

Nobel Biocare NEWS

Information for the Osseointegration Specialist

Issue 3/2017

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Moving Forward

Report of expert consensus



The FOR consensus conference held at the University of Pennsylvania School of Dental Medicine on November 30 to December 1, 2016 gathered a panel of international experts to discuss the topic of prosthetic protocols in implant-based rehabilitation.

The methods by which single crowns and prostheses are designed and fabricated for implant-based treatments have changed over the years. Recently, new materials and innovative techniques have been introduced, and relevant scientific evidence has been compiled. Ten international experts each conducted a systematic review of the literature on a specific topic in the field of prosthodontics, yielding the following results.

Both fixed and removable complete arch implant prostheses were associated with high implant survival rates (on average >90% after 10 years). Implant overdentures were associated with more maintenance needs / complications than fixed prostheses as well as with greater postplacement residual ridge resorption. The level of patient satisfaction was high, however, with both types of prostheses.



Monolithic zirconia with gingival coloring ("gingival staining"), or zirconia with veneered porcelain limited to the gingival area, offers promising results for fixed complete dentures.

The choice of prosthetic material seemed to have no influence on implant or prosthetic survival rates in fixed restorations.

A systematic review on the clinical outcome of monolithic ceramic implant-supported, single- and multi-unit prostheses determined that the risk of fracture and chipping was significantly reduced in monolithic restorations. Another systematic review determined that CAD/CAM abutments have good survival and success rates and provide comparable, if not better, clinical outcomes than conventional abutments. Ti-inserts for CAD/CAM monolithic implant-supported ceramic restorations improve the overall fracture strength of ceramic abutments and crowns, protect the implant connection from wear, and offer a better marginal fit when compared with all-ceramic abutments. However, independent clinical trials that document long-term performance need to be carried out.

Zygomatic implants offer an alternative treatment option for patients with severely resorbed maxillae, thus avoiding invasive bone graft procedures. The survival rate of prostheses is related to the number and position of the zygomatic implants. It reached 96–100% with one to six years survival. Prosthetic complications included loosening and the fracture of prosthetic screws with the attendant fracture of abutment screws.

Intraoral scanning is more challenging than in-vitro scanning of a model, and more in vivo studies are needed to define clinical indications for different types of IOS. Such is also the case for the impact of the misfit at the prosthesis-implant interface on clinical outcomes of screw-retained implant prostheses, where the available literature does not provide sufficient evidence.

The Foundation for Oral Rehabilitation would like to express their appreciation to the organizers and all the presenters. (See Nobel Biocare News 2/2017.) To join the FOR community, please go to the website below.

→ for.org/en/users/sign-up

"Both a reason and the means to smile once more"

All-on-4® treatment concept makes life worth living again.

As a young woman, Silvana Ribeiro faced the all-too-common consequences of a failing dentition in her upper jaw. She received a removable maxillary acrylic denture, which did not meet her esthetic or chewing needs, due to lack of retention and stability. At the age of 37, she received a fixed prosthesis supported by 4 implants (in accordance with the All-on-4® treatment concept) in the upper jaw using NobelSpeedy Groovy implants. On the same day, an all-acrylic fixed provisional prosthesis was adapted, re-establishing the occlusal vertical dimension, esthetics and function.

By Silvana Ribeiro



Smiling once more, Silvana Ribeiro says, "I didn't just gain a winning smile and the ability to eat unabashedly again, I won back my self-confidence."

My teeth began to give me problems during my first pregnancy. At that point, they started to grow very weak and began to fracture. One after the other, they had to be extracted, and before my recent rehabilitation, I only had three teeth remaining in the upper jaw.

I had been using a removable denture since the age of 20, but it bothered me a lot, and I found it difficult to cope with its drawbacks.

It was difficult for me to eat, and I found no pleasure around the dining table anymore. In fact, I actually stopped eating many foods, such as bread and apples, for example. Because I could not chew properly, my overall health was adversely affected, of course. What's more, eating difficulties were only part of the problem. I stopped smiling. I felt ashamed of myself.

Wide-ranging impact

In my day-to-day life, I became a more closed person. I was embarrassed by my dentures and simply did not smile—not even on my wedding day!

I was afraid that someone would notice that I was wearing a prosthesis. When I didn't wear my dentures for one reason or another, I shut myself in. Although I never hid my predicament from my husband or my son, nobody knew my secret outside a small circle of family and friends. In short, the dentures were discomfiting and diminished both my physical and psychological well-being.

Seen and heard on TV

I first learned that there was a very promising potential solution to my situation when I saw Dr. Paulo Malo being interviewed on a television program that I was watching here in Portugal. I was reluctant at first to seek care, but my son signed me up without telling me. He is very young—but apparently not too young to worry about me. He understood that I was suffering and wanted to help me.

At MALO CLINIC, I saw cases rehabilitated via the All-on-4® treatment concept and it seemed like a dream to me. People were completely transformed. They looked so beautiful. Only those who have the kind of problems I've faced can understand that removable dentures are simply not a viable solution.

To say the least, I was motivated at this stage to solve my problem permanently. They scheduled me for treatment and soon it was underway.

