



Baltic Osseointegration Academy (BOA) presents
The First International BOA Congress for dentists
"Thoughtful Look to the Nowadays Problems in Oral Implantology"
focused on oral rehabilitation using dental implants

*The First International BOA Congress will take place on 12-13 June 2009 in
Kaunas at "Reval Hotel Neris" Conference Centre*

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DEAR COLLEAGUES,



On the behalf of the Baltic Osseointegration Academy I am very honored to invite you to the First International Baltic Osseointegration Academy Congress "Thoughtful Look to the Nowadays Problems in Oral Implantology", which will be held in Kaunas, Lithuania, on 12-13 June 2009. The Congress is dedicated to the nowadays problems in oral implantology which include advanced surgical techniques, prosthetic treatment, aesthetic problems and the multidisciplinary oral rehabilitation approach.

The purpose of this Congress is the exchange of scientific knowledge and experience between the colleagues who are interested in implant dentistry, coming not only from Baltic States, but also from all over the world. The Congress' Scientific Committee has arranged interesting and attractive two-day program focused on major changes that occurred during last years in science and practice of implantology. The treatment strategies that will be presented during Congress should guarantee the best final outcome of therapy. Modern criteria for successful implant practice must include optimal aesthetics in every case.

Baltic Osseointegration Academy was established to promote national and international collaboration of dentists working in a field of implant dentistry. The main mission of BOA is to promote a continuing education of dentists in the fields of implant dentistry and osseointegration in order to ensure the best treatment based on worldwide science and practice unity. The BOA Congress provides a unique opportunity to meet, and to exchange views with colleagues from many countries.

The location of the Congress is perfect to stay and enjoy of the most attractive sites in Kaunas.

I am looking forward meeting you at the First International Congress of the BOA in Lithuania.

Gintaras Juodzbaly
President of BOA
Chairmen of BOA Congress

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PROGRAMME

Friday, 12 June, Hall Alfa	
9.30 – 9.40	Opening ceremony
Chairman: T. Linkevičius	
9.40 – 10.40 <i>Keynote speaker</i>	Esthetics is not a coincidence <i>K. Chmielewski (Poland)</i>
10.40 – 11.40 <i>Keynote speaker</i>	Aesthetic Implant Restoration Considerations for Compromised Sites. Part I <i>R. Cocchetto (Italy)</i>
11.40 – 12.00	Coffee break
12.00 – 13.00 <i>Keynote speaker</i>	Aesthetic Implant Restoration Considerations for Compromised Sites. Part II <i>R. Cocchetto (Italy)</i>
13.00 – 14.00	Lunch
Chairman: R. Pletkus	
14.00 – 14.20	Fixed temporary dentures application for edentulous maxillas rehabilitation <i>D. Karpavičius (Lithuania)</i>
14.20 – 14.40	Prosthetic treatment in esthetic zone – view of prosthodontist <i>K. Sveikata (Lithuania)</i>
14.40 – 15.00 <i>Keynote speaker</i>	Positioning of teeth in implant-supported restorations <i>T. Linkevičius (Lithuania)</i>
15.00 – 15.20	Abutment materials and soft tissue inter-actions. How to choose proper prosthetic components? <i>V. Rutkūnas (Lithuania)</i>
15.20 – 15.40	Coffee break
Chairman: G. Janužis	
15.40 – 16.00 <i>Keynote speaker</i>	Mistakes and pitfalls in daily implant practice <i>G. Gumbelevičius (Lietuva)</i>
16.00 – 16.20	Split alveolar ridge osteotomy for posterior mandible horizontal augmentation <i>S. Bojarskas, (Lithuania)</i>
16.20 – 16.40	Indirect Sinus Lift: easy and effective <i>V. Varinauskas (Lithuania)</i>
16.40 – 17.00	Is implant placement in maxillary distal region a simple procedure? <i>D. Razukevičius (Lithuania)</i>
17.00 – 19.00	Get-together Party in exhibition
19.00	Gala Banquet at Hall Alfa <i>Dress code: smart casual</i>
Saturday, 13 June, Hall Alfa	
Chairman: G. Gumbelevičius	
10.00 – 11.00 <i>Keynote speaker</i>	Sinus Floor Elevation – When, how and why? <i>B. E. Pjetursson (Iceland)</i>
11.00 – 11.20 <i>Keynote speaker</i>	Extraction socket morphology guided treatment for implant aesthetics <i>G. Juodžbalys (Lithuania)</i>
11.20 – 11.40	Coffee break
Chairman: G. Juodžbalys	
11.40 – 12.00 <i>Keynote speaker</i>	Esthetic success and failures in implant surgery <i>A. Puišys (Lithuania)</i>
12.00 – 12.20 <i>Keynote speaker</i>	Temporomandibular joint disorders <i>T. Tegnander (Norway)</i>
12.20 – 12.40	Bone grafting from light to hard <i>G. Salms (Latvia)</i>
12.40 – 13.00	Soft and hard tissue management in periimplantological treatment <i>A. Senyuk (Russia)</i>
13.00 – 14.00	Lunch
Chairman: A. Puišys	
14.00 – 14.30	Esthetic outcome by the use of Bone Block-Allografts for Anterior Atrophic Maxilla <i>J. Nissan (Israel)</i>
14.30 – 14.50 <i>Keynote speaker</i>	3D diagnostics in contemporary implantology. Does conventional orthopantomography still meet our needs? <i>S. Grybauskas (Lietuva)</i>
14.50 – 15.10	Features and benefits of 2D/3D radiography systems, their application in oral surgery <i>D. Aviženis (Lithuania)</i>
15.10 – 15.30	Reconstructions of osseous jaws defects using Autografts and Allografts <i>A. Lukošius (Lithuania)</i>
15.30 – 15.50	Coffee break
Chairman: D. Sakavičius	
15.50 – 16.10	Periodontitis patients and dental implants <i>I. Pacauskienė (Lithuania)</i>
16.10 – 16.30	Implants and orthodontics <i>A. Gaidytė (Lithuania)</i>
16.30 – 16.50	Peculiarities of implantation in patients with former chronic periodontitis <i>Ž. Guobis (Lithuania)</i>
16.50 – 17.10 <i>Keynote speaker</i>	Biological materials in implant dentistry <i>G. Juodžbalys (Lithuania)</i>
17.10 – 17.20	Discussion, Congress closure

