The technological advantages of in-situ hardening alloplastic bone graft substitutes and new matrix barriers in a hands on situation

Stability as a key for success

GUEST SPEAKER: Dr. Henrik-Christian Hollay

Thursday 15th October
4:15pm till 6:15pm
Room: PC15,
Maritim Hotelgesellschaft mbH,
Herforder Straße 2, 32105 Bad Salzuflen

Join us today at 4.15pm to discuss:
And experience:

Case report
Sinus lifts are regarded as one of the most difficult and invasive surgeries performed in dental clinics. This case report demonstrates a novel approach to the hydraulic sinus lift technique, utilising the iRaise Sinus Lift System by Israeli company Maxillent.

Implant planning
With an increasing number of patients opting for implants rather than conventional restorations, a thorough and individual planning process is more important than ever. Prof. Rainer Buchmann covers key aspects of ensuring safety in implant treatment.

What's on in Berlin
There is no such thing as boredom in a city like Berlin. Whether you want to explore the Festival of Lights or enjoy a cool Paulaner beer at Berlin’s largest Oktoberfest, here are some tips on how to spend your time off in Germany’s vibrant capital.
MALMÖ, Sweden: A research project on chronic oral infections, led by Prof. Gunnel Svensäter from Malmö University, has been awarded a grant of SEK 12 million (€ 1.3 million) by the Swedish Knowledge Foundation. The researchers aim to develop new clinical tools to diagnose and treat such infections.

In a statement, the foundation acknowledged that research on chronic oral infections offers immense potential and could be of considerable benefit for patients, the dental care system, industry and society in general. To date, there are no reliable methods in dental care for identifying individuals with an increased risk of serious tooth and implant infections. Therefore, the Malmö researchers are targeting the development of new clinical tools in order to enhance diagnosis and treatment of such conditions.

“We are searching for proteins that exist in biofilms around teeth and implants. The proteins can originate either from bacteria or from human cells. If these proteins could be found it would be possible to identify the site as a potential source of infection and treatment could be initiated at an early stage,” Svensäter, Professor of Oral Biology at the university’s Faculty of Odontology, said.

The lead researcher furthermore foresees potential financial benefits from developing diagnosis tools that could be used worldwide, for both the health care system and companies. “The problem we are endeavouring to solve is significant and exists on a global scale. Some 10 per cent of the Swedish population could experience serious problems involving chronic infections that could result in them losing their teeth. The scenario is much the same throughout the rest of the world,” she said.

The four-year project, which brings together microbiologists, cell biologists, chemists and clinical experts, among others, will focus on first finding protein markers in laboratory experiments and later proceed to clinical studies with patients.

According to Svensäter, the research project has been in the planning for a number of years. “We now have the right research group and the right companies in place and we are extremely pleased.”

Adding to donations of about SEK12 million by companies, as well as the university’s contribution of SEK 6 million (€ 0.6 million), the grant by the foundation brings the project’s total budget to SEK 30 million (€ 3.2 million).

The Knowledge Foundation is a funding body for universities and serves to strengthen Sweden’s competitiveness. Since its formation in 1994, the foundation has invested about SEK 8.7 billion (€ 942 million) in more than 2,500 projects.
See the latest developments in implant design and prosthetics

Visit us at Booth #18

BruxZir®
Solid Zirconia

PROSTHETIC COMPONENTS

NEW!

Industry Standard Conical Connection

INCLUSIVE®
TAPERED IMPLANT SYSTEM

Industry Standard Internal Hex Connection

949-431-7400
www.glidewelldirect.com

CLINICAL AND LABORATORY PRODUCTS
New study suggests many dental implants may be prone to fracture

by DTI

HAIFA, Israel: An examination of 100 biologically failed dental implants has found that more than 60 per cent of these implants showed signs of mechanical flaws, such as crack-like defects and full cracks. In publicising these results, the researchers aim to encourage dental implant manufacturers and dentists to find ways to reduce the structural damage that occurs when a metal is subject to repeated applied loads.

In the study, the researchers examined 100 discarded dental implants, which had been extracted owing to peri-implantitis, made of a titanium alloy and commercially pure titanium using energy dispersive X-ray analysis and scanning electron microscopy. They found mechanical defects in 62 per cent of the specimens. In addition, the inspection showed that the pure titanium implants had more cracks than did the titanium alloy implants.

“Embedded particles appear to be linked to the generation of surface defects that evolve into full cracks,” explained Dr Keren Shemtov-Yona, a dental researcher at the Technion—Israel Institute of Technology, who conducted the study as part of her Master of Science degree. Furthermore, the wear and tear of daily use may also contribute towards the potential of manufacturing flaws to develop into cracks and subsequently lead to failure of the material, the researchers stated. It was also found that the width and length of the different implants in this study were not correlated with the observed defects.

Shemtov-Yona is now aiming to conduct further studies to investigate the reasons for the development of cracks to determine whether the causes lie in manufacturing, use or both.