After the surgery I was able to leave the clinic with new teeth in place.* What a change it made! A loose denture user no more, I was regaining well-anchored teeth, which was very important. My quality-of-life suddenly improved tremendously. This treatment is not just about having beautiful teeth, however. It's about being able to lead a normal life. When I looked in the mirror for the first time, I felt happy, truly happy. I still feel that way today.

"It changed my life!"

For me the results were transformational. My outlook on life—if not my personality itself—changed dramatically once I could smile uninhibitedly again.

Where I was once hesitant and socially insecure, I now greet the people around me with a sincere smile and an upbeat attitude.

→ More to explore

To see how the All-on-4® treatment concept can revolutionize your practice, please visit: nobelbiocare.com/all-on-4.

* Loading with a fixed provisional restoration on the day of surgery is possible provided patient criteria are met and adequate implant stability is achieved.

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Practice matters

Osseointegration and osseointegration

The periodontal ligament to osteotomy repair osseointegration. (Pei et al., J Dent Res. 2017)

Following extraction of implants, the periodontal ligament to osteotomy repair osseointegration. New studies have investigated how the host response differs from that of osteotomies, and how periodontal ligament to osteotomy repair osseointegration. In extraction sockets, the authors observed that periodontal ligament could mineralize and form a bone-like structure. Hoisting of extraction sockets, when the healing of osteotomies, where the bone is stripped out.

My choice of membrane depends on the indication. I find cross sponges particularly well-suited to bone augmentation techniques, especially in situations with reduced soft tissue. In many clinical situations, space-maintaining stability and a slow resorption rate.

Most importantly, what I expect from a membrane when using guided bone regeneration (GBR) is pre-

dictable clinical success. In a meta-analytic study that we performed, comparing cross sponges with other collagen membranes, we have observed a reduced rate in dehiscences with cross sponges. In general, we have seen fewer complications in healing, especially versus other stiffer and cross-linked membranes. We have also demonstrated the efficacy of the membrane in a multi-center study.

In addition, the cross xenogin bone substitute is available in a useful variety of packaging options. Depending on the indication and clinical situation, a vial, a syringe, or a bowl is offered. The latter avoids the use of an additional sterile dappen dish for mixing the particulate with autogenous blood, which I prefer in most of my surgeries.

In my overall experience, the cross xenogin bone matrix is a reliable choice. It has been in clinical use for many years and examined in various research and clinical publications, which is a very important consideration for me when selecting a bone substitute to treat my patients. <

Regenerative Solutions For Clinical Success

Opening a world of exciting treatment options

Professor Werner Zechner, a specialist in bone grafting, implant surfaces and guided implant placement protocols, summarizes his experiences with cross regenerative solutions.

By Prof. Werner Zechner

From the very beginning, my experiences with the cross sponges have been very positive. It is simple to trim, even after soaking with autogenous blood. It's easy to handle during surgery and offers excellent stability.

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Professor Werner Zechner is Co-head of the Department for Oral Surgery and Implantology at the University Dental Clinic of the Medical University in Vienna, Austria. He has published over 40 articles in peer-reviewed, international scientific journals and books.

→ More to explore

See "in brief" on page 10 of this issue, and for the full references to this story, please visit: nobelbiocare.com/news.

NobelZygoma™ Dramatically Shortens Time-to-teeth

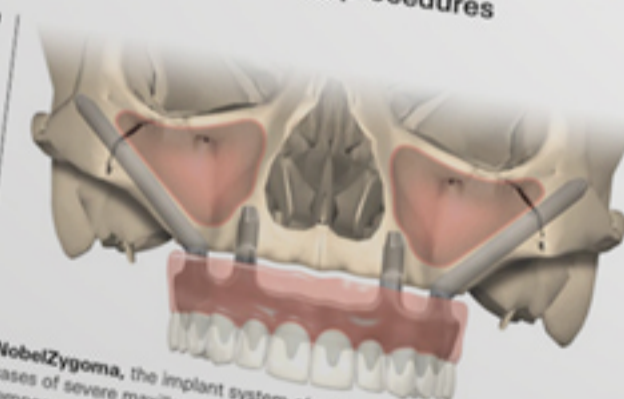
An excellent alternative to extensive grafting procedures

Prof. Paulo Malo successfully treated the first patient with the All-on-4® treatment concept decades ago. Here he comments on using the new NobelZygoma implant series.

By Professor Paulo Malo

The design features of the new NobelZygoma implant allow me to offer even better treatment solutions to my patients in a more effective way. The new apex shape gives enhanced bicortical anchorage in the zygomatic bone without spinning, and the non-threaded coronal part allows me to use the extra-maxilla technique, thus optimizing the prosthetic outcome.

We've been having nothing but great experiences with these new implants. The NobelZygoma implant basically has three major characteristics:



NobelZygoma, the implant system of choice for immediate loading in cases of severe maxillary resorption. It also offers a broad choice of temporary prosthetic options, dramatically decreasing time-to-teeth.

1) the apex, which is tapered for high primary stability and very important for immediate load; 2) the body of the implant, which is very kind to soft tissue; and 3) the head of the implant, which now comes both in 45 degree and zero-degree versions—the latter of which makes it possible for us to place the implant

deeper, and therefore reach a more buccal position. This is a great improvement in terms of prosthetic flexibility and has completely changed the way we now do prostheses in the zygoma. <

→ More to explore

nobelbiocare.com/nobelzygoma