An interview with EAO lecturers Drs Ion Zabalegui and Jean-Louis Giovannoli

**The best way to restore lost structures is to regenerate**

**Dr Ion Zabalegui:** Especially in the 1980s, dental barrier membranes were of utmost importance for the profession to understand the biological principles that are involved in restoring the lost structures around teeth as a consequence of periodontal disease.

**Dr Jean-Louis Giovannoli:** The best way to restore lost structures is to regenerate, and studies on periodontal healing have demonstrated that the proliferation of residual periodontal ligament cells has the potential to induce regeneration. Guided tissue regeneration (GTR) and guided bone regeneration (GBR) use membranes to create space and provide a protected environment so that the tissues can regenerate.

**What are the main advantages of alloplastic matrices compared with non resorbable materials?**

**Zabalegui:** Non resorbable membranes were once the standard for GTR. However, the postoperative complications owing to membrane exposure and the fact that a second surgical procedure to remove the membrane was mandatory after four to eight weeks for the finalisation of the procedure warranted new materials and protocols to address these problems. Alloplastic matrices that do not produce inflammatory responses and have a tissue-mediated metabolism have shown fewer postoperative complications and morbidity than have non resorbable barriers.

**Giovannoli:** Resorbable membranes reduce the risk of infection and failure. The GUIDOR Bioreabsorbable Matrix Barrier also has some advantages linked to its quality of tissue integration owing to the presence of two layers of material. This tissue integration gives good stability during the entire healing process and minimises the risk of resection of the covering soft tissue.

**What components are generally considered mandatory with regard to favourable outcomes in regenerative practice?**

**Zabalegui:** During the last three decades, there have been a fair number of papers that describe many of the factors that we think are involved in the favourable outcome of a regenerative procedure. For GBR procedures, stability, space maintenance and protection of the regenerative material without exposure during the treatment phase are probably the most important factors. However, the required time for barrier resorption to achieve good results is still not clear, since there have been reports of good results with both short- and long-lasting barrier membranes.

**Giovannoli:** For GTR and GBR, like for any other periodontal therapy, the priority is access in order to be able to prepare the root surface properly. The membrane should be porous enough to favour the nutrition, but it should be placed around the root to ensure good hermeticity and prevent the downgrowth of the epithelial cells. The material should be stiff enough to maintain a space, and this space will determine the amount of repaired tissue obtained at the end. In any case, the soft-tissue conditions should be favourable for submerging the product and keeping it submerged during the entire healing phase. For both GTR and GBR, the quality of the bleeding is important, since a dense clot must be obtained initially.

The 1-hour Sunstar GUIDOR breakfast industry symposium will take place on 25 September at 7:45 a.m. in Room K11 at the Stockholmmässan.
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During the last five decades, TePe has evolved from a small-scale production company into a high-tech manufacturing enterprise with distribution in 50 countries. Its close relation to the dental profession has been fruitful, resulting in a wide range of oral care products such as the TePe Interdental Brushes. First introduced in 1993, they are now recognized for their high quality and efficiency worldwide, according to the company.

The original series includes nine colour coded sizes to fit narrow and wider interdental spaces but there are also variants with softer filaments or an angled brush head and a longer handle. The latest complement to the interdental cleaning range is TePe EasyPick, which is efficient, easy to use and available in two conical sizes that fit most interdental spaces. The assortment also includes floss, dental sticks and interdental gels, the company said.

TePe Münhygieneproduktur AB is a family-owned Swedish company. Its history began in 1965 when woodcarver Henning Eklund developed an innovative triangular dental stick in collaboration with the School of Dentistry in Malmö. The user-friendly TePe toothbrush was first introduced in 1973 and today comes in a variety of models and sizes for adults and children. TePe also offers a unique series of products for specific oral hygiene needs, such as care of implants and orthodontic appliances, alongside a range of pedagogic materials, enabling individually tailored education and instruction to patients.

Based on the vision of healthy teeth for all throughout life, TePe says to work for raised oral hygiene awareness and prevention of oral disease. All production takes place at the headquarters in Malmö in southern Sweden. The company has 250 employees and subsidiaries in Germany, Italy, the Netherlands and the United Kingdom. It is certified according to international quality and environment standards, ISO 9001 and 14001. According to TePe, all products are clinically tested and evaluated to meet the demands of consumers and professionals worldwide. The wide product range is developed in cooperation with dental experts to make good oral health possible for everyone. Thanks to the trust TePe has earned from professionals and consumers, the company claims to be market leader in many countries.