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9.30 – 9.40	Kongreso atidarymas
Pirmininkas: T.Linkevičius	
9.40 – 10.40 <i>Pagrindinis lekt.</i>	Estetika dantų implantologijoje - tai ne atsitiktinumas <i>K.Chmielewski (Lenkija)</i>
10.40 – 11.40 <i>Pagrindinis lekt.</i>	Komplikuotų atvejų estetinė restauracija implantais. I dalis <i>R.Cocchetto (Italija)</i>
11.40 – 12.00	Kavos pertrauka
12.00 – 13.00 <i>Pagrindinis lekt.</i>	Komplikuotų atvejų estetinė restauracija implantais. II dalis <i>R.Cocchetto (Italija)</i>
13.00 – 14.00	Pietūs
Pirmininkas: R.Pletkus	
14.00 – 14.20	Laikinių fiksuotų protezų panaudojimo galimybės atliekant bedančio viršutinio žandikaulio reabilitaciją <i>D.Karpavičius (Lietuva)</i>
14.20 – 14.40	Protezavimas implantais estetinėje zonoje - protezisto požiūris <i>K.Sveikata (Lietuva)</i>
14.40 – 15.00 <i>Pagrindinis lekt.</i>	Dantų padėtis protezuojant ant implantų <i>T.Linkevičius (Lietuva)</i>
15.00 – 15.20	Implanto atramos ir minkštųjų audinių tarpusavio sąveika. Kaip pasirinkti protezinius komponentus? <i>V.Rutkūnas (Lietuva)</i>
15.20 – 15.40	Kavos pertrauka
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15.40 – 16.00 <i>Pagrindinis lekt.</i>	Klaidos ir pavojai implantacinėje praktikoje <i>G.Gumbelevičius (Lietuva)</i>
16.00 – 16.20	Alveolinės ataugos osteotomijos taikymas apatinio žandikaulio horizontalių defektų atstatymui <i>S.Bojarskas (Lietuva)</i>
16.20 – 16.40	Netiesioginis sinusliftingas: lengvas ir efektyvus <i>V.Varinauskas (Lietuva)</i>
16.40 – 17.00	Ar implantacija distaliniame viršutinio žandikaulio segmente yra nesudetinga procedūra? <i>D.Razukevičius (Lietuva)</i>
17.00 – 19.00	Šventinis furšetas parodoje
19.00	Šventinis banketas, konferencijų salė Alfa <i>Aprangos kodas: puošnius kasdieninis</i>
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Pirmininkas: G.Gumbelevičius	
10.00 – 11.00 <i>Pagrindinis lekt.</i>	Sinuso dugno pakėlimas – kada, kaip ir kodėl? <i>B.E.Pjetursson (Islandija)</i>
11.00 – 11.20 <i>Pagrindinis lekt.</i>	Alveolės morfologija, kuri nulemia implantacijos metodo pasirinkimą ir estetinį rezultatą <i>G.Juodžbalys (Lietuva)</i>
11.20 – 11.40	Kavos pertrauka
Pirmininkas: G.Juodžbalys	
11.40 – 12.00 <i>Pagrindinis lekt.</i>	Sėkminga ir nesėkminga estetika dantų implantacijoje <i>A.Puišys (Lietuva)</i>
12.00 – 12.20 <i>Pagrindinis lekt.</i>	Smilkininio apatinio žandikaulio sąnario disfunkcija <i>T.Tegnander (Norvegija)</i>
12.20 – 12.40	Kaulo priauginimas - nuo paprasto iki sudėtingo <i>G.Salms (Latvija)</i>
12.40 – 13.00	Minkštųjų ir kietųjų audinių manipuliacijos implantologijoje <i>A.Senyuk (Rusija)</i>
13.00 – 14.00	Pietūs
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14.50 – 15.10	2D/3D rentgeno diagnostikos aparatai, savybės bei pritaikymas burnos chirurgijoje <i>D.Aviženis (Lietuva)</i>
15.10 – 15.30	Žandikaulių defektų rekonstrukcija auto- ir alo-transplantantais <i>A.Lukošiūnas (Lietuva)</i>
15.30 – 15.50	Kavos pertrauka
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15.50 – 16.10	Periodontitas ir dantų implantacija <i>I.Pacauskienė (Lietuva)</i>
16.10 – 16.30	Dantų implantai ir ortodontija <i>A.Gaidytė (Lietuva)</i>
16.30 – 16.50	Implantacijos ypatumai pacientams, sergantiems lėtiniu periodontitu <i>Ž.Guobis (Lietuva)</i>
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ABSTRACTS

