“Bisphosphonates may increase the failure rate of implants”

Interview with Dr Sebastian G. Ciancio, USA, on periodontal disease as a risk factor for implant failure

By Dr Roland Glauser, Switzerland

The treatment of periodontitis and peri-implantitis involves the eradication of periodontal pathogens. Microbiologic studies have shown that a complex microbiota, involving periodontal pathogens, becomes established subgingivally around implants within one week after abutment connections, and this microbiota continues to persist subgingivally for long time periods. Today international woke up with Dr Sebastian G. Ciancio, USA, about this process and what dentists can do to lower the risks for peri-implant mucositis.

The number of reasons why implants fail are plenty. According to the latest research, risk factors such as bone quality, poor plaque biofilm control, smoking, systemic conditions, surgical trauma, medication, overload or peri-odontitis history come into play. Even genetics have been considered to be responsible for implant failure in some cases.

Do modern implant surfaces face the microbiology associated with peri-implant mucositis? The type of surface does not seem to affect the microbiology around implants since polishes from saliva attach to all types of surfaces and then the bacterial biofilm develops on the surface of this pellicle.

What treatment concepts for peri-implant mucositis are available at the moment and what’s their success rate? The main concepts to treat gingivitis are applicable to the treatment of peri-implant mucositis-plaque biofilm control with mechanical aids and chemotherapeutic agents, and periodical removal of deposits around implants.

It is known that certain medications may contribute to peri-implant mucositis. Which groups have been identified so far and are there alternatives? Calcium channel blockers can cause gingival enlargement around implants with resulting pseudopocket formation and alternative medications are available to control blood pressure and cardiac function. Bisphosphonates may increase the failure rate of implants particularly when administered IV to patients. There may also be a risk of increased failure in patients taking oral bisphosphonates.

Alternatives to the bisphosphonates are not as good but include increased intake of calcium and Vitamin D. Patients taking medications causing xerostomia may be at risk for increased implant failure since these patients accumulate more plaque than patients with a normal salivary flow and in many cases, the pathogens are more virulent. Patients taking sedatives and/or tranquillizers need frequent reminders about plaque biofilm control since these medications create an "I don’t care attitude" in many patients. Therefore they should be scheduled for more frequent recalls. Finally, patients with asthma who use steroid inhalers are at increased risk for oral candidiasis which can present with clinical signs similar to peri-implant mucositis.

Thank you for this interview.

By Dr Sebastian G. Ciancio, USA, on periodontal disease as a risk factor for implant failure

Over the years, a myriad of implant designs and protocol developments have been introduced to the field aiming at simplification and concision without jeopardizing favourable treatment outcomes. In particular, main focus is on a reduction of the number of interventions, such as the invasiveness of the surgery, duration of the treatment, and improved tissue stability and aesthetics. Hence, the future is moving towards clear differentiation strategies of “when” and “how” to favour modified clinical protocols, and when to follow more traditional staged treatment sequences.

Clinicians playing and storing dental implants need to implement these strategies on a routine basis in order to provide an up-to-date therapy for their patients. Consequently, implant dentistry is slowly moving to the next level which is shortened clinical protocols.

Dr Roland Glauser’s lecture on “Implants: A Periodontal Perspective” will be held today in the Theatre on Level 3. The session starts at 17:00.