The study, titled “On the mechanical integrity of retrieved dental implants”, was published in the September issue of Journal of the Mechanical Behavior of Biomedical Materials.
Perform sinus lifts in 25 minutes at your clinic

1. Reach sinus safely: special cortex drill
2. Elevate membrane with saline pressure
3. Inject bone graft

Post-op panoramic X-ray

perform sinus lift procedures with confidence and ease
dramatically improve your patients’ experience and quality of life

Seeking exclusive distributors: come and share the iRaise success
At this year’s ICOI World Congress, Dr Henrik-Christian Hollay will address the importance of stability in guided bone regeneration therapy. In anticipation of his Sunstar pre-conference workshop on 15 October, Dental Tribune International spoke to him about his perspective on what has been achieved over the years and what the future may hold.

Dr Henrik-Christian Hollay: Stability is and always has been key to successful bone augmentation and regeneration. In recent years, several methods and materials were developed to achieve this aim that are very complex and technique sensitive, such as titanium meshes, different types of membranes, which mostly have to be fixed with pins, and bone blocks that have to be screwed to the bone. Aside from the surgical challenge, the costs of these have driven the pursuit of materials that are cheaper and easy to handle and that facilitate the complete workflow. Bone graft materials that harden shortly after being placed and membranes that remain in position have made substantial progress in achieving these goals.

What techniques stand out in clinical practice?

Guided bone regeneration is the keyword of the moment. There are many interesting techniques that are relevant in daily practice. A technique that has been much discussed is socket or ridge preservation. There are also a few very special new techniques that have been developed in the last few years, such as the tunnel augmentation technique and different shell techniques. All of them are minimally invasive, and tunnel augmentation and socket or ridge preservation are even flaps. These two feature allied to syringe delivery allow clinicians to consider minimally invasive (bisurgery) techniques (such as the tunnel and soft shell techniques described above). For example, GUIDOR easy-graft from Sunstar is stable after 4 or 5 minutes, forming an analogue of the defect site into which it is placed. Traditional particulates (even those delivered from a syringe) will remain mobile and often do not conform to the site morphology. The inherent mobility of a traditional particulate often requires placement of a membrane to stabilize and contain the particles. Typically in such instances, the membrane will need to overlap the defect on all sides by 2 or 3 mm necessitating a significantly larger access flap. Because of rapid enzymatic degradation, collagen membranes used in such instances must be covered by tension free soft tissue closure. Techniques to achieve this may well require elevation of the periosteum and mobilisation of a free flap. This surgical cascade and the tissue trauma associated with it is technique sensitive, painful, and can delay healing as well as consume more time. Moreover, the micro-movements from a unstable site may well be associated with soft tissue invasion rather than the required hard tissue regeneration.

What are the most important factors regarding favourable outcomes in regenerative practice?

Next to stability, in my opinion, the most important factor is blood. Without strong bleeding from the cancellous bone in the recipient bone area, bone regeneration and augmentation will not occur. The pluripotent mesenchymal cells that are carried to the augmentation site via the blood do the real work for us, and it is important to bear that in mind. Several different techniques and materials can lead to a good outcome in guided bone regeneration performed correctly, but why is that so? It is because the human body has enormous healing potential and only needs a little bit of guidance from surgeons. After a long period of research on materials and techniques, our next mission will be to return to nature.

Dr Henrik-Christian Hollay is presenting the Sunstar GUIDOR pre-conference workshop titled “Stability as a key for success: An overview of various augmentation techniques with in situ hardening bone graft substitutes” on 15 October, from 16.15 to 18.15.

Dr Henrik-Christian Hollay: Stability is and always has been key to successful bone augmentation and regeneration. In recent years, several methods and materials were developed to achieve this aim that are very complex and technique sensitive, such as titanium meshes, different types of membranes, which mostly have to be fixed with pins, and bone blocks that have to be screwed to the bone. Aside from the surgical challenge, the costs of these have driven the pursuit of materials that are cheaper and easy to handle and that facilitate the complete workflow. Bone graft materials that harden shortly after being placed and membranes that remain in position have made substantial progress in achieving these goals.

What techniques stand out in clinical practice?

Guided bone regeneration is the keyword of the moment. There are many interesting techniques that are relevant in daily practice. A technique that has been much discussed is socket or ridge preservation. There are also a few very special new techniques that have been developed in the last few years, such as the tunnel augmentation technique and different shell techniques. All of them are minimally invasive, and tunnel augmentation and socket or ridge preservation are even flaps. These two feature allied to syringe delivery allow clinicians to consider minimally invasive (bisurgery) techniques (such as the tunnel and soft shell techniques described above). For example, GUIDOR easy-graft from Sunstar is stable after 4 or 5 minutes, forming an analogue of the defect site into which it is placed. Traditional particulates (even those delivered from a syringe) will remain mobile and often do not conform to the site morphology. The inherent mobility of a traditional particulate often requires placement of a membrane to stabilize and contain the particles. Typically in such instances, the membrane will need to overlap the defect on all sides by 2 or 3 mm necessitating a significantly larger access flap. Because of rapid enzymatic degradation, collagen membranes used in such instances must be covered by tension free soft tissue closure. Techniques to achieve this may well require elevation of the periosteum and mobilisation of a free flap. This surgical cascade and the tissue trauma associated with it is technique sensitive, painful, and can delay healing as well as consume more time. Moreover, the micro-movements from a unstable site may well be associated with soft tissue invasion rather than the required hard tissue regeneration.

What are the most important factors regarding favourable outcomes in regenerative practice?

