EUROPERIO8 · London · 3–6 June, 2015

Independent news for visitors and exhibitors

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Get into "Egg-tion"
Morita highlighted modern laser therapy against peri-implant and periodontal lesions during a satellite symposium at EuroPerio8.

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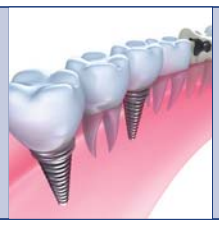

Evolution or road to ruin?
Kings College Hospital consultant Aws Alani, London, describes the pitfalls of modern implant therapy and explains why faster does not necessarily mean better.

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Practice growth assured
In 2015, BIOLASE, a leader in the dental laser segment, has had quite a number of changes, including a new president and CEO as well as new and improved products.

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A warm welcome to dentists in Europe

Thousands flock to ExCeL London as EuroPerio8 officially opened on Wednesday

■ London certainly knows how to welcome its visitors and the city did not disappoint when the eight edition of EuroPerio was officially opened yesterday at the ExCeL London Exhibition and Convention Centre in London Docklands. Accompanied by the London Marching Band, member societies of the European Federation of Periodontology paraded on stage with their national flags followed by musical performances by the New London Chamber Choir and Sheffield's own folk rock band, Brave New Storm.

Visitors of Europerio8 can look forward to one of the largest conferences for implant dentistry and periodontology that has ever been held in Europe, EuroPerio Chairman Francis Hughes said during his welcome speech. According to the Kings College Professor, the event is expected to attract more than 10,000 professional visitors from the UK and beyond over the course of the next three days. "There is lots for the whole dental team," he said.

In addition to Hughes, attendees of the conference were also addressed by EFP president Prof. Søren Jepsen, the president of the British Society of Dental Hygiene and Therapy, Michaela O'Neill as well as other EP members. "I would really like to thank the many students from the various dental schools in London who agreed to

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Flag parade of all EFP member societies.

Prof. Francis Hughes (Photos Daniel Zimmermann, DTI)

Get into "Egg-tion" with AdvErL Evo

Morita highlighted modern laser therapy against peri-implant and periodontal lesions during a satellite symposium at EuroPerio8

■ For periodontal treatment, modern Er:YAG lasers have proven to not only eliminate inflamed tissue, but also to preclude the risk of bacteraemia by efficiently fighting resident bacteria. At the last EuroPerio in Vienna, the Japanese Morita Group already demonstrated how this important feature can be used for the effective treatment of peri-implant lesions. Its new AdvErL Evo, which is also on display in London at EuroPerio8 at booth 23, now covers cases of class-D in comparison to conservative procedures that currently only allow successful peri-implantitis treatment up to CIST class-C.

Presenting its latest Er:YAG laser as a valid treatment option, the company held a satellite symposium at EuroPerio8 yesterday, where dentist Dr Michael R. Norton from London focused on the challenges and issues of a peri-implant treatment. Among other things, he discussed whether peri-implantitis was a condition of the primary infective nature of the mouth or an opportunistic secondary infection subsequent to bone loss that is caused by other etiologies. Norton said that a significant advantage of the laser treatment is that it helps increase the volume of water molecules up to 800–1,000 times. The subsequent micro explosions not only disinfect the implant surface, but also have a sterilising effect, which allows surface debridement without showering the surrounding area with small particles of titanium, which would occur when titanium wire brushes are used.

In a second lecture, the Director of the Department of Periodontology at the University of Bern, Prof. Anton Sculean, underlined the key positive aspects that laser technology offers for the treatment of inflammation of the gums or implant site. According to the professor, Morita's third generation Er:YAG laser allows a gentle, yet precise intervention that is minimally invasive, silent, painless and without significant vibration or production of heat. Sculean said that these qualities make it suitable for conservative soft and hard tissue treatments, including the removal of supra- or sub-gingival calculus, inflamed and necrotic tissue in gingival pockets and for the treatment of abscesses or granulomas.

