



DSI **DentaScience** Institute®

Spring Academy 2012

The Concept of Periodontal / Periimplant Healing

learn fast - live slow®



We only respect what we trust in - we only trust in what we understand - we only understand what we study
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Foreword (I)

Dear Fellow Colleagues,

Based upon latest scientific clinical results, it has become clear that 80% (!) of our overall population globally suffer from periodontitis. Out of all our patients, 60% have a diagnosis of rather slowly progressing chronic periodontitis (type II periodontal disease), while 20% (!) can be diagnosed with most aggressive rapidly progressing periodontitis (type III periodontal disease), if meticulous diagnostic methods are applied. As a consequence, type III patients belong to the high-risk group in terms of long-term prognosis, whereas type II patients can be handled much easier. Since teeth are especially lost in type III patients, all our implant patients belong to about 50% to such a high-risk group. As of today, it is of crucial importance to be able to distinguish between type II and III patients and address specific treatment protocols accordingly, if in particular implant patients are supposed to be maintained without any (!) complications and / or failures long-term.



Furthermore, it is evident that aggressive periodontitis / periimplantitis can directly cause - and not just trigger - serious general diseases like heart attack, stroke, thrombosis / embolism, endocarditis, colorectal cancer, Alzheimer's disease, chronic obstructive pulmonary disease (COPD), pneumonia, orofacial malignoma, rheumatoid arthritis, osteoporosis, insulin-dependent diabetes mellitus, urethritis / cystitis / pyelonephritis, prostatitis / orchitis, premature delivery / pre-term low birth weight, breast implant foreign body reactions and psoriasis.

As a conclusion, the goal of this combined theoretical and practical one-week course is to enable the DSI® course participant to clearly and easily distinguish between chronic and aggressive periodontitis / periimplantitis and provide a predictable and reliable treatment concept to completely heal both diseases and maintain such a healthy status for our patients long-term. Furthermore, the above-mentioned correlations with general health / disease issue will be explained into detail, since more and more of our today's patients are aware of such most important relationships via the Internet and latest social media asking for an inflammation-free / infection-free oral cavity long-term.

Foreword (II)

Last but not least, the Island Resort & Spa on Vilamendhoo provides a superb infrastructure to relax and to interact with most interesting individuals on a very personal basis resulting in intense discussions which allow the course participants to transfer this precious knowledge directly into today's clinical practice. For those of you, who love to snorkel and / or SCUBA dive, the South Ari Atoll area / Vilamendhoo Island region is among the world's best sites in very close vicinity (<30 minute boat ride) to submarine world heritage sites like 'Broken Rock', Kudarah Thila' and many other breathtaking dive sites which you may never forget.

Thus, we are very excited to welcoming you soon in Vilamendhoo / Maldives and remain in the meantime with our very best regards -

Sincerely yours

A handwritten signature in blue ink that reads "Joe Hermann". The signature is fluid and cursive, with a large initial "J" and "H".

Prof. Dr. Joe HERMANN + DSI® Team

Zurich, December 20, 2011

Preliminary Program (I)

Registration DSI® Spring Academy (English):

The Concept of Periodontal / Periimplant Healing as Crucial Prerequisite for Oral Health and Longevity ?!

Can Aggressive Periodontitis / Periimplantitis be completely Cured Long-term ?!

**Scientific Director
/ Speaker:**

Prof. Dr. Joachim S. HERMANN (CH)

Location:

Vilamendhoo Island Resort & Spa, Maldives

Date:

Saturday, April 21, 2012 - Sunday, April 29, 2012

CE-Points:

40 points / hours of continuing education credit

Course #:

SA01/2012

Language:

English
French
German
Italian

Course Dates:

Monday - Saturday:

Lectures / Seminars:

8:00 a.m. - 11:30 a.m.

Hands-on / Seminars:

4:30 p.m. - 7:30 p.m.