Next to stability, in my opinion, the most important factor is blood. Without strong bleeding from the cancellous bone in the recipient bone area, bone regeneration and augmentation will not occur. The pluripotent mesenchymal cells that are carried to the augmentation site via the blood do the real work for us, and it is important to bear that in mind. Several different techniques and materials can lead to a good outcome in guided bone regeneration performed correctly, but why is that so? It is because the human body has enormous healing potential and only needs a little bit of guidance from surgeons. After a long period of research on materials and techniques, our next mission will be to return to nature.
Bone Graft Substitute

GUIDOR® easy-graft

Visit our pre-congress workshop
15th October 2015, 4:15 – 6:15 pm.

- 100 % alloplastic bone graft substitute
- Soft from the syringe
- Mouldable in the defect
- In situ hardening

Distribution:
Sunstar Deutschland GmbH · Aiterfeld 1 · 79677 Schönau
Fon: +49 7673 885 10855 · Fax: +49 7673 885 10844
service@de.sunstar.com · www.easy-graft.com
# List of exhibitors

<table>
<thead>
<tr>
<th>Company</th>
<th>Hall</th>
<th>Booth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acteon Germany GmbH</td>
<td>Hotelhalle I</td>
<td>45, 46</td>
</tr>
<tr>
<td>American Dental Systems GmbH</td>
<td>Saal Berlin</td>
<td>36</td>
</tr>
<tr>
<td>Argon Dental</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertriebs Gesellschaft mbH &amp; Co. KG</td>
<td>Saal Berlin</td>
<td>29</td>
</tr>
<tr>
<td>BDIZ EDI</td>
<td>Saal Berlin</td>
<td>5</td>
</tr>
<tr>
<td>BEGO Implant Systems GmbH &amp; Co. KG</td>
<td>Saal Berlin</td>
<td>6</td>
</tr>
<tr>
<td>Bicon Europe Ltd.</td>
<td>Saal Berlin</td>
<td>12, 13</td>
</tr>
<tr>
<td>BioHorizons GmbH</td>
<td>Saal Berlin</td>
<td>7</td>
</tr>
<tr>
<td>Bioimplon GmbH</td>
<td>Hotelhalle I</td>
<td>43</td>
</tr>
<tr>
<td>BmedS/StarMed Loups &amp; Lights</td>
<td>Saal Berlin</td>
<td>4</td>
</tr>
<tr>
<td>Botiss Medical AG</td>
<td>Saal Berlin</td>
<td>34</td>
</tr>
<tr>
<td>Bredent Medical GmbH &amp; Co. KG</td>
<td>Hotelhalle I</td>
<td>49, 50, 51</td>
</tr>
<tr>
<td>BTI Deutschland GmbH</td>
<td>Saal Berlin</td>
<td>33</td>
</tr>
<tr>
<td>CAMLOG Vertriebs GmbH</td>
<td>Saal Berlin</td>
<td>15, 16</td>
</tr>
<tr>
<td>ClaroNav</td>
<td>Saal Berlin</td>
<td>41</td>
</tr>
<tr>
<td>Curasan AG</td>
<td>Saal Berlin</td>
<td>2</td>
</tr>
<tr>
<td>DENTSPLY Implants Manufacturing GmbH</td>
<td>Hotelhalle I</td>
<td>52, 53, 54</td>
</tr>
<tr>
<td>Deutsche Bank Privat- und Geschäftskunden AG</td>
<td>Saal Berlin</td>
<td>19</td>
</tr>
<tr>
<td>Geistlich Biomaterials Vertriebsgesellschaft mbH</td>
<td>Saal Berlin</td>
<td>31</td>
</tr>
<tr>
<td>Glidewell Laboratories</td>
<td>Saal Berlin</td>
<td>18</td>
</tr>
<tr>
<td>Hager &amp; Meisinger GmbH</td>
<td>Saal Berlin</td>
<td>32</td>
</tr>
<tr>
<td>Harf Medical Services GmbH – Chocolate</td>
<td>Saal Berlin</td>
<td>1</td>
</tr>
<tr>
<td>Cortex Vertrieb Deutschland</td>
<td>Saal Berlin</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Company</th>
<th>Hall</th>
<th>Booth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health AG</td>
<td>Hotelhalle I</td>
<td>47, 48</td>
</tr>
<tr>
<td>Helmut Zapf Medizintechnik GmbH</td>
<td>Saal Berlin</td>
<td>3</td>
</tr>
<tr>
<td>Hess Medizintechnik GmbH</td>
<td>Saal Berlin</td>
<td>23</td>
</tr>
<tr>
<td>Instradent GmbH</td>
<td>Saal Berlin</td>
<td>8</td>
</tr>
<tr>
<td>Leading Health Centers</td>
<td>Saal Berlin</td>
<td>22</td>
</tr>
<tr>
<td>Maxillent Ltd.</td>
<td>Saal Berlin</td>
<td>35</td>
</tr>
<tr>
<td>MCC Medical CareCapital GmbH</td>
<td>Saal Berlin</td>
<td>30</td>
</tr>
<tr>
<td>Medentis Medical GmbH</td>
<td>Saal Berlin</td>
<td>39</td>
</tr>
<tr>
<td>Quintessenz Verlags GmbH</td>
<td>Saal Berlin</td>
<td>9</td>
</tr>
<tr>
<td>SIC invent Deutschland GmbH</td>
<td>Saal Berlin</td>
<td>11, 12</td>
</tr>
<tr>
<td>SICAT GmbH &amp; Co. KG</td>
<td>Saal Berlin</td>
<td>26, 27</td>
</tr>
<tr>
<td>Stoma Dentsystems Gmbh &amp; Co. KG</td>
<td>Saal Berlin</td>
<td>20</td>
</tr>
<tr>
<td>Straumann GmbH</td>
<td>Saal Berlin</td>
<td>37</td>
</tr>
<tr>
<td>Sunstar Deutschland GmbH</td>
<td>Saal Berlin</td>
<td>24, 25</td>
</tr>
<tr>
<td>Synchro dent eK</td>
<td>Saal Berlin</td>
<td>14</td>
</tr>
<tr>
<td>TRI Dental Implants</td>
<td>Saal Berlin</td>
<td>16, 17</td>
</tr>
<tr>
<td>Universität Frankfurt</td>
<td>Hotelhalle I</td>
<td>44</td>
</tr>
<tr>
<td>Ustomed Instrumente</td>
<td>Saal Berlin</td>
<td>28</td>
</tr>
<tr>
<td>Ulrich Storz GmbH &amp; Co. KG</td>
<td>Saal Berlin</td>
<td>21</td>
</tr>
<tr>
<td>X-Nav Technologies, LLC</td>
<td>Saal Berlin</td>
<td>21</td>
</tr>
<tr>
<td>Z-Systems GmbH</td>
<td>Saal Berlin</td>
<td>10</td>
</tr>
</tbody>
</table>