Dr Michael R. Norton discussing the benefits of Er:YAG lasers for peri-implant treatment. (Photo Kristin Hübner, DTI)

Visitors of EuroPerio8 will be able to test the precision and experience the handling of the AdvErL Evo over the course of the next three days during the ever-popular "Egg-tion" sessions at Morita's booth. During these sessions, visitors are invited to engrave a smiley face on the shell of a raw egg with the laser. At the booth they can also find out more information about the company's other products and activities. ◂◂

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volunteer at the event," Jepsen told the *today* in an interview.

Continuing from today until Saturday, over 100 experts from around the globe will share the latest information and their expert knowledge about a wide range of topics and issues in the field of dental implantology and periodontology. This morning started off with a presentation on surgical techniques, implant placement timing and alternative approaches to periodontal treatment instrumentation.

It will also see the world premiere of a new film demonstrating the relationship between oral and systemic health, which is supported by the Sunstar Foundation and will complement the Cell-to-Cell Communications saga by Quintessence Publishing.

Leading companies in the field of dentistry have also announced that they will showcase their latest solutions and products at the event. Among these are a couple of new products, such as a new implant from MIS in Israel that promises immediate biological benefits for better treatment outcomes. According to the Israeli implant solutions provider, the V3 is a multi-use implant that is suitable for a wide range of surgical scenarios and is ideal in anterior regions, as well as in regions where space and bone may be limited and good aesthetic outcomes are essential.

Visitors will have the opportunity to get hands-on exposure to the latest solutions in dentistry by means of a number of sponsored sessions featuring clinical experts and researchers. ◂◂

For the latest news, updates and product launches from the conference please visit dental-tribune.co.uk or scan the QR Code below.

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How to reduce treatment time and more predictably manage patients with risk factors

Dr Pamela K. McClain

Dr Rachel Schallhorn

Requests for shorter treatment times along with an increasing number of patients with risk factors place greater demands on dentists and technology. Correctly assessing osseointegration and implant stability and is key in successful implant treatment. Using traditional methods such as torque and percussion tests are not suitable for monitoring osseointegration, it requires a more advanced diagnostic tool.

Gain insight from these esteemed periodontists on what they do to objectively and noninvasively identify which implants are ready to load and which ones need additional healing time.

Drs Pamela K. McClain and Rachel Schallhorn, both Diplomates of the American Board of Periodontology, have been using Osstell and the ISQ scale (Booth 43d) for a number of years now to measure primary implant stability and osseointegration.

"We are currently using Osstell when we place all implants to establish a baseline measurement of implant stability," they say. "At the time of placement if the ISQ is too low (depending on the location—anything below 45) we will remove the fixture, possibly graft and then wait another 3–6 months before trying to place another fixture. We try to take the measurement on the buccal/ lingual, and mesial/distal aspects and record the highest and lowest values "

McClain and Schallhorn add: "We typically recheck the ISQ value at three months. If the ISQ has improved (or is stable if the number was high to begin with—over 65) we will release the patient for restorative treatment. It gives us and the patient a more objective way to assess the implant stability. If it's not ready at that time we continue to recheck every six weeks until the ISQ has improved or indicates stability."

"Since we began using this device in 2009, our decision making process has become more simple and objective. We will continue to use the Osstell values to help guide treatment decisions and as a communication tool with our referring dentists."

Dr Paul Rosen, Clinical Professor of Periodontology & Oral Implantology Temple University Kornberg School of Dentistry in Philadelphia, USA, also explains below why Osstell is important in his practice.

Dr Paul Rosen

"Osstell use is critical for my implant practice. Every year, this device more than pays for itself as there are always several patients who heal slowly or who have implants placed with extremely low insertion torque. This confounds my ability to predict when healing has been adequate to proceed to the restorative phase. Osstell provides me with quantitative information necessary to make informed decisions. No longer am I the villain who slows up patient care, but it is objective data about the patient's healing that becomes the determining factor."