Limited Attendance:

20 participants

Registration Fee:

CHF 2'500.–

(incl.: Course Fee, Hand-outs, Hands-On, Welcome & Farewell Reception, VAT /
excl.: Accommodation, Travel & Meals / Drinks)

Preliminary Program (II)

Travel / Accomodation Information

All travel and accommodation issues will be organized exclusively by our **DSI® Business Partner TSU Tauchsport Uster** from Zurich-Uster since travelling as a group will allow us to get attractive discounts. The **TSU** E-Mail address is as follows:

info@tauchsportuster.ch

You are most welcome to communicate your needs / preferences in English, German as well as French. Most of our participants will be accompanied by their families / children and will stay another week right after the DSI® Spring Academy 2012 Meeting for leisure purposes.

However, course participants flying in from different destinations world-wide other than Zurich International Airport (IATA-Code: ZRH) are certainly welcome to select their own flight in and out of Male International Airport (IATA-Code: MLE) according to their own preferences arriving in Male by **Sunday morning, April 22, 2012**, and leaving Male earliest by **Sunday morning, April 29, 2012** or **May 6, 2012**, respectively. For these fellow colleagues and their families, **DSI® Business Partner TSU Tauchsport Uster** will then organize the seaplane shuttle service to and from Vilamendhoo Island as well as the overall stay on the island as a package.

Here are the details in SWISS FRANCS (CHF!) and per person according to today's rates (changes may apply):

Flights:

Edelweiss Air WK 1066 B: Zurich (ZRH) -> Male (MLE)

SAT, 21.04.2012 -> SUN, 22.04.2012

6:50 p.m. - 8:15 a.m.

Edelweiss Air WK 1067 B: Male (MLE) -> Zurich (ZRH)

SUN, 29.04.2012 -> SUN, 29.04.2012

SUN, 06.05.2012 -> SUN, 06.05.2012

10:10 a.m. - 4:40 p.m.

Preliminary Program (III)

Accomodation:

1 week double bed room in Gardenvilla:	CHF	3'385.–
1 week single bed room in Gardenvilla:	CHF	3'980.–
2 weeks double bed room in Gardenvilla:	CHF	4'126.–
2 weeks single bed room in Gardenvilla:	CHF	5'236.–
1 week double bed room in Beachvilla:	CHF	3'469.–
1 week single bed room in Beachvilla:	CHF	4'127.–
2 weeks double bed room in Beachvilla:	CHF	4'294.–
2 weeks single bed room in Beachvilla:	CHF	5'530.–
1 week double bed room in Jacuzzi Beach Villa:	CHF	3'770.–
1 week single bed room in Jacuzzi Beach Villa:	CHF	4'645.–
2 weeks double bed room Jacuzzi Beach Villa:	CHF	4'896.–
2 weeks single bed room Jacuzzi Beach Villa:	CHF	6'566.–
1 week double bed room in Jacuzzi Water Villa:	CHF	4'337.–
1 week single bed room in Jacuzzi Water Villa:	CHF	5'590.–
2 weeks double bed room Jacuzzi Water Villa:	CHF	6'030.–
2 weeks single bed room Jacuzzi Water Villa:	CHF	8'456.–
Additional fee for an upgrade into Business Class:	CHF	2'800.–
Additional fee for 'All inclusive package':	CHF	574.–

Please note that all fees are including full board and seaplane transfers (Male <-> Vilamendhoo). In addition, one supplemental child can stay in the same Gardenvilla as well as Beachvilla, two supplemental kids only in the same Beachvilla.

Preliminary Program (IV)

Lecture Topics (a.m.):

Epidemiology

- How many people in our today's clinical practices suffer from gingivitis, slowly progressing chronic periodontitis as opposed to rapidly progressing aggressive periodontitis / periimplantitis ?!
- Is aggressive periodontitis / periimplantitis limited to a certain age group (6 - 30 yrs) or are all ages equally susceptible to such an aggressive disease ?!
- How many patients suffer from periimplantitis long-term ?!
- What are the 8 types of periodontal diseases my patients present with in my private practice ?!
- How big is the chance if someone is diagnosed with an aggressive periodontitis / periimplantitis that family members and / or partners do suffer from the exact same infectious disease ('Kissing Disease') ?!