#1 FEATURES AND BENEFITS OF 2D/3D RADIOGRAPHY SYSTEMS, THEIR APPLICATION IN ORAL AND MAXILLOFACIAL SURGERY

D. Avizenis

JSC Vilimekso Servisas, Vilnius, Lithuania

Objectives: To introduce key features of 2D/3D radiography imaging systems, to survey radiation doses and evaluate payback of the unit alike.

Material and methods: The analysis and comparison of manufacturers' technical documentation as well as related units characteristics. Survey of studies and standards of hygiene is relative to this issue.

Results: Establishment of key advantages and disadvantages by comparison of different units. Taking into account the features of dentist work and doctor's own specialty, was determinate opportunities for functional use of radiography unit; also was picked out a most reasonable model for improved each practice efficiency.

Precise radiography diagnosis today is a growing presence in accurate oral and maxillofacial surgery.

Programmable functions of dental imaging software enable dentists, oral and maxillofacial surgeons and orthodontists to operate easily and save a time.

Conclusion: 2D/3D radiography systems are an integral part of precise diagnosis and subsequent treatment. The resulting precise anatomical image enables to avoid both mistakes while making a diagnosis and adverse events during treatment process.

#2 SPLITALVEOLAR RIDGE OSTEOATOMY FOR POSTERIOR MANDIBLE HORIZONTAL AUGMENTATION

S. Bojarskas, G. Juodzbaly

Department of Maxillofacial Surgery, Kaunas University of Medicine, Kaunas, Lithuania

Objectives: The aim of study was to evaluate efficacy of split osteotomy for distally atrophied mandible alveolar ridge horizontal augmentation as alternative method and to establish critical anatomical parameters for this method.

Material and methods: 7 patients with horizontal atrophy of mandible alveolar ridge, selected upon sufficient height of bone for dental implants installation, were examined applying clinical and radiological examination before and after operation. The length of atrophied alveolar ridge, height and width at narrowest (minimum available for osteotomy) and widest sites were recorded. Postoperative follow up was tracked for 2 weeks, 1 month, 3 month and 8 month. Statistical analysis of measurements was processed applying SPSS for Windows program.

Results: Osteoregeneration, assessed clinically and radiologically, was achieved in all cases. Before the operation, the mean width at narrowest site of atrophied alveolar ridge was 2±0.15 mm, height 12±1.45 mm, length 22±2.7 mm. Eighth month after surgery the minimal width values changed significantly, increasing to 6±1.6 mm, meanwhile inconsiderable reduction of height to 11±1.3 mm was noticed.

Conclusions: Split osteotomy of alveolar ridge is consistent and well predictable method for horizontal augmentation of distally atrophied mandible.

#3 AESTHETICS IS NOT A COINCIDENCE

K. Chmielewski

Associate Doctor in Implantology, Clinic in Frankfurt and Main, Main, Germany

Objectives: Overview of conditions and reasons for good, predictable results when the anterior teeth are afflicted with the loss of soft and hard tissue after naturally healed extraction sockets.

Material and methods: Clinical cases referring to clinical

research, colleagues experience and scientific publications.

Results: Implant placement is very successful after several months using convincing treatment concept for extraction sockets (socket preservation). Excellent aesthetic result was reached using "3 Dimensional Vertical Bone Reconstruction in One Step Procedure" technique. Treatment time was reduced using the single surgical procedure with Cortico-Cancellous Autogenous Grafts from the chin and biomaterials.

Conclusion: Using different innovative, secure, reliable techniques, referring to long clinical experience, it is possible to achieve the best and predictable aesthetic and functional result in implant treatment, even in very hard and challenging cases.

#4 IMPLANTS AND ORTHODONTICS

A. Gaidyte

Clinic of Orthodontics, Kaunas University of Medicine,
Kaunas, Lithuania

Dentistry, with its multiple disciplines and in conjunction with modern science and technology, is making enormous advances. Through all of this progress, it has developed the capacity to treat complex dentofacial problems with results that have unprecedented predictability, function, stability, longevity and esthetics. In some patients where insufficient number of teeth or reduced periodontium is present the orthodontic treatment could be the best solution before implant therapy and prosthetic rehabilitation.

Objectives: The aim of present study was to investigate the possibility of periodontal tissue regeneration using tooth movement method.