A solution for performing osteotomies through impacted crescental access, Osteo Safe from Anthogyr can be used for all indications related to implant site preparation and bone remodelling in the context of vertical bone augmentation.

A pre-calibrated automatic implantation instrument, it is connected to a micromotor and is simple and quick to use owing to the sequence of four osteotomes for the placement of Axiom REG/UX implants.

Reproducible and precise, Osteo Safe allows controlled and regulated movement during implantation. Clinicians can also hold the instrument with just one hand for improved visibility during implant surgery. Since it is atraumatic, it offers improved patient comfort and better safety, the company said.

In addition to Osteo Safe, Anthogyr has a number of other instruments and dental implants on display at EAO.

Adressing all problems a clinician faces when restoring a single tooth in the posterior, Nobel Biocare is trying to bring innovation back to the posterior region with its new complete posterior solution. Multiple Nobel Biocare novelties allow the clinician to make one solution complete, but the foundation for treatment success is the implant itself, the company said. Here Nobel Biocare offers several options, each engineered for the specific demands of the posterior.

A new variant offers the benefits of the NobelActive family but with dimensions ideal for the molar region. The NobelActive WP (wide platform) implant possesses a wider diameter implant body (5.5 mm) to better fit the large extraction sites in the molar region and a wider implant platform for an optional emergence profile. Both new implants also benefit from Nobel Biocare’s internal conical connection. This advanced connection’s conical seal and hexagonal interlocking mechanism provide high mechanical strength. It offers restorative flexibility too, being compatible with Nobel Biocare’s most innovative restorative solutions, including those designed specifically for posterior regions.

The ability to use an angulated screw channel (ASC) allows the screw access hole on the FCZ Implant Crown to be placed anywhere between 0° and 25° in a 360° radius. This means it can be angled towards the front of the mouth for easy access, even in the posterior. It also helps avoid placing the access channel on the cusp of a tooth, where it could affect occlusion. The associated Omnigrip Screwdriver further simplifies work on the restoration. Its effective pick-up function and secure grip on the screw help the clinician to work safely and efficiently.

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The biocompatibility of the materials used contributes to biological stability in the areas it matters most. Plus, being screw retained, the FCZ Implant Crown is completely cement free, avoiding the risks associated with cement excess entirely. Even the titanium adapter is mechanically retained.

Natural looking tooth color is another benefit offered by the FCZ Implant Crown. Whichever of the eight available shades is used, the color is applied throughout the material. This means discoloration isn’t a concern when making adjustments. Cutbacks and staining can also be used to achieve the desired aesthetic effect.

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OSSTELL-SUPPORTED SATELLITE SYMPOSIUM TO FOCUS ON 25 YEARS OF ASSESSING OSSEOINTEGRATION THROUGH ISQ DIAGNOSTICS

There is an increasing trend in implant treatment to improve patient comfort and treatment safety, as well as reduce treatment times. Until the early 1990s, however, the methods available to determine implant stability, including torque tests, percussion tests and tactile feeling, were subjective, invasive and difficult to communicate. In addition, reverse torque tests have been criticised, since they can jeopardise the ongoing osseointegration process. A breakthrough came with an invention using resonance frequency analysis to determine the clinical status of a dental implant by Profs. Neil Meredith and Peter Cawley, and the team from Öststell in Sweden. At the 2015 EAO Congress, the company and other leading clinicians from around the world will be gathering to discuss the latest findings and developments in osseointegration, including the 25-year anniversary of assessing osseointegration through the implant stability quotient (ICQ).

Öststell has gathered three distinguished clinicians in the field, Dr Marcus Dagnelid (Sweden) as well as Profs. Daniel Buser (Switzerland) and Peter Moy (USA), to discuss ISQ diagnostics in a clinical context and the advantages of using ISQ measurements to enhance long-term clinical outcomes. The symposium, held today from 10:00 to 12:00 in Room A2, will also explain how to shorten treatment time and manage patients with risk factors, while reducing the possibility of unnecessary costs related to premature loading.

“In daily practice, we never measure the insertion torque since we use Öststell instead to monitor implant stability. For non-splinted implants, we want the second ISQ value to be ≥ 70 to initiate the prosthetic rehabilitation with functional loading. In most implant patients, this is either at four or eight weeks of healing allowing an early loading protocol,” Prof. Buser stated.

Measured at placement and before restoration, the stability development of a dental implant and the degree of osseointegration can be determined in a fully non-invasive and objective way with the help of ISQ analysis. The result is presented as an ISQ value of between 1 and 100. The higher the value, the more stable the implant. Backed by more than 700 studies and publications, the proprietary ISQ diagnostic method and the corresponding ISQ scale are now considered a global standard.