Medical History

- What are crucial medical and dental areas-of-interest / questions to be addressed which might interfere with the patient's treatment and long-term prognosis ?!

Etiology

- Can general diseases like heart attack, stroke, thrombosis / embolism, endocarditis, Alzheimer's disease, chronic obstructive pulmonary disease (COPD), pneumonia, orofacial malignoma, colorectal cancer, rheumatoid arthritis, osteoporosis, insulin-dependent diabetes mellitus, urethritis / cystitis / pyelonephritis, prostatitis / orchitis, premature delivery / pre-term low birth weight, breast implant foreign body reactions and psoriasis be triggered or even caused by aggressive periodontitis / periimplantitis ?!
- What is the crucial difference between a periodontal / periimplant inflammation and an appropriate infection ?!

Pathogenesis

- Are all implant brand types / surfaces equally susceptible to periimplantitis ?!
- Does the microgap of Bone Level Implants harbour significantly more aggressive implant- / periodontopathogens as opposed to Soft Tissue Level Implants even under perfect oral hygiene ?!
- What types of bacteria reside in such a colonized microgap ?! - Are these specific bacteria then responsible for a bad taste / halitosis in the oral cavity even under excellent oral hygiene ?!

Preliminary Program (V)

- If so, can these noncleansable niches potentially be detrimental / pathological trigger factors for patients suffering from heart attack, stroke, thrombosis / embolism, endocarditis, Alzheimer's disease, chronic obstructive pulmonary disease (COPD), pneumonia, orofacial malignoma, colorectal cancer, rheumatoid arthritis, osteoporosis, insulin-dependent diabetes mellitus, urethritis / cystitis / pyelonephritis, prostatitis / orchitis, premature delivery / pre-term low birth weight, breast implant foreign body reactions and psoriasis ?!
- Can such a microgap be completely sealed long-term ?!
- Does a rather early tooth extraction prevent from future periimplantitis and thus, completely eradicate a most aggressive Gram-negative, anaerobic flora long-term ?!
- How long does it take at least until a patient develops a gingivitis, chronic or an aggressive periodontitis / periimplantitis ?! As a consequence, how does a customized optimal recall interval look alike during maintenance care after completion of the active therapeutic phase ?!
- Can patients stay healthy long-term once they have completely healed originally suffering even from severe aggressive periodontitis / periimplantitis ?!
- Is there a high chance that a partner will also develop aggressive periodontitis / periimplantitis if it were to be a highly contagious infectious disease ('Kissing Disease') ?!
- Are smokers just 'poor people with bad luck' or is there even a treatment protocol to cure them completely even originally suffering from aggressive periodontitis / periimplantitis long-term ?!
- Are patients at a higher risk to develop a severe general disease like endocarditis once seeing a dental professional or even every day when cleaning his / her teeth in a diseased dentition ?!

Diagnosics

- Does it make sense to consequently probe both around endosseous implants and natural teeth of every single patient ?!
- Can the Periotest® device carefully and noninvasively detect screw-loosening, abutment loosening, implant mobility as well as the appropriate fracture, accordingly ?!
- What is primarily the most precise and powerful diagnostic chair-side tool to define tooth / implant prognosis long-term ?! - Tooth mobility, tooth vitality, microbiology, radiographic crestal bone loss or just the clinical attachment level (pocket probing depth) ?!
- Can I visually identify a high-risk patient group suffering from aggressive periodontitis / periimplantitis via high amounts of plaque / calculus / biofilm in the oral cavity or even on a radiograph ?!
- Does it make sense or is it even a crucial requirement to check periodontal pockets (6 sites per tooth / implant) and the status of tooth vitality on every single patient ?! If yes, who within the Dental Team ist the best person to do it and when ?!