Material and methods: Mesial or distal movement over apparently too thin labio-lingually alveolar bone areas was employed to create solid areas of new bone.

Results: Slow "orthodontic extraction" regenerated new periodontal tissues following forced eruption of tooth with more or less "hopeless" long term prognosis. Enhanced aesthetics and increased levels of osseointegration for the single tooth implants were created by adjunctive orthodontic treatment.

Conclusion: Tooth movement may be an excellent method for periodontal tissue regeneration (i.e. increase) of gingival tissue and alveolar bone levels in implant sites in vertical and horizontal planes. On the other hand the advent of miniscrew provides a new reference that allows today's orthodontist to plot courses of treatment that have been previously unpredictable or even impossible with traditional mechanics.

#5 3D DIAGNOSTICS IN CONTEMPORARY IMPLANTOLOGY. DOES CONVENTIONAL ORTOPANTOMOGRAPHY STILL MEET OUR NEEDS?

**Simonas Grybauskas, Algirdas Puisys,
Tomas Linkevicius**

Vilnius Implantology Center, Vilnius, Lithuania

Objectives: The aim of this study was to investigate the need for 3D radiological examination before implant surgery or reconstructive procedures of alveolar ridge.

Material and Methods: Thirty nine patients with a need for implant surgery and dental rehabilitation were chosen for this study. All of them had an orthopantomography (OPG) previously performed for dental treatment. The OPG was thoroughly examined and implant surgery planned. CBCT scans (iCAT, Imaging Sciences International, USA) were performed

and all cases were re-planned according to 3D CT investigation. If implant planning was identical using OPG and CBCT scans the need for CBCT was assumed to be negative, if treatment planning was changed when CBCT scans were analyzed the need for CBCT was assumed to be positive.

Results: In 23 out of 39 patients the analysis of CBCT scans resulted in alterations of initial treatment plan formulated according to OPG only. In 5 patients implant plan was changed ultimately and allowed to avoid serious malpractice, i.e., perforation of sinus floor or perforation of lingual cortical bone in the distal area of lower jaw.

Conclusions: CBCT is a powerful diagnostic tool that should be used for implant surgery planning instead or along with OPG.

#6 MISTAKES AND PITFALLS IN DAILY IMPLANT PRACTICE

G. Gumbelevicius

Gidenta, dental clinic, Vilnius, Lithuania

Failure of dental implant in daily practice is seldom complication and it is related to failure to osseointegrate correctly. Disturbances of osseointegration like other complications can be evoked by different factors: operator skill, quality and quantity of the bone available at the site, patient's oral hygiene and others.

Objectives: The aim of this study was to analyze present data concerning the reasons of most common complications in implant dentistry practice and suggest proper treatment management.

Material and methods: Literature data published in the year 1996-2008 was reviewed and special focus on treatment management was considered. The most promising treatment options were discussed, including clinical cases demonstration.

Results: Implant survival rate is in close correlation with proper treatment planning and surgical procedure performance. CT-scan diagnostic method, virtual case planning and complication's treatment options were discussed in present study.

Conclusion: Identification of possible complications causes and their prevention options are the most important determinants of desirable functional and aesthetic results achievement.

#7 PECULIARITIES OF IMPLANTATION IN PATIENTS WITH FORMER CHRONIC PERIODONTITIS

Z. Guobis

Clinic of Dental and Oral Pathology, Kaunas University of
Medicine, Kaunas, Lithuania

Objectives: The purpose of this study is to overview the risk factors and problems, which the dentist may deal with after periodontitis is treated when planning, placing, restoring and maintaining health and harmony in oral implant therapy.

Material and methods: The review of textbooks and scientific publications, published in the year 2005-2009. We summarized risk factors and problems that are to be concerned when applying implant therapy for former periodontitis patients. Clinical cases are presented. Results: Patients with former *periodontitis adultorum generalisata chronica* are one of the most demanding patients group in the field of implantology. We need to know our patients better in order to obtain full health status, oral hygiene status, expectations, compliance etc. Bone desorption is very common af-

ter periodontitis, thus aggravating the surgical techniques and prosthetic rehabilitation and final esthetics. There are many techniques to facilitate and enhance implant placement and final esthetics: guided bone regeneration, guided tissue regeneration, etc.

Conclusion: Periodontitis is one of the most prevalent diseases in our dental patients in older age groups. We need a very thorough anamnesis and deep knowledge about possible and predictable surgical techniques and prosthetic approaches for every individual patient. It is possible to reach acceptable results in function and esthetics for a long term.

#8 EXTRACTION SOCKET MORPHOLOGY GUIDED TREATMENT FOR IMPLANT AESTHETICS

G. Juodzbaly

Department of Maxillofacial Surgery, Kaunas University of Medicine, Kaunas, Lithuania

Objectives: The aims of this study were: 1) to assess the clinical criteria that are needed for develop ideal implant aesthetics during immediate implant placement and 2) to identify surgical procedures, either soft or hard tissue, that are needed to predictably achieve aesthetics for the immediate implant placement.