Floor plan and the exhibitors list are subject to change. Last update was 30 September, 2015.

![Exhibit Booth Locations](image_url)
Thursday, 15 October
14:30 to 16:00
Pre Congress Courses
GOLD Sponsors: Bredent Medical, DENTSPLY Implants, Health AG
SILVER Sponsors: Bicon Europe, BioHorizons, Camlog, SIC Invent
14:00 to 15:00
Diplomate Written Exam
15:00 to 17:00
Diplomatic Oral Exam
18:00 to 19:30
Poster Presentations/Welcome Reception

Friday, 16 October
08:00 to 09:00
Dr. Ralf Smeets:
Alternatives to Autogenous Bone Grafts in Dental Implantology—What’s New?
09:00 to 10:00
Dr. Galip Gurel:
Ultimate Digital Communication Skills for Minimally Invasive Dentistry
10:00 to 10:30
Break with Exhibitors
10:30 to 11:30
Dr. Ilia Roussou:
Soft Tissue Applications Around Implants: Why and How?
09:00 to 10:00
Dr. Ate Anli:
Soft Tissue Applications Around Implants: Why and How?
10:00 to 10:30
Break with Exhibitors
10:30 to 11:30
Dr. Gerard Sgorbietti:
Breaking the Limits with New Technologies
17:15 to 18:15
Dr. Afy Palti:
New Techniques and Materials for Sinus Elevation Including Trouble Shooting in the Implant Office
19:00 to 20:00
Awards Ceremony
20:00 to 23:00
Gala Dinner

Saturday, 17 October
08:00 to 09:00
Dr. Eric Rompen:
Extraction Socket Management with Immediate or Delayed Implant Placement: Facts and Figures
09:00 to 10:00
Dr. Ate Anli:
Soft Tissue Applications Around Implants: Why and How?
10:00 to 10:30
Break with Exhibitors
10:30 to 11:30
Dr. Gerard Sgorbietti:
Breaking the Limits with New Technologies
11:30 to 12:30
Dr. Joseph Choukroun:
12:30 to 13:30
Lunch with Exhibitors
13:30 to 14:30
Dr. Ismail Moubayi:
Periimplantitis: Is There Any Treatment for this Implant Specific Pathology?
14:30 to 15:30
Dr. Yon Paltis:
Predictable Destruction of Osseointegrated Implants with Prostheses
15:30 to 16:15
Break with Exhibitors
16:15 to 17:15
Dr. Mariusz Duda:
Implantological Cases with Complications Compared with Successful Cases
17:15 to 18:15
Dr. Richard Leesungbok:
Implant Treatment with Smart Loading Protocols, CAD/C Technology, and Magnetic Attachments
18:15
Closing Comments