NEW V-CONCEPT BY MIS DELIVERS TRUE INNOVATION TO IMPLANT DENTISTRY

MIS Implants Technologies recently launched the new V3, a multi-unit implant suitable for a wide range of surgical scenarios that is part of the company’s V-Concept. “MIS Implants is now a frontrunner of innovation in implant dentistry” this was the powerful message delivered by MIS at the product launch at EuroPerio8 in London.

“The V3 is set to change the future by offering unprecedented biological advancements not previously known in the dental implant industry specifically, the significant gain of bone- and soft-tissue volume where it matters most,” said Elad Ginat, Product Manager at MIS Implants Technologies.

He pointed out that this claim is supported by the placement of over 2,000 V3 implants in clinical cases performed and reported by some of implant dentistry’s most highly respected experts. The cases date back to 2012 and were treated in collaboration with numerous well respected research institutes and universities around the world.

“The triangular coronal portion of the V3 is completely new in concept,” said Ginat. Its unique shape allows the formation of gaps between the sides of the implant and the osteotomy, creating open, compression free zones that immediately fill with blood to form a stable blood clot and accelerating osseointegration for more rapid bone regeneration, he explained.

The triangular shape further allows secure anchorage at three points and provides doctors with more flexibility in positioning the implant, either facing the flat side buccally or towards an adjacent implant as needed, to gain more bone. It is important to note that a wider V3 implant can be used in clinical situations in which a traditional circular implant would require a smaller diameter.

“It’s all part of the innovative V-Concept, as a three point universal bone compression without compromising crestal anchorage.”

The second point is aesthetics. The extra bone volume affects soft-tissue volume, which is further enhanced by the tubular shaped prosthetic components, realizing sustainable and healthy results. With more bone and soft tissue to work with from the start, clinicians can attain much higher aesthetic outcomes and reduced healing times.

The third point is simplicity, part of the MIS “Make it Simple” philosophy. Doctors can enjoy all the impressive V-Concept benefits of greater bone- and soft-tissue volume without learning new protocols or procedures. In addition, a dedicated V3 surgical kit makes procedures simple, safe and accurate.

“The V-Concept is an innovation MIS is very proud of, especially since it directly benefits our customers. It helps dental professionals all over the world simplify procedures, improve success rates, reduce chair time and achieve better aesthetic results,” concluded Ginat.

MIS PLANNING WORKFLOW

Planmeca offers a complete range of tools for implantology that cover the entire implant planning workflow—from pre-surgical planning to post-operative evaluation of the patient. The superior combination of CBCT and virtual prosthetic data creates the best possible basis for implant planning and open CAD/CAM, the company said. The advanced 3D data combinations, realistic implant libraries and sophisticated dental unit integrated devices are supposed to ensure the smooth planning of patient-specific implants in all situations.

The Planmeca Romexis software suite provides patient-specific information on bone density, the shape of the alveolus, as well as the height and width of the proposed implant site. According to the company, this increases the implant success rate, as operations can be planned meticulously and implants positioned predictably.

The software uses realistic implant, abutment and crown models from its own libraries. Users can import and superimpose a soft-tissue scan and crown design with CBCT data—providing the perfect environment for implant planning. Crowns can either be ordered from a dental laboratory or milled on-site with chairside equipment.

Planmeca says that Romexis enables fully guided implant placements with superior accuracy. The software suite provides a wide array of implant planning features, such as an implant alignment tool, a custom abutment editor and an implant extension option. The safety distances between implants and between an implant and a nerve can also be reliably defined by releasing a warning when the set boundary is breached.

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The recently launched 2015 version of the digital implant planning and surgical guide solution from 3Shape offers several new features, including implant workflows for edentulous patients. It also comes with a new two-piece edentulous surgical guide design option in order to create split edentulous surgical guides with two separate connecting pieces. This will improve accessibility during surgery for the dentist, the company said.

The Implant Studio 2015 software provides flexible tools and workflows to support all major implant planning and treatment scenarios, as well as communications and snapshot tools to seamlessly share images and comments between dental practices and labs. Since it is an open platform, clinicians will have access to implant libraries from all major implant manufacturers, according to the manufacturer.