Material and Methods: Twenty-five maxillary anterior teeth from 25 patients, 15 men and 10 women (age: 18 to 51 years, mean = 32.4±9.1 years) were extracted. Sockets assessment and treatment approach was made based upon classification developed by authors. Aesthetic outcome was evaluated at the prosthesis placement and one year after function.

Results: Five extraction sockets were categorized as adequate: 12 as compromised and 8 as deficient. All soft tissue parameters showed statistically significant improvement ($p=0.031$) at the moment of prosthesis placement. Three parameters of extraction socket soft tissues, vertical deficiency of 2 mm, deficient quality and thin gingival biotype, had a significant effect on compromised peri-implant soft tissue aesthetic outcome after one year of function. Conclusions: Careful assessment of extraction socket parameters, both soft and hard tissues, promotes the clinicians' ability of achieving predictable implant aesthetics during immediate implant placement.

#9 BIOLOGICAL MATERIALS IN IMPLANT DENTISTRY

G. Juodzbaly

Department of Maxillofacial Surgery, Kaunas University of Medicine, Kaunas, Lithuania

Some patients have insufficient bone to place dental implants, but there are many surgical techniques to increase the bone volume making implant treatment possible.

Objectives: The aim of the present study was: 1) to make analysis of research data concerning efficacy of biologic materials designed for bone defects repair in implant dentistry; 2) to summarize bone vertical and horizontal augmentation results, which were performed by author last 10 years.

Material and methods: The articles from 1999 to 2009 related to the topic were identified in the online MEDLINE/Pubmed and other databases and manually. Clinical outcomes of horizontal and vertical jaws alveolar process augmentation was analysed using orthopantomograms and clinical implant success criteria's.

Results: Bone can be regenerated in a vertical and horizontal direction using various techniques, but it is unclear

which technique is preferable. Major bone grafting procedures of resorbed mandibles may not be justified. Bone substitutes (Bio-Oss) may replace autogenous bone for sinus lift procedures of atrophic maxillary sinuses. Bone morphogenetic proteins may enhance bone formation around implants grafted with Bio-Oss.

Conclusion: Sites treated with barrier plus Bio-Oss showed a higher position of the gingival margin, when compared to the sites treated with barriers alone. Autogenous bone grafts seems to be gold standard for bone augmentation. Future investigations of tissue engineering are promising to be useful for ridge augmentation procedures of the jaws.

#10 FIXED TEMPORARY DENTURES APPLICATION FOR EDENTULOUS MAXILLAS REHABILITATION

D. Karpavicius, S. Grybauskas, V. Steponavicius, E. Varpiotas

Department of Implantology and Prosthetic Treatment, Kaunas University of Medicine, Kaunas, Lithuania

Objectives: To evaluate the importance of the correct position of temporary implants and dentures, during rehabilitation of edentulous maxillas. Longevous practice in solving such problems allows us to give useful practical advices for other colleagues.

Material and methods: The data will be presented from the results obtained using temporary implants for edentulous patient treatment. Appropriate clinical situations will be discussed and evaluate. It will be shown the importance of correct positioning of temporary and permanent implants and the advantages of this method, comparing to removable temporary dentures.

Results: Treatment of edentulous maxillas usually causes problems in these cases, when fixed temporary dentures are required during the period between implantation and the finally fixation of permanent dentures. The suggestions how to make correct position of permanent and temporary implants and proper modelling of fixed temporary dentures will be discussed in this presentation.

Conclusions: Understanding and practicing this method of treatment allows our patients feel more comfortable. Colleagues, then, will be able to prognosticate the results of treatment more precisely.

#11 POSITIONING OF TEETH IN IMPLANT-SUPPORTED RESTORATIONS

T. Linkevicius

Department of Prosthodontics, Institute of Odontology, Faculty of Medicine, Vilnius University, Vilnius, Lithuania

Objective: to evaluate anatomical positioning of teeth in implant-supported restorations and define its impact on function, esthetics, longevity and maintenance of prostheses.

Material and methods: Clinical cases with anatomically positioned fixed implant-supported restorations were analyzed and compared to traditional implant prosthetics. Literature was reviewed to support the specific placement of the teeth in implant-supported restorations.

Results:

1) Anatomically positioned teeth in implant-supported restorations contribute to more pleasing appearance of the patients.

2) Improper location of prosthetic teeth can result in unwanted complications, such as chipping of the veneering porcelain of metal-ceramic restorations.

Conclusion: it can be concluded that the rehabilitation of maxillary or mandibular dental arch with fixed metal-ceramic restorations should include positioning of the teeth in their previous location.

#12 RECONSTRUCTIONS OF OSSEOUS JAWS DEFECTS USING AUTOGRAFTS AND ALLOGRAFTS
A. Lukosiūnas, D. Sakavicius, R. Kubilius, G. Sabalys, G. Juodzbaly

Department of Maxillofacial Surgery, Kaunas University of Medicine, Kaunas, Lithuania

Reconstruction of the jaw defects is a distinct problem, independent from the origin of its development.