Young Implantologists
Thursday, 15 October
Claas R. Jody, G. Scortiacci, N. Forna, M. Steinmann
Moderator: K. D. Valavanis
10:00 to 10:10
Introducing the ICOI Young Implantologists Podium
10:10 to 10:30
Roberta Garparro (Italy):
Ultra short Implants: A Novel Mini Invasive Treatment Opportunity
10:30 to 10:50
Tetsuki Homma (Japan):
One Abutment One Change, Digital Prosthetic Protocol
10:50 to 11:10
Elisa Choukroun (France):
Socket Management for Secondary Implantation—A Biological Approach
11:10 to 11:30
Filipa Braga (Portugal):
Digital Dentistry in Complex Cases
11:30 to 11:50
Paolo Huzsoly (Italy):
Platform Switching: “Cono Morse” and Implant Morphology to Optimize Function and Aesthetics
11:50 to 12:10
Coffee Break
12:10 to 12:30
Daniel Grubeanu (Germany):
Predictable Implant Aesthetics in the Sensitive Zone by Intelligent Abutment Selection. The Concept “Atlantis”
12:30 to 12:50
Giuseppe Pantaleo (Italy):
Different Indications of Regenerative Biomaterials: Our Clinical Experience
12:50 to 13:10
Nicolaos Mallios (Greece):
Optimum Graft for Reconstructing Absorbed Ridges. Autogenous Bone, Allografts, Xenografts or Alloplastic Materials?
13:10 to 13:30
Tom Giblin (Australia):
Incorporating Digital Dentistry into the Modern Implant Practice
13:30 to 13:50
Gil Andurand (Israel):
Digitally Assisted Controlled Prosthetic Approach
13:50 to 14:10
Thilo Damakos (Germany):
Backward Planning in Implant Dentistry

Presentation dates and topics are subject to change. Last update was 23 September, 2015.
Glidewell Laboratories presents Hahn Tapered Implant System

Glidewell Laboratories, one of the largest dental laboratories in the US and the manufacturer of industry-leading restorative materials and cutting-edge implant technologies, is showcasing its new Hahn Tapered Implant System at the 2015 ICOI World Congress in Berlin in Germany. Developed in collaboration with Dr Jack Hahn, creator of the original tapered implant, the system was designed for general dentists by combining clinically proven features with contemporary innovations.

Since its launch at major conferences in the US this year, such as the Chicago Dental Society Midwinter Meeting, sales have increased significantly. “At ICOI, Glidewell will be introducing the implant system to the European market,” said Brian Banton, Vice President of International Sales. “ICOI is an ideal place for us to present the new implant system to an international audience. Being a world congress, it allows us to reach customers from many different areas, particularly from the Middle East and Asia.”

In order to expand patient access to implant therapy and to make implant therapy simpler, safer and more predictable, Hahn designed this system for both general practitioners and specialists. The tapered implants allow for swift insertion and precise control during placement, as well as increase the likelihood of achieving primary stability. “Benefiting from Dr Hahn’s 40 years of experience, we have been able to develop a high-quality implant system that delivers premium results for a very cost-effective price. The implants are able to utilise an already existing surgical component, which allows dentists to switch to the Hahn Implant with a minimal amount of change,” Banton explained. “To date, we have also seen a 100 per cent success rate with Hahn Tapered Implants,” he added.

The implant system has been granted approval for the European market and is available in five different diameters, from 3 to 7 mm. For more information, go to www.hahn-implant.com or visit Booth 18 at the ICOI World Congress.

Glidewell Laboratories, based in Newport Beach in California in the US, is an industry-leading provider of affordable, high-quality dental laboratory products and services to dental professionals worldwide. Established in 1970 by certified dental technician Jim Glidewell, the company offers a wide range of crown and bridge, removable and implant restorations. The company’s CAD/CAM-processing capabilities are recognised as being among the most advanced in the industry, and enable it to manufacture award-winning restorative materials and proven implant systems.
Minimally invasive sinus lift with iRaise
A case report. By Prof. Gabi Chaushu, Israel

Introduction
Implant placement in the atrophic posterior maxilla is a challenge. Bone augmentation (paranasal floor elevation) is very often indicated. When the subantral residual bone height is very limited, open sinus lift surgery or lateral window Caldwell-Luc antrostomy is the conventional therapy used by most dentists. This is a traumatic invasive surgery with several postoperative complications for the patient and long term recovery.

Chen was the first to introduce a hydraulic sinus lift technique, during which the surgeon lifts the Schneiderian membrane from the sinus floor using the hand-piece and by spraying a liquid. The newly formed space is filled with bone grafting material and followed by implant placement.

The present case will demonstrate a novel approach to the hydraulic sinus lift technique utilizing the iRaise implant system (Maxillent). The implant design includes an L-form internal channel leading to the apical portion of the implant, which allows for saline and bone grafting material to be injected into the sinus cavity. A sterile 0.9% NaCl solution is injected through the implant's internal channel in order to detach the Schneiderian membrane from the sinus floor. Aspiration of the saline is then followed by injection of bone grafting material in gel form through the same implant channel, thus filling the space between the sinus floor and the membrane.

In the last step, the entire implant body is placed into the augmented bone. The hydraulic lift of the sinus membrane is performed through the alveolar crest. Once the implant has been fully inserted, the internal channel is closed by the bone and there is no communication with the implant prosthetic platform, preventing penetration of bacteria from the oral cavity to the bone graft after implant placement.

Case presentation
A 40-year-old healthy female patient presented to the dental office.

Clinical and radiographic examination revealed that tooth #15 was missing (Fig. 1). The residual alveolar ridge height was 5 mm. The treatment plan included placement of an endosseous implant followed by an implant-re- tained crown. In order to be able to realise this plan, a sinus augmentation was required.

The iRaise implant was used in this case, which allowed placing of the implant and hydraulic elevation of the sinus membrane simultaneously. Prior to the surgery, 1,000 mg amoxicillin was prescribed as a prophylactic treatment and a full-thickness mucoperiosteal flap was raised.