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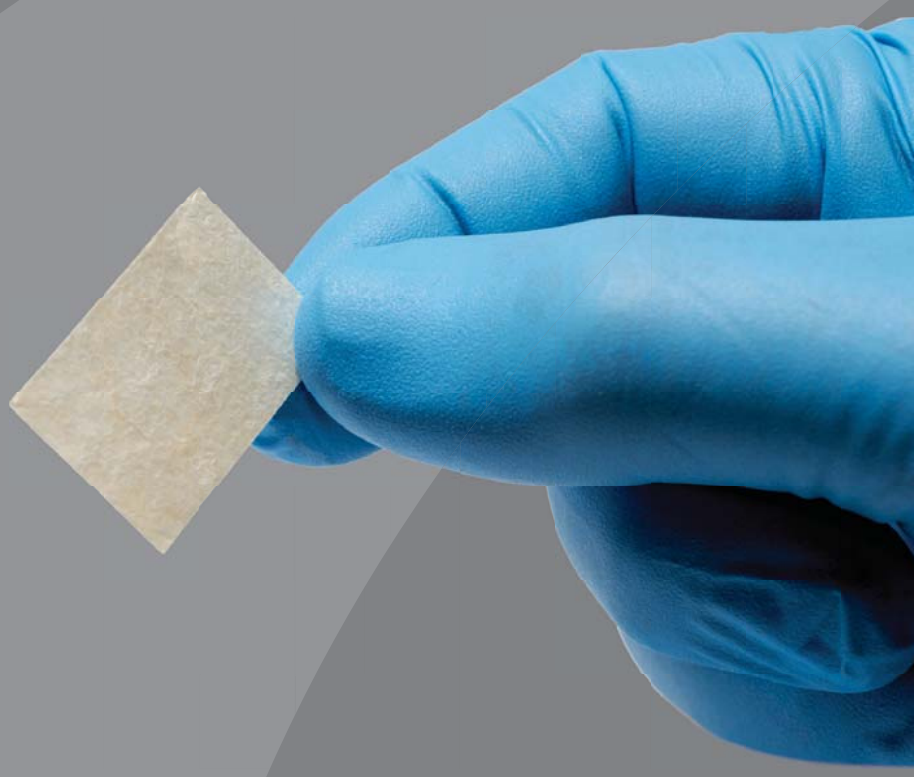

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Dental implantology: Evolution or the road to ruin?

By Dr Aws Alani, UK

Teeth are highly evolved structures that have developed progressively over millions of years in attempts to protect themselves from caries and periodontal diseases. Over the years many advances have been made which can treat these various diseases predictably. Various strategies have been developed to prevent or slow down these problems given enough patient compliance and appropriate personal and professional maintenance. Despite these very significant improvements there are still instances when patients get told 'this tooth or these teeth need to go'. It is the obvious sadness, heartache or despair that patients are caused by this bad news that has driven caring clinicians to find ways to replace teeth with various devices from dentures, to bridges to implant retained prostheses. P. I. Brånemark, now sadly deceased, famously quipped 'No one should have to die with their teeth in a glass of water beside their bed'. Brånemark's original inspiration coupled with determination, intuition, passion and an ability to surround himself with a great team of individuals with differing skills made osseointegration much more predictable. Brånemark's landmark studies changed prosthetic dentistry dramatically but a careful look at the design of these protocols and the implants themselves reveal were hugely different to the patient selection protocols and the types of implants being placed today. Furthermore, the restorations supported on them were made of the established materials then and obeyed traditional mechanical laws. In terms of biologic cleansability, the metal polished 'highwater' abutment design allowed for optimal interproximal cleaning whilst the implant surface itself was also relatively smooth in comparison to the rougher surfaces we often see today. Market saturation, cost, profit, and market share in many technological driven markets often drive innovation of some sort of change to help gain greater market share or profit. The over-commercialisation of dentistry generally creates a constant turnover of supposedly "new and better" products where the common quote 'if it ain't broke don't try to fix it' is lost on many directors of marketing or increasingly profit driven CEO's.

Why and where?

The searching question needs to be asked, "where has this technological change taken implantology and what are the real reasons why this was and is happening?" Increasingly, the shadow of peri-implantitis looms likes a spectre over the provision of implants. Unlike caries or periodontal disease there is very little consensus or research that can provide a predictable cure for what now is now a new breed of diseases. Peri-implantitis is relentless once established within fine threads of the implant and the bone resorption and soft tissue problems that follow can result in spectacular problems. Part of the key issue probably lies in the surface exposed to the susceptible patient's oral environment, as most microbiologists will allege. The bacterial content and make-up of the bio-film is a reflection of the surface that it resides on. Implant surfaces have become progressively rougher in order to hasten the early osseointegration processes and to try to provide patients with their restoration quicker in an ever more competitive financial environment. However speed is not always helpful. Experience shows that some things are better taken slowly over time - rather similar to making love.