Objective: The purpose of present study was compare efficacy of osseointegration applying autologous bone and allotransplant for the reconstruction of jaw defects.

The material of study was 43 patients treated during 2006-2008 at Kaunas Medical University hospital, Department of Maxillofacial Surgery because of jaw defects. 32 patients were operated applying autologous iliac crest transplantation and 11 patients – allotransplantation using Bio-oss granules.

Material and methods: ortopantomography and relative computerized densitometry were applied for osseointegration evaluation.

Results: Assessing radiological signs of new bone formation at operated defect site, patients were divided into three groups. The examination results of each group were evaluated 4 weeks, 8 weeks, 12, 24 and 32 weeks after operation. Radiological changes were assessed by computerized densitometry.

Conclusions: The higher efficacy of osseointegration reconstructing jaw defects is attained applying autologous bone transplantation.

#13 ESTHETIC OUTCOME BY THE USE OF BONE BLOCK-ALLOGRAFT FOR ANTERIOR ATROPHIC MAXILLA
J. Nissan

Department of Oral-Rehabilitation, School of Dental Medicine, Tel Aviv University, Tel Aviv, Israel

Implant support prosthesis is a prosthetic procedure with a surgical component. In the past Dental implants were placed according to the available bone structures, today Implant placement is restoration guided.

Pre-implant augmentative surgery is a pre-requisite in many cases in the anterior maxilla to achieve a stable, long-term esthetic final result.

Objectives: The purpose of present study was to demonstrate the potential of freeze-dried cancellous block allograft for restoration guided site development in the anterior atrophic maxilla.

Material and methods: Clinical and histological cases and studies will exemplify the possibilities of increasing alveolar ridge width and height, esthetic restorations and immediate loading.

Results: Advantages, disadvantages and potential complications and solutions were emphasized. It was showed that implant site development is a mandatory step during treatment planning.

Conclusion: It can be concluded that cancellous block allografts may provide an alternative treatment that meets the clinical and esthetic requirements of restoration guided implant-supported prosthesis in the anterior atrophic maxilla.

#14 PERIODONTITIS PATIENT AND DENTAL IMPLANTS

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Objectives: Despite the same microbial factors are associated with the periodontal disease and periimplantitis, dental implants are widely used for replacement of missing teeth in partially edentulous periodontal patients. The aim of study is to review of the literature concerning the risk and influence of periodontal flora on development of periimplantitis and compare long term prognosis of implants in patients with or without a history of chronic periodontitis.

Material and methods: The review of 64 scientific publications, published in the year 1998-2009.

Results: Periodontal treatment is very important for this group of patients prior to placement of dental implants and supportive periodontal therapy afterwards. Implants replacing teeth due to chronic periodontitis may demonstrate lower survival rates and more biological complications than implants replacing teeth lost due to other reasons.

Conclusion: Susceptibility to periodontitis and periimplantitis for periodontally compromised patients is under investigation.

#15 SINUS FLOOR ELEVATION – WHEN, HOW AND WHY?

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Objectives: The objective of the present study is to assess the survival rate of grafts and implants placed in conjunction with sinus floor elevation using the trans-alveolar or the lateral approach.

Material and Methods: An electronic search was conducted to identify studies on sinus floor elevation, with a mean follow-up time of at least 1 year after functional loading.

Results: The search provided 839 titles. Full-text analysis was performed for 175 articles resulting in 48 studies that met the inclusion criteria for the lateral approach and 18 studies for the trans-alveolar technique.

Meta-analysis of 12020 implants indicated an estimated annual failure rate of 3.48% (95% C.I.: 2.48%-4.88%) translating into a 3-year implant survival of 90.1 % (95% C.I.: 86.4 %-92.8 %). However, when failure rates was analyzed on the subject level, the estimated annual failure was 6.04% (95% C.I.: 3.87%-9.43%) translating into 16.6% (95% C.I.: 10.9%-24.6%) of the subjects experiencing implant loss over 3 years. Meta-analysis of studies reporting on the trans-alveolar technique indicated an estimated annual failure rate of 2.48% (95 percent confidence interval (95% C.I.: 1.37%-4.49%) translating to an estimated survival rate of 92.8% (95% C.I.: 87.4%-96.0%) for implants placed in transalveolarly augmented sinuses, after 3 years in function. Furthermore, subject-based analysis revealed an estimated annual failure of 3.71% (95% C.I.: 1.21%-11.38%), translating to 10.5% (95% C.I.: 3.6%-28.9%) of the subjects experiencing implant loss over 3 years.

Conclusion: The insertion of dental implants in combination with maxillary sinus floor elevation is a predictable treatment method showing high implant survival rates and low incidences of surgical complications.

The best results (98.3% implant survival after 3 years) were obtained using rough surface implants with membrane coverage of the lateral window.

Furthermore, the trans-alveolar technique was shown to

be predictable with a low incidence of complication and high implant survival rate, especially utilized in sites with 5mm or more pre-operative bone height.

