How to treat peri-implantitis

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«The treatment of peri-implantitis may require a surgical approach to fill the osseous defect.»

Depending on disease severity, a decision tree based on assessment of probing depth leads to both non surgical and surgical interventions. Following a systematic literature review of 26 studies, it was revealed that it is possible to obtain defect fill of peri-implantitis defects following surgical treatment modalities with concurrent placement of bone substitutes in such defects.20 When defect fill of peri-implantitis defects is required, use of natural bone mineral in combination with a collagen membrane results in marked clinical improvements.27 Bovine xenogenic biomaterial was found to provide more stable radiographic bone fill than autogenous bone.28 Surgical regenerative treatment of peri-implantitis is shown, resulting in clinical improvements after 12 months with long-term favorable hard- and soft-tissue outcomes over 6 years (case by courtesy of Prof. G.E. Salvi).

REFERENCES

**DEFINITION, DIAGNOSIS AND PREVALENCE**

Peri-implant infections are pathological conditions surrounding dental implants. These infections range from mucositis lesions, reflecting a localized challenge, to peri-implantitis where alveolar bone around the implant is lost.† The typical signs and symptoms of mucositis and peri-implantitis were discussed in detail at various sessions in this conference† and can be described as follows.

<table>
<thead>
<tr>
<th>Signs and symptoms of MUCOSITIS</th>
<th>Signs and symptoms of PERI-IMPLANTITIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bleeding upon probing (BOP)</td>
<td>Evidence of bone loss</td>
</tr>
<tr>
<td>Green and yellowing of the tissue</td>
<td>Musculoskeletal dehiscence and migration</td>
</tr>
<tr>
<td>History of periodontal disease</td>
<td>Implant failure</td>
</tr>
<tr>
<td>History of smoking</td>
<td>Infections</td>
</tr>
</tbody>
</table>

‡ The prevalence numbers are to be interpreted with caution as they are based on a single feature.

**RISK INDICATORS**

A systematic review was performed in order to identify potential risk indicators for peri-implant disease.‡ The following factors were identified.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Prevalence</th>
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<tbody>
<tr>
<td>Smoking</td>
<td>20%</td>
</tr>
<tr>
<td>Age &gt; 60 years</td>
<td>15%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>10%</td>
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‡ Differences in the definition of peri-implantitis have resulted in a wide range of reported prevalence values and are still matter of academic dispute.

**THE INFLUENCE OF IMPLANT SURFACES ON PERI-IMPLANTITIS**

The role of the implant surface for development of peri-implantitis as well as its treatment has been examined. Although similar bone loss was seen with both SLA and polished implants during the “active” breakdown period, the bone loss after 6 months was significantly higher in SLA than in polished implants.‡ This suggests that peri-implantitis may progress more significantly around implants with a structurally rougher surface than around implants with a polished surface.

**PREVENTION & MAINTENANCE CARE PROTOCOLS**

There are five key factors involved in prevention of peri-implantitis:

1. **Treatment planning phase**
2. **Preparation of the patient**
3. **Design of the prosthesis**
4. **Prophylaxis**
5. **Placement of the implant**

The following factors are associated with peri-implant diseases:

- **History of periodontitis**
- **Alcohol consumption**
- **Implant surface**
- **Cigarette smoking**

**TREATMENT OF PERI-IMPLANTITIS**

In treating of peri-implant infections, an analogous approach to systematic periodontal therapy should be considered.‡ The systems phase focuses on debridement, and supportive phase. The removal of functional plaque is a prerequisite to prevent disease progression. Either nonsurgical or surgical therapy, or both can be implemented.

**Peri-implantitis – Prevention is better than cure**

‡ Visit these lectures on Monday, May 9, 3.40 a.m. and 9 a.m. at the Main Symposium!

**Decontamination of the implant surface**

Dr. J.-L. Giovannoli

‡ Visit this lecture on Saturday, May 4, 12.35 p.m. at the Main Symposium!

**Peri-implantitis – Prevention is better than cure**

‡ Visit these lectures on Monday, May 9, 4.30 a.m. and 11.35 a.m. at the Main Symposium!

**How big is the problem?**

‡ Visit these lectures on Saturday, May 4, 10 a.m. and 9 a.m. at the Main Symposium!

**How to debride around an implant**

‡ Visit these lectures on Saturday, May 4, 12.35 p.m. at the Main Symposium!