Once exposed to the environment of a susceptible patient the macro topography of the threads provide an ideal ecologic niche for bacterial proliferation. Further nano-level features make the implant surface a veritable *'inflammation super highway'* for the pathogenic organisms. Predictably enough the micro-organisms found on the rough surface are usually the common pathogenic ones but also some species are found that have previously never been discovered in the oral cavity.

Patient selection issues

We need to consider the types of patients for whom we are now accepting for implant provision. At King's College Hospital the criteria for state sponsored implant provision largely involves patients with hypodontia and those who have suffered trauma. Usually both cohorts are likely to present with well-maintained minimally restored dentitions or with scope for oral health improvement prior to the consideration for any restoration let alone an implant. Unfortunately we are unable to provide this treatment for smokers. This is in stark contrast to patients who may be provided with implants in general and specialist practice for patients who are likely to have lost teeth as a result of plaque associated diseases. Indeed it could be considered a paradox by many interested observers that some clinicians are providing patients with implant retained restorations when have shown that they are highly prone to plaque associated disease via tooth loss and have not demonstrated any real capacity for changing that. Patients who smoke, those with a history of periodontitis and those with poor oral hygiene are well known to be at a very significantly higher risk of peri-implantitis (Alani et al. 2014).

Biological versus mechanical problems

If we are being frank the pathogenic bacterial induced diseases are not the only long-term problem that we now see. The reported frequency of mechanical complications has risen over the years but the reported problems are probably only the tip of the iceberg as many complications have not and will not be reported for a variety of understandable reasons.

Over time the components of implants have shown notable weaknesses. Screw loosening, fractured screws, loose abutments and the cracking of ceramic can be laborious and expensive to manage. One aspect, which may be lost on some is that, lacking a periodontal ligament dental implants, cannot and will never be able to acclimatise to changing occlusal and non-axial forces. These are very likely to create stresses within the masticatory system thereby resulting in breakages. These forces are compounded greatly if patient's parafunction on a daily basis and that is sometimes an unknown risk factor until it is too late. The more implants that are placed usually the fewer teeth are present resulting in a net reduction in physiological feedback and thereby creating an increased chance of failure of some type.

Ethical, moral and legal issues

These problems become much more worrying when viewed from ethical, valid consent and medico–legal perspectives. This is particularly so when patients are convinced to undergo elective extractions of teeth which often seem reasonably intact and/or treatable with conventional proven treatment strategies. It seems that there is a worrying drift towards aggressive treatment with extractions in order to provide a supposed "full mouth rehabilitation" with multiple implants. The increasingly dubious practice of sacrificing teeth for the sake of implants seems to many concerned clinicians to be quite irrational. As ethical oral health practitioners, deliberately removing saveable teeth for prosthetic replacement using implants as support seems to be consciously flying in the face of increasingly apparent evidence of various complications with implants and many would consider that approach to be foolish. How many "implantologists" doing that to others would genuinely have it done to themselves or done to some close family member?

