loss which can lead to de-osseointegration

The apical infection after peri-apical granuloma is part of a special form.

The microbiota in the surrounding peri-implant tissue is similar to the microbiota found with periodontitis. General factors enhancing the risk for peri-implantitis:

- habits (especially bruxism, smoking)
- susceptibility to periodontitis
- genetic disposition in connection with smoking
- general diseases (e.g. diabetes mellitus, bisphosphonate-therapy, osteoporosis, immunosuppression, radiation)

High biological age does not necessarily correspond with higher risk for peri-implantitis.

Local risk factors

Poor oral hygiene

Periodontal disease

- The history and actual clinical periodontal findings

BDIZ EDI
Lipowskystr. 12
D-81373 München
GERMANY

Fon: +49-89-720 69-888
Fax: +49-89-720 69-023
office@bdizedi.org
www.bdizedi.org



Biological quality of available bone

- best prediction by non-augmented bone
 - maxilla less risky than mandible
- bone volume (dimension of buccal plate)
- bone quality
 - attention: low-level vascularized bone
- augmentation techniques
 - vascularized autogenous grafting (distraction, splitting, Le-Fort-1)
 - free autogenous grafting (lateral, vertical)
 - allogeneous & xenogeneous (GBR-techniques)

Biological quality of available soft tissues

- availability of fixed mucosa
- phenotype of mucosa

Implant design

So far there is no evidence that geometry of root-form implants is associated with peri-implantitis.

Implant surface

The risk of inflammatory reactions will be influenced by plaque adhesion and the possibility of cleaning the surface.

Surgical technique

Surgical intervention in implants may lead to damage of the peri-implant tissue and therefore to the predisposition of peri-implantitis:

- thermal trauma to bone
- mechanical trauma (compression of vital bone)
- position of the polished edge at subcrestal implant placement
- soft-tissue management
- malpositioning of the implant (vertical, horizontal, axis)

Prosthodontics

Modality of prosthodontic treatment, the different procedures and the resulting functional load thereto are subject to risk potential

- misplacement of superstructure regarding soft tissue level
- lack of hygienic access
- micro-movement of abutments and/or superstructure (screw-loosening)
- prosthetic misfit

In addition overloading is seen as a co-factor.



Diagnosis and procedure

To identify disease a careful clinical examination according the principles of periodontology is necessary:

- bleeding on probing
- careful probing of pocket on four sides (0,2 N probe)
- radiological investigation
peri-apical
CBVI-imaging with <0,2mm-Resolution
- analysis and determination of possible cases

Therapy

Therapy will be accomplished to heal acute symptoms and prevent progression and relapse:

- eliminate cause(s)
- start therapy in the initial stadium
- mechanical cleaning/smoothing
- local disinfection
- reduction deep pockets and/or hyperplasia
 - in selected cases: by resective treatment and/or augmentation of vertical defects
- individualised recall schedule

Therapeutic success

The treatment of peri-implantitis is less predictable than for periodontitis.
Success parameters are:

- reduction of inflammatory reactions
 - bleeding on probing
- no inflammatory reaction within 6 months
- reduction of probing depths

Cologne, 2 February 2008

Christian Berger
President

BDIZ EDI
Lipowskystr. 12
D-81373 München
GERMANY

Fon: +49-89-720 69-888
Fax: +49-89-720 69-023
office@bdizedi.org
www.bdizedi.org