Introduced in 2014, Implant Studio enables dental practices and labs to plan and perform surgery to complex implant procedures by considering the aesthetics and intended final restoration as well as the overall clinical situation. Furthermore, dental professionals can design and output surgical drill guides ready for printing or milling thus making surgical drill guides more accessible and affordable. Implant Studio does this by merging CT/CBCT images with 3D impression scans (STL files) from digital intraoral scanners such as 3Shape TRIOS, for example. The data sets are then used to create virtual tooth setups for prosthetic driven implant planning.

Data from Implant Studio can then seamlessly be shared with 3Shape’s dental lab solution Dental System for the restorative design and milling workflow steps.

“3Shape CAD/CAM solutions are so important because they enable us to work with and have confidence in all different patient data sets. From CBCT and intraoral scans to the clinical situation and restorative production, 3Shape has met our goal in allowing us to design all cases with consistent data across a totally uniform platform,” commented Dr Alan Jurim, dentist and dental lab owner, New York, USA. “Implant Studio is the final key to this complete integration and for planning and achieving predictable implant procedures.”

Implant Studio 2015 is currently available in the EU and several other countries. A release in the US market will be announced separately once available, according to 3Shape.

At the EAO congress in Stockholm, Henry Schein will present product and service highlights it has integrated into its Connect-Dental offering across Europe within the last few months. With Connect-Dental, Henry Schein offers a full solution that focuses on the digitalization of dentistry and the optimum digital workflow between the practice and the laboratory. It includes a variety of components such as an extensive range of products and software, comprehensive services and profound training for the practice and laboratory team.

According to the company, Connect-Dental helps to improve the efficiency of the practice and laboratory and enhance the quality of patient care. Here is a brief overview of its power spectrum:

- Open architecture for individual solutions – CAD/CAM systems from leading manufacturers serving the entire digital workflow—from digital impression to the finished restoration
- Comprehensive technology consultation and systems integration by the Henry Schein specialists with many years of CAD/CAM experience
- High-performance materials for CAD/CAM manufacturing, such as the comprehensive Zirlux range, including Zirlux FC², a highly translucent zirconia, exclusive from Henry Schein – Optimum networking between practice and laboratory – European-wide training and event tours around open CAD/CAM solutions and new high-tech materials – Individual consulting, leasing and financing services.

During the EAO Scientific Meeting in Stockholm, a wide range of highlight products from scanners, milling machines, abutment solutions and up-to-date computer-aided design and computer-aided manufacturing workflows around digital dentistry will be showcased to demonstrate the new opportunities for high-quality implantology and the open architecture that Henry Schein provides to its customers under the umbrella of Connect-Dental. Especially, the Henry Schein Connect-Dental digital solutions around the implant workflow will be in focus:

- Individual screw retained abutments for all major implant systems produced chairside in the dental office
- Implant planning and guided surgery (3D printed new serviced opportunity for dental labs and surgical guides: milled chairside in the dental office)
- Individual implant prosthetics lab side: Digital impression solutions and benefits for implant dentistry – 3D Printing solutions for dentistry

Henry Schein currently has 190 CAD/CAM and digital specialist consulting and training partners, comprehensive services and trainings—a concept that works and enjoys popularity among our customers all over the world.”

Henry Schein will present solutions for all major implant systems produced chairside in the dental office and guided surgery (3D printed new serviced –只想给牙齿提供其所需的支持力量 – Individual implant prosthetics lab side: Digital impression solutions and benefits for implant dentistry – 3D Printing solutions for dentistry

CONFIDENT IMPLANT PLANNING WITH SOREDEX 3-D IMAGING DEVICES

At the EAO congress, Finnish manufacturer SOREDEX is presenting easy-to-use imaging solutions for the comprehensive digital accuracy and optimising clinic efficiency. Preoperative radiographic examination using a CBCT imaging device offers additional diagnostic information for confident surgery and implant planning. SOREDEX’s CRANEX 3D product line with 2D and 3D imaging programmes is for implantologists and oral surgeons.

Dental imaging has never been as exciting as it is today, as 3-D imaging is rapidly changing the way clinicians perform diagnosis and determine subsequent treatment. The SOREDEX CRANEX 3D and CRANEX 3Dx systems combine digital imaging with advanced 3-D imaging. The CRANEX 3D has two fields of view (FOV) – 2D (for implant planning and follow-up imaging, to name just a few applications. A specific endodontic programme ensures detailed diagnostic information for challenging cases. The units are integrated with OnDemand3D software, with all the required tools for successful surgery planning, including automated arch, nerve marking, implant pick and place, STL align and import, as well as the In2Guide surgical guide module.

SOREDEX provides tools and solutions for various procedures, courses around digital dentistry and cephalometric imaging, as well as advanced 3-D head and neck and ENT imaging.