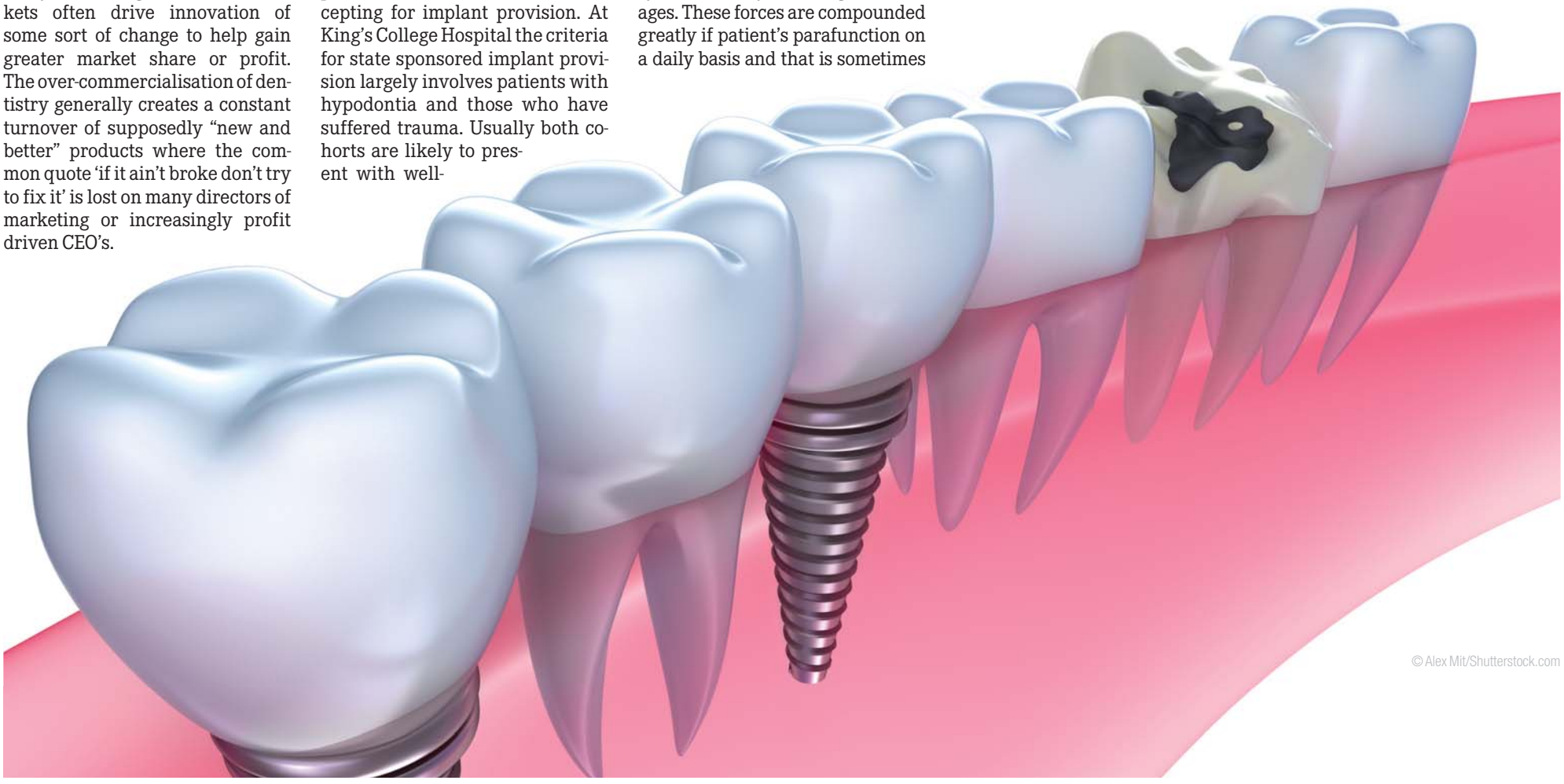
Planned obsolescence

A state of the art implant today is likely to be obsolete tomorrow. Electively removing teeth is irreversible and replacing teeth with implant retained devices means that patients are trapped in the era of Implantology in which these were placed and restored, that means issues of machining, surface blasting, roughness, platform switching, design and attempts at bone augmentation by cow, coral or Californian substances. The list goes on and on and will probably continue to expand with what many would call "human experimentation without licence".

Now comes the time for implant manufacturers to take stock of their many "market driven" mistakes including "fast initial integration with the roughest possible surfaces". Instead they need now to produce proven (i.e. not speculative) designs to better prevent these now well known problems of infection and breakages.

A wiser, pragmatic approach seems to be to concentrate everyone's efforts on saving teeth and thereby eke out their usefulness for the patients' lifetime. Recently, the legendary Jan Lindhe writing in the *British Dental Journal* summarised the state of play as 'There is an overuse of implants in the world and an underuse of teeth as targets for treatment'.

Aws Alani qualified from Kings in 2003 and after hospital and practice positions completed his MSc from the Eastman Dental Institute in 2006. He subsequently completed specialist training in Restorative Dentistry afterwhich he became an ITI Scholar in Toronto, Canada. In 2014 he was appointed Consultant in Restorative Dentistry at Kings College Hospital and is lead clinician for the management of congenital abnormalities.