The exact point of implant placement was marked in region #15. Special drills were used to engage the cortical bone of the sinus floor. A diamond bur was then used to cross the cortical bone. The use of a diamond bur prevents rupture of the Schneiderian membrane. An iRaise implant of 4.2 mm in diameter and 14.5 mm in length was inserted halfway. The orifice of the internal channel reached the bone and was placed facing the buccal side. The implant connector was attached to the implant orifice, and 2 ml of NaCl was injected through the connector in order to detach the sinus membrane by equal hydraulic pressure. The Valsalva manoeuvre test was performed to confirm membrane integrity.

Aspiration of the saline followed, and a mixture of saline and blood appeared in the syringe, indicating that the Schneiderian membrane had detached and become elevated and the blood capillaries had ruptured. The next step was injection of 2 ml of a synthetic bone grafting material of tricalcium phosphate and hydroxyapatite in gel form (MBCP Gel, Biomatlante). The connector was removed and the implant inserted to its full length, to crest level.

A CBCT scan was taken immediately after treatment and showed a beautiful four-layer creation of air, bone, water, bone grafting material and the residual alveolar ridge (Fig. 2). The integrity of the Schneiderian membrane and a healthy sinus were also observed. The internal channel of the implant had been completely filled with the injected bone.

The surgery ended with closure of the flap by conventional suturing. The patient found the surgery easily tolerable and immediately returned to her everyday routine.

No side-effects, such as swelling, pain or haematoma, were reported. Follow-up examinations at three and six months postoperatively were performed, and the periapical radiographs showed calcification, which is associated with bone formation (Figs. 3 & 4).

Discussion
The iRaise sinus lift technique is easy to perform. Two separate surgeries are combined in one short surgery to create a minimally invasive procedure that is well tolerated by the patient and allows for a quick return to normal life, as opposed to other sinus lift surgery approaches, such as the open lateral window technique, which have been shown to cause substantial side effects, such as swelling pain and haematoma, and require longer recovery. The present minimally invasive hydraulic sinus lift technique is likely to become a routine procedure in private practices and hospitals.

Editorial note: A list of references is available from the publisher.
Implant planning affects periimplant diseases

A time shift link

By Rainer Buchmann¹, Daniel Torres-Lagares², Guillermo Machuca-Portillo²
¹ University of Düsseldorf, Germany; ² University of Seville, Spain

1. Accuracy of implant diagnosis and implant placement by 3D viva-
sualization (DVT) of implant surgi-
cal access.
2. Minimal surgical involvement with short and low diameter im-
plants while restricting augmenta-
tion to prosthetic relevant set-
tings.

Planning

Early Decision Making

Early implant decision making comprises anatomical, functional and economic issues:

a) Anatomy: Treated severe peri-
comprises anatomical, functional

b) Function: Following untreated periodontal diseases or tooth re-
moval, shifting of single tooth ini-
tiates due to myofunctional im-
balance. By loss of front-canine equilibration and side shift emergence.

DVT in early implant planning har-
safeness. The generation of a

3. Minimal surgical involvement with short and low diameter im-
plants while restricting augmenta-
tion to prosthetic relevant set-
tings.

Digital imaging 3-D

Digitalization means information and safety. The generation of a

A time shift link

Implant planning affects periimplant diseases

By Rainer Buchmann¹, Daniel Torres-Lagares², Guillermo Machuca-Portillo²
¹ University of Düsseldorf, Germany; ² University of Seville, Spain

1. Accuracy of implant diagnosis and implant placement by 3D viva-
sualization (DVT) of implant surgi-
cal access.
2. Minimal surgical involvement with short and low diameter im-
plants while restricting augmenta-
tion to prosthetic relevant set-
tings.

Planning

Early Decision Making

Early implant decision making comprises anatomical, functional and economic issues:

a) Anatomy: Treated severe peri-
comprises anatomical, functional

b) Function: Following untreated periodontal diseases or tooth re-
moval, shifting of single tooth initi-
tiates due to myofunctional im-
balance. By loss of front-canine equilibration and side shift emergence.

DVT in early implant planning har-
safeness. The generation of a

3. Minimal surgical involvement with short and low diameter im-
plants while restricting augmentation to prosthetic relevant settings.

Digital imaging 3-D

Digitalization means information and safety. The generation of a DVT in early implant planning harbors 3 advantages:

- Commitment: The expenses of
b) Function: Following untreated periodontal diseases or tooth remo-
val, shifting of single tooth initi-
tiates due to myofunctional imbalance. By loss of front-canine equilibration and side shift emergence.

DVT in early implant planning harbors 3 advantages:

- Commitment: The expenses of
- Precision: The benefit of a time-in-
tense 3D implant evaluation is a
more precise, controlled and risk-
reduced planning, and eases surgi-
cal implant placement. These ad-
advantages should be utilized by all
dental health care providers, even
with long-term clinical expertise

if you are not a DVT owner, oral
surgeries (specialists) and diagnos-
tic radiology clinics are appropri-
ate contact addresses. regard for
the intended 3-D image always al-
locate the exact DVT area, details
and viewer suitable for your PC
software. The expenses both of
the DVT and the digital analysis
and evaluation are subjects to private cash.