#16 ESTHETIC SUCCESS AND FAILURES IN IMPLANT SURGERY

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Objectives: The appearance and long-term stability of peri-implant bone, mucosa and gingiva determine the success of implant-supported prosthesis from both the esthetic and functional standpoints. Today, the therapies with implant-supported restorations are reliable, well documented clinical procedures. The literature offers substantial information concerning the biological and functional outcome on a high evidence level. On the other hand only few data exist concerning the esthetic results, especially about the peri-implant soft tissue stability.

Material and methods: Implant surgery was performed in Vilnius Implantology Center from 2003 to 2008. 309 patients received dental implants in esthetic area. In this work numbers of clinical cases were evaluated according these criteria: 1) initial clinical situation, 2) treatment method was taken, 3) final restoration 4) follow up evaluation. Considerations and analysis of esthetic success and failures were made.

Results: Results can be divided into 5 groups: 1) Immediate implantation. 2) Implantation with bone, soft tissue augmentation. 3) Bone blocks reconstruction before implant placement. 4) Implantation into relatively young patients (teeth physiological growth). 5) Prosthesis. There were made analysis of common mistakes leading to esthetic failures and ways to solve it.

Conclusions: Teeth reconstruction on dental implants in the esthetic zone is safe, well documented, long lasting, and esthetic restoration, while the implant surgery was done after detailed individual case evaluation and treatment planning.

#17 IS IMPLANT PLACEMENT IN MAXILLARY DISTAL REGION A SIMPLE PROCEDURE?

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Objectives: The purpose of this study was to evaluate the gain in the height after the indirect sinus lift by osteotomes and implant placement was performed. The study also included a review of anatomic features of the sinus that have an effect upon the direct and indirect sinus lift procedures.

Material and methods: Strict selection of patients by "anamnesis vitae" and accurate panoramic x-ray are needed before planning indirect sinus lift. Panoramic x-rays and computed topographies of the patients were analysed.

Results: Using indirect sinus lifting technique there are no limitations in the height of bone augmentation, especially if we need to lift 3.8 mm in height. The most common traumatic complication of indirect sinus lift is the perforation of the sinus membrane, but there is always the possibility to correct it doing direct sinus lifting. If a panoramic x-ray and other symptoms it shows, there may be anatomic difficulties during surgical procedures. A sinus computed tomography should be carried out before the operation.

Conclusion: Indirect sinus lift – easy, safe and effective technique for the augmentation of vertical bone height. If a panoramic x-ray and other symptoms it shows, there may be anatomic difficulties during surgical procedures. A sinus computed tomography should be carried out before the operation.

#18 ABUTMENT MATERIAL AND SOFT TISSUE INTERACTIONS. HOW TO CHOOSE PROPER PROSTHETIC COMPONENTS?

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Objectives: To evaluate functional and aesthetic aspects of different prosthetic components used for temporary and definitive restorations.

Material and methods: Human gingival fibroblasts were cultured *in vitro*. The toxicity of selected prosthetic materials was tested by exposing them to cell culture medium. Cell viability was estimated using MTT assay. Peri-implant mucosa color changes with different prosthetic materials were investigated using titanium, zirconium and feldspathic ceramic specimens using animal model. ΔL , Δa , Δb and ΔE were calculated and compared for all specimens using 4 types (from thin to thick) of mucosa. Light transmission of different materials was evaluated as well. Statistical analysis one-way ANOVA test, Tukey multiple comparison test.

Results: Results showed no toxic effect of titanium, polished zirconium and roughened zirconium compared to control group. Cytotoxic effect was observed in gold, chrome-cobalt alloys as well as in ceramic and provisional prosthetic materials. Overall color change of mucosa was significantly influenced by the optic properties of the prosthetic components. Significantly more light was transmitted to the mucosa in the zirconium group.

Conclusion: Titanium, zirconium proved to be highly biocompatible. Gold alloy and ceramics had low impact on reduction of cell viability. Light transmitting feature of zirconium materials might promote natural appearance of marginal the tissues.

#19 BONE GRAFTING: FROM LIGHT TO HARD

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Objectives: The purpose of present study was to evaluate bone grafting results performed in Oral and Maxillofacial Department of Riga Stradins University from 2003-2008.

Material and Methods: 320 patients, 196 woman and 124 man (age 17 to 70 years) who needed dental implants in the Department of Maxillofacial Surgery, were consecutively enrolled in the investigation. 320 bone grafts were performed for jaws alveolar process augmentation by 4 surgeons from 2003-2008. Donor sites were: iliac crest, chin and angular region of mandible. In number of cases auto bone was mixed with following bone substitutes: Bio-Oss, Bone Ceramic, Tutodent, Cerasorb, and Alzipore. 560 Friadent, Ankylos, Xive, Biohorizons and Semados dental implants were placed in to grafted areas after 4-8 months of healing.

Results: Bone grafting has minimal complications rate in hands of 3 surgeons. Fourth surgeon had less clinical experience and more treatment complications. 17 patients out of 320 have flap dehiscence and secondary wound healing. 8 grafts were completely lost and were left for redo surgery. 9 grafts were preserved by minimal surgical intervention and local hygiene procedures. Integrated bone grafts showed sufficient amount of bone for implant placement. 5 implants did not integrate after 6 months of secondary surgery. Long term implant survival is under investigation.