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08:45–09:45

A geneticist's apology: Nature, Nurture, or Neither? (Plenary Lecture), ICC Auditorium
Speaker: Steve Jones

10.30–12.00

The choice of the surgical technique, ICC Auditorium

Basic surgical principles
Speaker:
R. Burkhardt

Use of advanced flap
Speaker:
M. De Sanctis

Use of autografts
Speaker: O. Zuhr

Outcomes in implant surgery: Timing of implant placement, Hall 1 (N20/N19)

Treatment options and clinical decisions
Speaker: C. Hämmerle

When are immediate implants indicated?
Speaker: J. Cosyn

Early implant placement
Speaker: S. Chen

Innovative approaches to instrumentation, Hall 2 (S22/S23)

Are there effective alternatives to manual instruments
Speaker:
K. Warrer

Use of power driven and airflow scalers
Speakers:
M. Reners , F. Lambert & G. Gagnot

Use of lasers and photodynamic therapy
Speaker: A. Braun

Determinants of disease susceptibility, Capital Suite 7–12

Determinants of disease susceptibility: setting the stage
Speaker: P. Papapanou

Genetic susceptibility in periodontitis: potential for future diagnosis
Speaker: Y. Houri Haddad

Proteomic identification of susceptibility markers in periodontal disease: Impact and potential
Speaker: N. Bostanci

14:30–16:00

The treatment of multiple recession defects, ICC Auditorium

Etiology, indications and treatment options
Speaker: M. Goldstein

Evaluation of clinical and aesthetic outcomes
Speaker: F. Cairo

Efficacy in the use of tunnelling techniques
Speaker: I. Zabalegui

Critical factors in implant surgery, Hall 1 (N20/N19)

Advanced surgical approaches to implant placement
Speaker: M. Merli

Guided implant placement solutions
Speaker: M. Vercruyssen

Immediate implant placement with immediate function
Speaker: J. Blanco

Effective plaque control, Hall 2 (S22/S23)

Importance of oral hygiene and plaque control
Speaker. N. West

Mechanical plaque control
Speaker: F. Van Der Weijden

Chemical plaque control
Speaker: E. Figuero

The biofilm challenge–Are there are key roles for specific bacteria?, Capital Suite 7–12

Current knowledge of the bacterial etiology of periodontitis
Speaker: M. Kilian

Understanding the Biofilm: composition, interactions and complications
Speaker: A. Moter

The role of specific bacteria in modulation of the biofilm
Speaker: M. Curtis

16:30–18:00

Innovative and emerging technologies, ICC Auditorium

Future approaches to soft tissue regeneration
Speaker: K. Demirel

Use of Allografts
Speaker: E. Allen

Use of Xenografts
Speaker:
S. Aroca

Critical factors in the surgical treatment of peri-implantitis, Hall 1 (N20/N19)

Rationale for the surgical therapy of peri-implantitis
Speaker: J. Meyle

Efficacy of access flap surgical approaches
Speaker:
E. Romeo

Efficacy of regenerative surgical approaches
Speaker:
S. Renvert

Effective risk factor management in periodontology, Hall 2 (S22/S23)

Key risk factors in the aetiology of periodontitis
Speaker: S. Jepsen

What to do with the heavy smoker
Speaker: C. Ramseier

Impact of medical conditions on periodontal disease and its treatment
Speaker: P. Heasman

The host response, Capital Suite 7–12

Current knowledge of the role of the host response
Speaker: L. Shapira

New paradigms in innate immunity
Speaker: I. Chapple

New paradigms in bacterial-host interactions
Speaker: G. Hajishengallis

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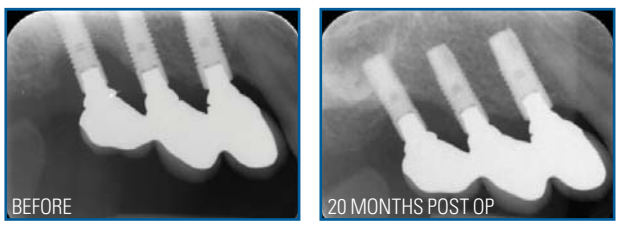

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