Preliminary Program (VI)

- Can a meticulous full-mouth diagnostic approach on every single patient virtually prevent from any dental urgencies in my practice or do we have to live with a more or less hectic professional live style every day ?!
- As part of meticulous dental diagnostics, do we always need a radiographic analysis ?!
- What is the radiation dose once taking a periapical conventional / digital radiograph as opposed to a panoramic x-ray or even a Cone-Beam Computer Tomogram (CBCT) ?! - Do we have any indication as of today to take a full head & neck Spiral Computer Tomogram (CT) in Dental Diagnostic Sciences ?!
- In microbiological diagnosis, should I just sample one or multiple sites, put multiple sites all together in a pool, or is it even crucial to go for multiple sites separately ?!
- How many of the periodontopathogens / implantopathogens should I look for – are A.a., B.f., P.g. and T.d. enough ?!
- Are chair-side microbiological tests effective and precise enough with high predictability ?!
- Who is the 'right' patient / what is the 'right' moment for microbiological sampling both around natural teeth and endosseous implants ?!
- What Plaque Indices (PI) / Bleeding-on-Probing (BOP) percentages do we absolutely need to achieve excellent healing results long-term virtually without having a chance of recurrent disease ?!
- Who is the 'right' patient / what is the 'right' moment for probing both around natural teeth and endosseous implants ?!
- Do we absolutely need periodontal probes with standardized probing force around endosseous implants ?!
- Are Bleeding-on-Probing (BOP) tests precise and predictable tools both around natural teeth and endosseous implants ?!
- When and how much Dental Diagnostic Sciences do we need in up-to-date radiography / oro-facial imaging ?! - From periapical / panoramic radiography to Cone-Beam Computer Tomography (CBCT)
- What are the 12 specific distinguishing criteria for the detection of chronic vs. aggressive periodontitis / periimplantitis ?!

Treatment Planning / Prognosis / Risk Assessment

- What is the Ideal Timing for Oral Surgery / Periodontics / Endodontics / Operative Dentistry / Implant Dentistry / Orthodontics and Restorative Dentistry in an Attempt to Maximize Patient Outcomes and equally Reduce Treatment Time ?!
- What are the criteria to either preserve a tooth or rather remove and replace it by an endosseous implant ?!

Preliminary Program (VII)

- What are the criteria to come up with a customized risk assessment both at the individual tooth as well as patient level long-term ?!
- How long should I wait between the hygiene phase (supragingival debridement), subgingival scaling and then open flap debridement (periodontal surgery) as well as before the final periodontal exam as a basis for a successful maintenance care program long-term ?! What is the first moment after which a periodontal / periimplant reevaluation can be carried out ?! - Or in other words, how long do I have to wait until initial macroscopic tissue maturation is accomplished then allowing me to continue with other forms of therapy and results in a predictable fashion (Implant Dentistry / Orthodontics / Restorative Dentistry etc.) ?!
- Is it right, that endosseous implants do have the same or even better success rate as compared to natural teeth ?!
- Are success rates equal within the overall oral cavity, or are there significant differences between lower and upper jaw locations as well as between an anterior vs. posterior implant position ?!

Oral Hygiene Instruction

- How many people in our today's clinical practices do efficiently clean their interproximate spaces on a day-to-day basis ?!
- Are sonic toothbrushes a major milestone in oral hygiene or just well-marketed fancy products ?!
- Can an ideal toothbrush ever replace an interdental hygiene aid ?!
- How often do we need to clean our teeth / implants ?! - Twice, thrice or even just once per day ?!
- What is the easiest and most effective and at the same time most careful dental tooth brushing technique ?! - 'Stillman's Technique', the 'Modified Bass-Technique' or just rotating, oscillating movements ?!
- What are the easiest and most effective tools both for toothbrush and interdental oral hygiene for our patients' daily home care ?!
- Does it make sense to also clean the tongue temporarily or long-term once suffering from aggressive periodontitis / periimplantitis ?!

Active Therapy

- Who is the right person to ideally treat these patients suffering from different forms as well as degrees of periodontal / periimplant disease ?! Which human 'man- or woman-power' do we really need / should we employ ?!
- Can a dental hygienist and / or a prophylaxis assistant heal gingivitis, chronic or even aggressive periodontitis / periimplantitis ?!

