A study on Straumann Bone Level SLActive® dental implants
Comparing change in peri-implant bone level between submerged versus transmucosal placement of bone level implants in the anterior maxilla and mandible: 12-month results

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The surgical procedure and implant application are performed to establish aesthetics and function in anterior sites, and implants where the metallic shoulder is reduced may help to improve the aesthetics of the restorations. The marginal bone change observed over time is another important factor, with a historical success criterion being bone loss of no more than 0.5 mm in the first year and <0.2 mm annually thereafter.

This investigation was designed to evaluate the amount of bone level change with submerged and transmucosal healing, and to assess any difference in bone level change between the two procedures with Straumann Bone Level SLActive® Implants.

Materials and Methods
Implants to replace single teeth in the anterior region (maxilla or mandible) were placed in a total of 146 patients in 12 centres in seven countries. A temporary crown was placed between eight and 14 weeks, and the final reconstruction was placed after 26 weeks. The primary parameter was evaluation of change in bone level, measured by standardized radiographs taken at the surgery (baseline), provisional placement (approx. 14 weeks), final crown placement (six months) and 12 months, with annual follow-ups extending for five years. Secondary parameters included soft tissue recession, implant survival and success and prosthesis success.

Results
The Intent-to-Treat (ITT) population for the 1-year results included 127 patients (60 and 67 in the submerged and transmucosal groups, respectively), while after 12 months the mean change in bone level was -0.47 ± 0.47 mm (-0.32 ± 0.47 mm and -0.48 ± 0.65 mm for the submerged and transmucosal groups, respectively) (Fig. 1). There was therefore no significant difference in bone level change between the two groups. Almost two-thirds of implants (64.8 per cent) showed less than 0.5 mm bone loss over 12 months (Fig. 2). The implant survival and success rate was 98.2 per cent.

Patient satisfaction with the final prosthesis was extremely high; 99 per cent of patients reported their level of satisfaction as excellent or good (Fig. 5).

Fig. 1: Mean bone level change from baseline at 6 and 12 months. – Fig. 2: Percentage of implants showing different categories of bone level change.

Mean bone level change from baseline at 6 and 12 months.
Dentistry in Singapore goes more digital
National Dental Centre launches new electronic record system

HONG KONG/LEIPZIG, Germany: Singapore’s largest dental care facility is upgraded its patient management. From April on treatment data of patients visiting the National Dental Centre will be registered and stored within a new electronic dental record system. The $US3 million project took years to complete and is the first custom-built dental record system in the city state.

Launched by the end of March in presence of Singapore’s Health Minister Khaw Boon Wan, the system is supposed to allow dentists better access to the dental history and pre-medical conditions of patients. It will also significantly cut down waiting times at the clinic, officials told the newspaper The Straits Times. In recent years, the Centre has repeatedly been criticised for their long waiting lists, particularly for specialist appointments such as root canal treatment or bridge work.

The system will also be compatible with the electronic medical record system by the country’s largest healthcare provider SingHealth for sharing critical medical information such as drug allergies or lab tests results.

With an annual influx of more than 16,000 patients, the National Dental Centre is one of the largest centres for dental healthcare services in Singapore. It currently maintains three specialist clinical departments for oral and maxillo-facial surgery, orthodontics as well as restorative dentistry. They also offer a range of dental training programmes and continuing professional education.

Fig. 1: General patient satisfaction with final prostheses at 12 months.

Discussion

Traditional implant success criteria include an acceptable bone loss of 0.5mm in the first year and <0.2mm annually thereafter. Recently, however, there have been suggestions for these criteria to be revised, indicating that a more acceptable bone loss for modern implant systems would be 0.5mm over five years. However, many of the studies on which this suggestion is based use placement of the temporary or final prosthesis rather than placement of the implant as the baseline measurement for bone level change.

Studies that use implant placement as the baseline measurement for bone level change have shown relevant bone loss before loading; therefore, using prosthesis placement as the baseline may give an inaccurate reflection of the real amount of bone loss. A more accurate picture can be obtained by measuring bone levels at implant placement and at regular intervals thereafter (Fig. 1). Knowledge of the amount of bone level change to expect has a huge clinical relevance in treatment planning to achieve an optimum aesthetic outcome; for example, unexpected bone loss can cause substantial soft tissue recession, resulting in an aesthetic failure.

Conclusions

Marginal bone level change was small and not significantly different between submerged and transmucosal implants.

- The marginal bone level change from implant placement as baseline is 0.47mm (mean). The marginal bone level change from implant loading as baseline (at six month) was 0.17mm (mean)
- Extremely high survival and success rates were observed (99.2 per cent for both)
- Patient satisfaction with the outcome was extremely high (99 per cent).

Editorial note: A list of references is available from the publisher.

TRAINEER (ASIA PACIFIC)

Straumann is a global leader in implant and restorative dentistry and oral tissue regeneration. By offering a full spectrum of products with cutting edge technology and service, Straumann has become the partner of choice for dental professionals worldwide. Training & Education (T&E) is a core function at Straumann globally and in APAC regionally priding itself for its unique partnership with thought leaders and clinicians in dental field in building awareness and expertise in implant, restorative and regenerative dentistry through training and education of unmatched quality.

Straumann APAC is now looking to recruit a Regional Trainer who will be responsible for training customers as well as internal and distributor staff on Straumann portfolio of products. The Trainer will also be responsible for the logistics of the courses, planning and arranging the necessary training materials and equipment. He/she would be travelling frequently giving training support to the region. The Trainer will also respond to customer inquiries with specific technical advice/support where necessary. The Trainer is responsible for ensuring that training and education programs are conducted in accordance to global guidelines and with adaptation to local needs.

The position is based at the company’s regional Headoffice in Singapore and reports to the Director of Scientific Affairs, APAC.

Tasks

Planning, organization and successful delivery of high quality T&E courses
- Planning for APAC HQ courses on a yearly basis in collaboration with broader APAC T&E team
- Setting and regular maintenance of APAC course/activity database
- Support to non Straumann customer activities with materials and equipment
- Support to subsidiary and distributor programs
- Post activity reporting

Internal/Staff Training

- Planning, content development and execution of staff training
- Foreseeing the attendee criteria, agenda and logistics of the event within allocated budget

External/Customer Training

- Planning, organization and ensuring successful execution of high quality and differentiated courses
- Providing material and equipment support

Candidate Qualifications

- Degree in Dentistry, Education or as a Dental Technician
- Experience in dental industry and implant dentistry is preferable
- Professional experience in adult education is a bonus
- Fluency in English (written and spoken) is a must. Asian languages (Mandarin, Japanese) would be an advantage
- Experience with Microsoft Office packages and Powerpoint in particular is expected
- Excellent interpersonal and presentation skills
- Well-organized and structured person
- Team player
- Comfortable to interact with different cultures and customer segments

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