Soft Tissue Engineering With Native Collagen Matrixes

By Dr. Hueskens

Muco gingival sur- gery can be divid- ed into four objec- tives:
- Increase of keratinized tissue around teeth and implants
- Cover denuded root surfaces
- Augmentation of papillae
- Regeneration procedures as ridge augmentation.

All these indication have been treated in the past with free gingival, or connected tissue grafts harvested from the patients palate[1]. The fact that a second surgical site is necessary and that due to complications as bleeding or pain- the procedure is not very comfortable for the patient it is often refused. The amount of harvested soft tissue material is very limited too.[2] Therefore the use of xenogenous materi- als can be an very interesting alternative and was well inves- tigated in the past [3]

Since 2010 we have now three years of experience with colla- gen matrixes from native ori- gin (MucoMatrixX, Dentegris Germany). These matrixes are 1.2 to 1.7 in thickness and are available in the dimensions 15X20 mm, 20X30 mm and 30X40mm. As they come in a dry state they have to be rehy- drated before use. Therefore the MucoMatrix is hydrated with sterile, physiological sa- line solution for about ten min- utes. It is bendable, sutureable and it can be shaped, both with scalpel or scissors. The matrix has two sides, one that shows little cuts is the bottom side, the upper side shows little pores. The time of resorption is six to twelve month.

In the following cases we show how the collagen matrix works as a perfect substitute for both, free gingival and connected tissue graft.

Case one: Increase of kerati- nized tissue around teeth.

In the sequence is shown how a matrix is sutured on a recipi- ent site in region 45 to 47 (1a). Therefore a horizontal inci- sion at the mucogingival junc- tion is placed followed by a

muco sal flap preparation.(1b)

The fixation of the matrix was made by some single sutures that can be removed after four days post operation because of the fast revascularization of the graft (1c). The next pic- tures show the site after two weeks (1d) and six month post operation(1e). A perfect result of enlarging the keratinized tissue could be achieved.

Case two. Root coverage.

In this sequence is shown how the matrix is used to substi- tute a connected tissue graft to serve in a root coverage proce- dure in region 33 to 36 (2a) In this case after coronal reposition- ing of the flap, it is fixed with vertical matrass sutures (2c). Picture 2d showing healing after three weeks, 2e after two years. Region 33 showing start- ing keratinization.

Case three. Soft tissue ridge augmentation including re- inforcement of the distal and mesial papilla.

This sequence shows the recon- struction of the resorbed ridge after an extraction of tooth 12, due to a bridge 13 to 11 and 21 (3a). In this case af- ter a palatal incision a mucosal flap is prepared and enlarged direction labia (3b). Two layers of the matrix are positioned under the flap and the sutures fixing the flap (3c). The provi- sional shows the good primary success in reconstruction of the defect (3d/3e). The docu- mentation of the following healing period showing a per- fect long term treatment suc- cess. Remarkable is the gain of the papilla from picture 3g to picture 3h.

Case four. Closure of the socket during an immediate implant placement proce-

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“Using short implants you are much more conservative”

By Dental Tribune Middle East

Dubai, UAE: During the Bicon Short Implant Forum 2013 in Dubai, UAE we caught up with Dr. Michael Ziegler, Clinical Director of the American Dental Clinic in Dubai to understand his experience with Bicon.

DTME: Dr. Michael Ziegler, you have been here a long time in the Middle East and we are eager to learn more from you.

Dr. Michael Ziegler: Well I have been here for over 27 years, actually I opened my clinic when Emirates Airlines opened their office who grew a little faster than I did but I have always loved the region and had a great time here.

How long have you been using Bicon?

For about 5 years now however I have known about Bicon for a long time but I just was not quite ready to embrace and take the jump into Bicon mainly due to the fact that I did not know enough about it and everybody was talking against the usage of short implants and I believed that too but a lot has changed since. What changed was that I am looking for something conservative and something that is consistent which works. These two points work for me and for my patient. Bicon is conservative because in my hands I had a lot of problems before to make bone. By using short implants you are much more conservative and it is a lot easier for the patient and with less time involved, risk with a consistent outcome. You can top these points and Bicon offers all of these.

Would you advise your dental colleges to use Bicon? How is the learning curve?

When I started using Bicon I was on my own over here. There is a learning curve but once you understand it, it becomes simple and you have more control compared with other systems. The is a learning curve because there is a different way of thinking. One system is a screw and one you tap in so these are two different total concepts, two different healing concepts and the healing process of Bicon is one of the greatest reasons why it is a wonderful implant. The Bicon implant provides room to form a clot or a callus with quick support whereas a screw in implant is very closely associated to the bone so it is a total different type of healing. I have put Bicon in a patient where after drilling the sight there was no blood after having lost two implants and absolutely no bleeding and to put a regular implant in there would have been a very scary thing to do. Two years I had put it in and recently the x-rays showed it is working and it is fine. Furthermore, it is suitable for many situations such as periodontal situations and one of the greatest benefits is for sinus lifts allowing predictability and easy on the patient.