Preliminary Program (VIII)

- What is the ideal chemotherapeutic approach (chlorhexidine etc.) once patients have an impaired ability to perfectly well clean their teeth immediately after full-mouth subgingival (scaling) or open flap debridement (periodontal surgery) ?!
- Can systemic and / or local antibiotics ever penetrate the subgingival biofilm (plaque / calculus) ?! - If yes, is it enough to carry out just a subgingival debridement in combination with antibiotics as an adjunctive therapy - If no, can patients only be healed if a brilliant biofilm as well as infectious granulomatous tissue removal can be carried out via hand instruments in combination with most effective antibiotics !
- In terms of systemic and / or local antibiotics, are there many effective medications, or is there just one most effective approach ?!
- How many patients in my practice really need antibiotics, and how frequent are allergies and resistances in our clinical practices ?!
- Due to a high percentage of allergies and resistances to antibiotics, will federal authorities take away the right from us dentists to prescribe such a medication ?!
- If someone is really allergic to penicillin, what is the best option then to go for in terms of antibiotics ?!
- Is Full-Mouth-Disinfection (FMD) a well established and evaluated approach in adjunctive periodontitis / periimplantitis therapy virtually vaccinating patients against most aggressive Gram-negative anaerobic bacteria (antigen / antibody reaction) ?! - If this were to be the case, when exactly should a subgingival (scaling) and / or open flap debridement (periodontal surgery) be carried out – Is FMD most effective best within one or even two days, or even spread out over some four weeks ?!
- Can a radical soft tissue excision resulting in 'very long teeth / implants' cure best most aggressive periodontal disease (periodontitis / periimplantitis) or are there approaches leading to minimal amounts of soft tissue recession even with patients originally suffering from severe degrees of periodontitis / periimplantitis ?!
- Do we have THE ultrasonic or sonic scaler / wand which 'does it all' ?!
- Can power-driven instruments completely heal a chronic and / or aggressive periodontitis / periimplantitis ?! - What is the rationale for hand instruments ?!
- Do we have any clinically relevant data that any laser is able to cure aggressive periodontitis / periimplantitis on a predictable and reliable basis short- or even long-term ?!
- Is 'photodynamic laser therapy' THE new successful option in the treatment of chronic and / or aggressive periodontitis / periimplantitis therapy or is it just a magic marketing tool / toy ?!
- In open flap debridement (periodontal surgery) procedures, is it beneficial to the patient to only partially or not at all remove the infectious granulomatous tissue or is it even a crucial requirement to take it all out ?!

Preliminary Program (IX)

- What is the ideal microtexture of an optimally healing tooth and / or implant surface ?! - Should it be rather smooth, or is it even very important to create a clean and micro-rough tooth / implant surface ?!
- What is the bio-logic rationale for an EDTA-Gel (EthyleneDiamineTetraacetic Acid; PrefGel®) root / implant surface conditioning and for Enamel Matrix Derivatives (Emdogain®) or are these substances just fancy and in fashion ?!
- What is the perfect flap design in open flap debridement (periodontal surgery) or any other oral surgical treatment not to compromise the natural blood supply ?! - Are there any indications left for vertical incisions ?!
- Do we need to be able to carry out multiple suturing techniques or is it just important to precisely readapt the flap margins in a meticulous approach (small sutures / light / loops / microscope) to provide the best (primary) pain-free wound healing ?!
- Is there a rationale for loops and / or microscopes to achieve the best bio-logical result based upon primary wound closure combined with the best patient compliance and least patient discomfort ?!
- What is the rationale for the 'Whiskers Suturing Technique™' in periodontal / periimplant regeneration ?!
- What is the difference between periodontal / periimplant repair vs. regeneration ?! - Can we expect a significantly improved long-term prognosis if we are able to rather regenerate than repair lost periodontal / periimplant tissues ?!
- Is there ever a chance to partially and / or completely bio-logically regain lost bony tissues or will it never come again ?!
- If bony craters and / or open furcations were to be able to remodel, can the soft tissues recover as well ?! - If so, can a 'Creeping Attachment' be predicted at some extent or is it just 'wishful thinking' ?!
- Can the use of Enamel Matrix Derivatives (Emdogain®) significantly help to allow us to even be successful / completely heal high-risk patient groups like heavy smokers, insulin-dependent diabetes mellitus patients, patients suffering from depression etc. ?!
- When using an EDTA-Gel (EthyleneDiamineTetraacetic Acid; PrefGel®) and Enamel Matrix Derivatives (Emdogain®) during open flap periodontal / periimplant debridement (periodontal / periimplant surgery), is there still a need / rationale for membranes to cover infrabony defects / open furcations ?!
- Can Enamel Matrix Derivatives (Emdogain®) significantly reduce / eliminate postoperative pain, swelling, and patient discomfort in general ?!
- What is both the most effective and most gentle technique to sharpen periodontal as well as surgical hand instruments - Do we really need it ?!
- Do we have to use special curettes / brushes / tips / devices when cleaning a diseased infectious implant surface ?!