Interimplant distance

If an implant is placed adjacent to a tooth, the interdental papilla re-

issues 1–4 ensure dispenses of the habitual use patterns after 4 to 6 weeks wearing. Due to hygiene and stabilization, the intramural appliances are manufactured as strew splints in a dimension of 1.5 mm with extension limited to the first molars.

Fig. 5: Examen craniofaciale: auslösende Dysfunktionen im Sinne von Muskelverspannungen (M. temporalis, M. masseter) und der temporomandibularen Gelenke (M. pterygoideus medialis und lateralis) mit Schwerpunkt auf der frontalem Konkordanz.

3. Careful reduction of prominent intrusive contacts (front) and sliding bars during laterotrusion on the operating side.

4. Placement of a relaxation appliance in the maxilla (overbite and deep bite in the mandible) for functional decompensation with a frontal plateau allowing a front-canine equilibration and temporary release in molars by vertical release of 1 mm (Fig. 5).

5. Functional decompensation is essential to relieve load, vascular-
ization and mineralization of the alveolar bone prior to implant place-
ment. Subsequent realization of the

- Precision: The benefit of a time-in-
tense 3D implant evaluation is a
more precise, controlled and risk-
reduced planning, and eases surgi-
cal implant placement. These ad-
advantages should be utilized by all
dental health care providers, even
with long-term clinical expertise

if you are not a DVT owner, oral
surgeries (specialists) and diagnos-
tic radiology clinics are appropri-
ate contact addresses. regard for
the intended 3-D image always al-
locate the exact DVT area, details
and viewer suitable for your PC
software. The expenses both of
the DVT and the digital analysis
and evaluation are subjects to private cash.

Interimplant distance

If an implant is placed adjacent to a tooth, the interdental papilla re-

issues 1–4 ensure dispenses of the habitual use patterns after 4 to 6 weeks wearing. Due to hygiene and stabilization, the intramural appliances are manufactured as strew splints in a dimension of 1.5 mm with extension limited to the first molars.

Digital imaging 3-D

Digitalization means information and safety. The generation of a DVT in early implant planning harbors 3 advantages:

- Commitment: The expenses of
- Precision: The benefit of a time-in-
tense 3D implant evaluation is a
more precise, controlled and risk-
reduced planning, and eases surgi-
cal implant placement. These ad-
advantages should be utilized by all
dental health care providers, even
with long-term clinical expertise

if you are not a DVT owner, oral
surgeries (specialists) and diagnos-
tic radiology clinics are appropri-
ate contact addresses. regard for
the intended 3-D image always al-
locate the exact DVT area, details
and viewer suitable for your PC
software. The expenses both of
the DVT and the digital analysis
and evaluation are subjects to private cash.

Interimplant distance

If an implant is placed adjacent to a tooth, the interdental papilla re-

issues 1–4 ensure dispenses of the habitual use patterns after 4 to 6 weeks wearing. Due to hygiene and stabilization, the intramural appliances are manufactured as strew splints in a dimension of 1.5 mm with extension limited to the first molars.

Digital imaging 3-D

Digitalization means information and safety. The generation of a DVT in early implant planning harbors 3 advantages:

- Commitment: The expenses of
- Precision: The benefit of a time-in-
tense 3D implant evaluation is a
more precise, controlled and risk-
reduced planning, and eases surgi-
cal implant placement. These ad-
advantages should be utilized by all
dental health care providers, even
with long-term clinical expertise

if you are not a DVT owner, oral
surgeries (specialists) and diagnos-
tic radiology clinics are appropri-
ate contact addresses. regard for
the intended 3-D image always al-
locate the exact DVT area, details
and viewer suitable for your PC
software. The expenses both of
the DVT and the digital analysis
and evaluation are subjects to private cash.
"Safeguarding implant treatment commences with careful tooth removal, pre-implant treatment and implant planning."

**Periimplant Therapy**

<table>
<thead>
<tr>
<th>Step</th>
<th>Defect (PD in mm)</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>≤ 3 mm</td>
<td>Oral Hygiene + BMP Cleaning</td>
</tr>
<tr>
<td>B</td>
<td>≤ 4–5 mm</td>
<td>CHX 0.2 %, Er-YAG</td>
</tr>
<tr>
<td>C</td>
<td>≥ 6 mm</td>
<td>Implant Removal/Regenerative Therapy</td>
</tr>
</tbody>
</table>

**Surgical Reentry**

1. Removal of suprastructure (screw-fixed).
2. Horizontal alveolar ridge (acute marginal mucoperiosteal flap reflection).
3. Infrabony defect curettage.
4. 0.2 % CHX irrigation, Er-YAG decontamination.
5. Stimulation of gingival bleeding plus autogenous bone grafts for defect fill and reconstruction.

**Table 1:** Key treatment issues to control periimplant damage, to a large extent being prevented by early and careful implant planning.