Conclusions: Auto grafts are highly successful and predictable method of bone grafting before implant restoration. Bone grafts give better prognosis for implant long term suc-

cess and improved esthetical results. Bone substitutes are diminishing bone resorption if properly used. Tension free flap closure is essential for good clinical outcome.

#20 SOFT AND HARD TISSUE MANAGEMENT IN PERIIMPLANTOLOGICAL TREATMENT

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In recent times a lot of methods and materials have become available for soft and hard tissue augmentation in the context of dental implantology. But this variety often confuses doctors and complicates the treatment process.

Objectives: The aim of this study was to demonstrate the influence of implant rehabilitation using different types of surgical techniques. The most important phase of planning is to investigate anatomical conditions and prosthetic evaluations outcome.

Material and methods: Standardized clinical and radiographic parameters were evaluated after completion of the prosthetic treatment. Prosthetic and surgical aftercare was scored during the evaluation period. Three main treatment methods were employed into the study:

1. Placement of the dental implant.
2. Ensuring its long-term function by providing appropriate support from the alveolar bone.
3. Ensuring the functional and esthetic support of restoration by soft tissue.

Implant success rate and esthetic result was recorded.

Results: The clinical status of the patient and his appropriate conditions defines different types of treatment procedures leading to the combination of implant placement and hard and soft tissue augmentation. Optimal treatment method combinations were presented.

Conclusions: The consistency of application of different treatment methods in implant dentistry has different interpretations. This can lead to an increase in treatment time. Optimal treatment method choice is based on concrete anatomical, function and esthetic indications.

#21 PROSTHETIC TREATMENT IN ESTHETIC ZONE – VIEW OF PROSTHODONTIST

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Objectives: Compare different types of provisional restorations trying to achieve naturally looking dental papilla around dental implants, compare effectiveness of different soft and hard tissue augmentation techniques and loading time.

Material and methods: The review of scientific literature, published in the year 2004-2009. 35 publications were chosen and retrospective study was made. Different types of prosthetic restorations fixed on dental implants were made.

Results:

1. Accurate patient selection and preoperative treatment planning is needed;
2. Surgical guides should be used;
3. Soft and hard tissue augmentation is necessary in most cases;
4. Provisional restorations are necessary for papilla formation;
5. Most complications are caused by incorrect planning;
6. Literature review and clinical cases shows good long term results.

Conclusions: Use of surgical guides and fixed provisional restorations allows prosthodontist to create natural looking papilla. Prosthetic treatment in the esthetic zone is very accurate procedure and collaboration between surgeon and prosthodontist is the key to success. Unless the hard and soft tissue is created correctly, papilla formation may not be ideal.

#22 TEMPOROMANDIBULAR JOINT DISORDERS

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Temporomandibular joint (TMD) disorders are a group of complex problems of the jaw joint. TMJ disorders are also sometimes referred to as myofascial pain dysfunction and Costen's syndrome. This pathology by most specialists still considered to be a syndrome or a set of ill-defined painful symptoms in patients who seems to be emotionally stressed.

Objectives: The aim of present study was to analyze present scientific data concerning TMJ disorders pathology, including the anatomy and function of the joint.

Material and methods: Literature scientific data concerning TMJ disorders was reviewed and special focus on Dawson Occlusion- and Piper Pain- Classification was considered. TMD disorders diagnosis and treatment possibilities were reviewed through a case study including MRI-scans.

Results: Results of nowadays studies on TMD disorders has proved that this pathology evolved from a syndrome to a disease with proven treatment. Possible diagnostic methods, classification and treatment options were discussed in present study.

Conclusion: Latest years studies on Temporomandibular joint disorders proved that this pathology can be classified as a disease with specific clinical symptoms and treatment.

#23 INDIRECT SINUS LIFT: EASY AND EFFECTIVE

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Objectives: Evaluate indications and contraindications of indirect sinus lifting technique, effectiveness, difference of complications and the possibility of immediate implantation in comparison with direct sinus lifting technique.

Material and methods: The review of textbooks and scientific publications, published in the year 2000-2009. We choose 50 publications and did a retrospective analysis to evaluate the objectives of the study. We also did one indirect sinus lift procedure under endoscopic control through nose in the clinic.

Results: Strict selection of patients by "anamnesis vitae" and accurate panoramic radiogram are needed before planning indirect sinus lift.

Using indirect sinus lifting technique there are no limitations in the height of bone augmentation, especially under endoscopic control, unless the residual vertical bone height is less than 5 mm.

The most common traumatic complication of indirect sinus lift is the perforation of the sinus membrane, but there is always the possibility to correct it doing direct sinus lifting. Publications showed up to 5 year postoperative observation of patients what shows really good long term results of indirect sinus lift.

Conclusion: Indirect sinus lift – easy, safe and effective technique for the augmentation of vertical bone height. Especially accurate and safe it is, when done under the endoscopic control. It is also possible to do immediate implantation when using this technique.