Preliminary Program (X)

- What is the rationale / significant benefit to the patient when using a combination of an EDTA-Gel (EthyleneDiamineTetraacetic Acid; PrefGel®) and porcine Enamel Matrix Derivatives (Emdogain®) in periodontal / periimplant regeneration ?! - What are the bio-logical principles of such an approach ?!

Maintenance Care

- What are the latest and up-to-date success criteria in implant dentistry meticulously evaluating crestal bone and soft tissue (level) changes both around Bone as well as Soft Tissue Level Implants ?!
- Once a patient has completely healed (periodontitis / periimplantitis), how often do we need to see him / her with the dental hygienist and / or prophylaxis assistant to successfully prevent from recurrent disease predictably and reliably ?! - Once or twice, or even three vs. four times per year ?!
- Is there a difference among patients originally suffering from gingivitis vs. chronic or aggressive periodontitis / periimplantitis ?!
- Is there a difference in terms of recall interval definition among patients originally suffering from a slight, moderate or severe degree of periodontal / periimplant disease ?!
- How often does the dental team have to take radiographs, measure tooth vitality and pocket probing depths ?! Who is the ideal and qualified person to do so ?!
- Is Supportive Periodontal Therapy (SPT) after both subgingival (scaling) and open flap debridement (periodontal surgery) at least as important as the so-called 'Active Periodontal Therapy' or is this just making some extra money on our periodontitis / periimplantitis patients or even both ?!

Seminars (a.m. & p.m.)

- The Case of the Day™ - Daily case presentations with step-by-step comprehensive clinical documentation and interactive discussion - Medical History -> Diagnostics -> Prognosis -> Treatment Planning -> Active Therapy -> Maintenance Care
- **DSI® Business Partner** Exhibits - Individual study / discussion / evaluation of state-of-the art product portfolios & news releases

Hands-On Topics (p.m.):

- Introduction and direct personal supervised use of up-to-date loops & microscopes
- 6-site probing technique (Pocket Probing Depth / Clinical Attachment Level) utilizing a force calibrated periodontal probe (AudioProbe®) on acrylic models with 'artificial 3-D-calculus'

Preliminary Program (XI)

- Introduction into / demonstration of instrument kit / utilization of individual periodontal hand instrument kit suitable for both subgingival (scaling) and open flap debridement (periodontal surgery)
- Minimally-invasive sharpening of periodontal and surgical hand instruments (scaler / periodontal curette / periosteal elevator / surgical curette / surgical elevator) utilizing the Periostar® device
- Orthopedic guidelines and practice in ergonomics / physical therapy
- Subgingival debridement (periodontal scaling) on acrylic models with 'artificial 3-D-calculus' using latest generation periodontal hand instruments
- Introduction into / demonstration of / utilization of individual macro- and microsurgical instrument kit for (periodontal) surgery
- Basic principles and practice of 3 major suturing techniques utilizing latest generation macro- and microsurgical instrument kit for (periodontal) surgery
- Open flap debridement (periodontal surgery) on acrylic models with 'artificial 3-D-calculus' using latest generation periodontal and surgical hand instruments
- Open flap debridement (periodontal surgery) on pig mandible utilizing latest generation periodontal and surgical hand instruments

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