The Bicon implant has been around for over 25 years. I would like to conduct more hands-on courses from coming year 2014 to dentists from the Middle-East region. Since 1985, the Bicon Dental Implant System has offered dentists a proven solution for missing dentition. The Bicon implant design comprises plateaus, sloping shoulders and a bacterially-sealed, 1.5° locking taper implant to abutment connection. With the plateau design, cortical like bone forms around and between each plateau. This Haversian bone allows for the routine use of 5.0mm short implants. The sloping shoulder provides the necessary room for bone to support interdental papillae that are gingival aesthetic. Bicon’s 360° of universal abutment positioning provides for the revolutionary cement less and screw less integrated Abutment Crown™, which consistently provides for a non-metallic aesthetic gingival margin.

Bicon Short Implant Event held in Dubai

By Bicon

Dubai, UAE: The Bicon Short implant event held in Dubai, UAE: The main speakers were Dr. Vincent Morgan, President of Bicon LLC/Boston; Prof. Dr. Mauro Marincola, Clinical Director Bicon/Italy; Dr. Laura Murcko, Bicon consultant/Boston; Mr. Paolo Perpetutini, Italy, Bicon International Technician. Additionally two local Implantologist Dr. Kadhim Hindani and Dr. Michael Ziegler spoke about their experiences with Bicon. Dr. Haider Kandler and Dr. Joji Markose assisted the hands on course which also took place.

The 2 day program was organized in Dubai for a delegation of 70 Iranian dentists and was co-organized with the help of the Iranian distributor of Bicon – Mehr Taban Co. In addition, dentists from UAE, Kingdom of Saudi Arabia, Oman, Iraq, Qatar and India formed the group of 142 dentist who attended the theoretical course on the first day with 75 dentist taking part in the hands-on course on the second day. In addition 18 lab technicians from UAE and Iran attended for education.

Bicon presented proven clinical studies on the 4.0 x 5.0 SHORT implant, TRINIA the mortal Free CAD/CAM Solution and Metal Free Fixed Restorations on short implants. Bicon presented guided surgery techniques for the first time to the Middle East dentists. The course attendees received 17 CE credit hours. At the end of the course the attendees received good exposure advantages of the only unchanged implant system since 20 years.

During the hands-on course on Bicon Surgical, Prosthetic, Guided Surgery and TRINIA, dentists took advantage and learned about the product in a practical way. Based on the success of the Bicon Short Implant Forum 2015 in Dubai, Bicon would like to conduct more hands-on courses from coming year 2014 to dentists from the Middle-East region.

THE REAL CHOICE for pediatric dentistry

The Scientific Session at Atlantis Dubai, UAE

Bicon Short Implant Event held in Dubai
"So many features in Bicon make it a unique implant"

By Dental Tribune Middle East


Since 1980, Dr. Al Himdani started practicing as Oral Implantologist in one of the most famous hospitals in Paris "Cochin Hospital", he was one of the founders of the first University Diploma “MSc. Oral Implantology” in France & Europe. In 2002, Dr. Al Himdani arrived in the Emirates as a Consultant Implantologist & Maxillo-Facial Surgeon in Al Zahrah Private Hospital and in 2003 he established his own clinic “French Center for Dental Implant” where actually practiced exclusively his speciality as Oral Implantologist.

DTME: When was the first time you started using Bicon?

Prof. K. Al-Himdani: About 6 years ago when my friend a Dr. M. Al Jabhawi from U.K. “Whom I would like to thank him” introduced it to me and from that time Bicon solved approximately 90% of problems that I faced with all other implant system which I have used during my 30 years in this field.

What makes Bicon different from other implant systems?

So many features in Bicon make it a unique implant starting from:
1. Implant macro geometry;
   * Its Platform switch & Sloping shoulder which enhances hard & soft tissue growth improving the quality of biological width and so the final Esthetic outcome.

2. Surgical Kit which gives the ability for Manual Bone Manipulation “Splitting & Expanding” and the collection of precious Autogenous Bone, maneuvers which help to overcome “to a certain limit” ridge deficiency avoiding so bone grafting procedures. Beside that the 50 rpm of motorized surgical procedure decreases, if not eliminate the chance of bone damage during host preparation.

3. Prosthetic restoration with its unique Implant Abutment Connection especially with the absence of internal screw has advantage regarding crown’s reparations without traumatizing the implant and oral tissues. On top of that, the ability of the use of Integrated Abutment Crown to overcome the aesthetic result of the use of screw retained crown restoration in case of palatal oriented implant placement.

What is your advise for Dental Colleges?

Implant practice is very exciting field from all points of view “Functional, Esthetic, Healthy, …” and it seems to be easily achieved, but to obtain a durable successful result needs a proper implant selection with good understanding of patient risk factors which are susceptible to compromise our final result.

Contact Information

Prof. Kadhim Al-Himdani
Ph.D., M.Sc., B.D.S.
Maxillofacial Surgeon & Oral Implantologist Paris VII, France
Tel: +971 6 5722555
Fax: +971 6 5746886
Mob: +971 504621479
PO.Box 69676
Sharjah, UAE