<table>
<thead>
<tr>
<th>Step</th>
<th>Defect (PD in mm)</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>≤ 3 mm</td>
<td>Oral Hygiene + BMP Cleaning</td>
</tr>
<tr>
<td>B</td>
<td>≤ 4–5 mm</td>
<td>CHX 0.2 %, Er-YAG</td>
</tr>
<tr>
<td>C</td>
<td>≥ 6 mm</td>
<td>Implant Removal/Regenerative Therapy</td>
</tr>
</tbody>
</table>

**Table 2:** Surgical revision of advanced periimplant bony defects is limited to single clinical set-tup due to the time and extent of surgery and additional patient expenses.
PROFESSIONAL MEDICAL COUTURE

THE NEW 2014-2015 COLLECTION

EXPERIENCE OUR ENTIRE COLLECTION ON WWW.CROIXTURE.COM
What’s on

Festival of Lights
• Date: daily
• Starting time: 19:00
• www.festival-of-lights.de

For the 11th time, the landmarks, monuments, buildings, streets and neighbourhoods of Germany’s vibrant capital will be illuminated with stunning light effects that turn the whole city into one gigantic piece of art. One of this year’s highlights is an impressive installation at the Potsdamer Platz, the “House of Cars” designed by German-Israeli artist collaboration OHH Creative Group in celebration of the 50 year anniversary of Germany-Israel relations. All illuminations run daily from 19:00 to midnight and are free for all visitors. Guests can explore the festival through a variety of LightSeeing tours by foot, bike or boat. Those who enjoy the challenge of balancing more than one fun activity at once can take a guided photosafari or marvel at the artistry on a running tour. Whatever you choose to do, be sure to savour the extraordinary brilliance that the Festival of Lights brings to Berlin.

Jon Spencer Blues Explosion
• Date: 16 October
• Starting time: 20:00
• Venue: Columbia Theater, Columbiadamm 9–11
• www.columbia-theater.de

On their latest album, Freedom Tower: No Wave Dance Party 2015, the Jon Spencer Blues Explosion pay homage to their hometown of New York. And just as loud, colourful, dirty and frantic as the Big Apple are the 13 new songs on the album. There appears to be a harsh love between these three music veterans and the busy East Coast metropolis. Combining elements of rock ‘n roll, blues, noise and punk, the band’s music enshakes New York’s darkest sides, far away from the tourist masses and picture-perfect “I love NY” campaigns. Today, Jon Spencer, Judah Bauer and Russell Simins, whose explosive shows made them one of the most exciting live bands of the nineties, will be playing at the newly remodelled Columbia Theater. It will certainly be an evening of sweat and emotion!

Oktoberfest at Kurt-Schumacher-Damm
• Date: daily
• Starting time: Thursday and Friday 15:00, Saturday 14:00

There is no need to travel to Munich to experience the authentic Oktoberfest feeling in Germany! In fact, with all the blue and white decorations, traditional culinary delights, such as Hax’n (pork knuckle), Hendl (roast chicken) and Leberkäs (a specialty meatloaf), and, of course, plenty of Germany’s famous festival beers, like Paulaner, to choose from, you won’t even notice you are not in the beloved Bavaria of Fairy Tale King Ludwig II. Traditionally, the Oktoberfest at Kurt-Schumacher-Damm is the biggest Bavarian Oktoberfest in the capital. In its 65th year already, it celebrates the Germans’ love for hearty food, folk music and tasty beer. Entry to the festival, with more than 50 funfair attractions, is free of charge.

1 Year Clinical Masters™ Program in Aesthetic and Restorative Dentistry

12 days of intensive live training with the Masters in Athens (GR) and Geneva (CH)

Three sessions with live patient treatment, hands-on practice, plus online training under the Masters’ supervision.

Learn from the Masters of Aesthetic and Restorative Dentistry:

Registration information:
12 days of live training with the Masters in Athens (GR) and Geneva (CH) + self study
Curriculum fee: £9,900
(Based on your schedule, you can register for this program one session at a time.)

Collaborate on your cases and access hours of premium video training with the Masters

Details on www.TribuneCME.com

contact us at tel.: +49-341-484-74134
email: request@tribunecme.com

University of the Pacific

100 C.E.

ADA CERP

Continuing Education Recognition Program

Tribune CME is designated as an Approved PACE Program Provider by the Academy of General Dentistry. The formal continuing dental education programs of this organization have been accepted for credit by the ADA CERP. Approval does not imply acceptance by a state or provincial board of dentistry. The Academy of General Dentistry is not responsible for the content, accuracy or equivalency of courses offered by this organization. ADA CERP approval does not imply acceptance by a state or provincial board of dentistry. ADA CERP is a service of the American Dental Association to assist dental professionals in identifying quality providers of continuing dental education. ADA CERP is a service of the American Dental Association to assist dental professionals in identifying quality providers of continuing dental education. ADA CERP is a service of the American Dental Association to assist dental professionals in identifying quality providers of continuing dental education.

Tribune CME is designated as an Approved PACE Program Provider by the Academy of General Dentistry. The formal continuing dental education programs of this organization have been accepted for credit by the ADA CERP. Approval does not imply acceptance by a state or provincial board of dentistry. The Academy of General Dentistry is not responsible for the content, accuracy or equivalency of courses offered by this organization. ADA CERP approval does not imply acceptance by a state or provincial board of dentistry. ADA CERP is a service of the American Dental Association to assist dental professionals in identifying quality providers of continuing dental education. ADA CERP is a service of the American Dental Association to assist dental professionals in identifying quality providers of continuing dental education. ADA CERP is a service of the American Dental Association to assist dental professionals in identifying quality providers of continuing dental education.
MORE BONE Where it Matters Most...

Find out more about the new V3 Implant at: www.V3-implant.com