Dear Participant,

This book of abstracts is intended to provide you with an overview of the Speakers and Lectures.

Enjoy the meeting!

The BIDM 2017 Scientific Committee
Dear Colleagues, Dear Friends,

On behalf of the Lebanese Dental Association, we announce the opening of the 27th Beirut International Dental Meeting, which will be held in Beirut, Lebanon on October 5 -7, 2017 in Beirut International Exhibition & Leisure Center.

Through its “Chaising the future”, The convention will feature many national and international keynote speakers involved in different fields of dentistry.

BIDM 2017 will lead the field in academic and scientific knowledge and promote the highest standards of clinical practice for its participants which will impact the future of dentistry. It will be an invigorating congress reflecting the evolution of dentistry in the era of change in oral health care.

The Scientific Committee worked hard to present a challenging scientific program in the form of plenary lectures, live transmissions, workshops, round-table discussions and poster sessions which will provide a unique meeting place for interdisciplinary and multidisciplinary knowledge exchange and a continuing education opportunity for dentists from all fields of endeavor, as well as world-class content for industry supporters in its huge exhibition center.

The social program will give participants a chance to network among colleagues while enjoying the cuisine, culture, and well-known hospitality at which Lebanon excels.

We have chosen Beirut as the location of our meeting because it is a modern city which affords a combination of culture and history and offers an ambiance of astonishing Mediterranean architecture, souks, sea shores, and culinary pleasures in a warm, friendly and passionate environment.

We strongly believe it will be an enjoyable experience for both visitors and hosts.

We wish you a pleasant stay in the land of the Cedars!

Sincerely,

Prof. Carlos Khairallah
President of LDA
Chairman, BIDM 2017

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Chairperson, Scientific Committee, BIDM 2017
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Mounir Doumit
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Rami Richa
Sherine Badr
Tony Zeinoun
Ziad Moujaes

Thursday 5 October 2017, pm
Amine Zoghbi
Antoine Khoury
Edgard Jabbour
Elia Gerges
Elie Azar Maalouf
Elie Hayek
Habib Chémaly
Hitaf Nasrallah
Mohamad Abou Khalil
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Paul Boulos
Riad Bacho
Roula Basbous
Samia Abou Jaoudé
Serge Abou Rjeily
Tony Karam
Walid Nehmé
Ziad Salameh
Friday 6 October 2017, am
Abeer Kayssi
Antoine Shoufani
Carla Zogheib
Elie Khoury
Fady Daher
Fidel Nabbout
Georges Tawil
Hala Ragab
Hassan Husseini
Inaam Baghdadi
Joseph Ghafari
Karim Corbani
Louis Hardan
Lucette Sagaan
Nabil Barakat
Paul Boulos
Paul Nahhas
Ramzi Haddad
Roula Abiad
Sami El Toum
Sara Salloum
Tony Dib
Wahid Terro
Ziad Moujaes

Friday 6 October 2017, pm
Ahmed Abiad
Ahmed Tarek Farouk
Alexandre Khairallah
Carina Mehanna
Carla Zogheib
Christian Makary
Fabienne Boustani
Fayez Saleh
Georges Hage
Hakam Moussa
Hani Arakji
Issam Khalil
Louis Hardan
Mohamed Atef
Mohamed Shokry
Nahed Attia
Paul Boulos
Pierre Khoury
Roula Abiad
Roy Sabri
Samer Rifaii
Tony Dib
Wahid Terro
Wassim Manhal
Ziad Moujaes
Saturday 7 October 2017, am

Alfred Naaman
André Assaf
Carole Chakar
Fadl Khaled
Fatmé Hamasni
Ghada Ayash
Hani Abdul Salam
Hitaf Nasrallah
Houssam Jassar
Maria Reslan
Mona Ghoneim
Nadim Abou Jaoudé
Tony Daher
Wahid Terro
Ziad Moujaes
Endo in the time of implants: proper understanding of treatment options

The goal of endodontics is to prevent and treat apical periodontitis. Inconsistent treatment outcomes have been reported for different endodontic procedures, especially in cases with persistent endodontic infection. Treatment decisions in such cases may often be a dilemma. Recommendations to the patients may vary from follow-up for longer periods, intervention through surgical or nonsurgical approaches, or even tooth extraction and selection of a potentially more successful treatment option such as dental implants. Clinicians must understand the prognostic factors that can influence the outcome of an endodontic treatment and the time required for endodontic lesions to heal. It is also essential to realize the long-term outcomes of implant dentistry in the hands of specialists and general dentists. All these factors must be well understood to select the optimal treatment decision for each case.
Dento-alveolar surgery is one of the most common procedures in general dentistry and oral and maxillofacial surgery. These procedures may vary in their complexity from simple single or multiple extractions to surgical removal of impacted teeth. Controversies still exist related to the need to extract wisdom teeth. Evidence-based review of the literature is necessary in order to highlight the decision-making process related to their extraction.
A cleft lip may appear as a small notch in the edge of the lip only - partial - or extended into the nose and the alveolar crest - complete.
A cleft can occur on one side "unilateral" or on both sides "bilateral".
Different surgical techniques are used to repair the cleft lip. The most common are Millard technique, Tennison, Pfifer, Le Mesurier, Wynn and Obukhov-Miro-Limberg techniques.
They are all based on the principle of local flaps management and Z Plasty.
Each technique has its advantages and disadvantages.
In this lecture, we propose and defend the technique of Obukhov-Miro-Limberg that allows us to standardize the planning of the repair of the lip; the surgical operation is not abstract but a concrete numeric reality, which facilitates the analysis and evolution of our results.
Esthetic prosthetic complications in implant dentistry: the missing central and lateral incisors

The missing of a tooth is associated with the loss of the supporting structures (soft and hard). Its replacement with an implant supported prosthesis could be, if well managed, very natural. The complications will start when the missing teeth are adjacent and in the esthetic zone. Not only the bucco-lingual and vertical loss are the main issues, but the missing of the interdental papilla. The restoration of the missing structures ad integrum is the main challenge. Through this presentation we will discuss the biological and anatomical changes associated with the loss of the central and lateral incisors in the Maxilla. The loss of the interdental papilla being the major issue. Its replacement and management will be discussed according to different clinical situations.
Reconstruction of large boney defects and restoration of esthetics and function is very challenging especially in the head and neck region. Porous ceramic scaffolds offer a new treatment modality for the patients where the surgeon is only concerned with insertion and fixation of these scaffolds while smart materials play the rest of the work regarding stimulation of wound healing and reconstruction of the required tissue. Smart materials offer selection between resorbable and non resorbable scaffolds that could be enriched with different bioactive agents as hydroxy apatite, growth factors, platelet rich plasma and much more. This lecture sheds light on construction methods, control of porosity, enriching techniques, and surgical procedures. Histological evaluation allows clear understanding on the relationship between reaction of host tissue and design of the scaffolds. Trials from animal models to real patient's applications will be demonstrated ranging from ridge augmentation to maxillofacial applications.
Modern radiology and software engineering offer sharp edge technology for accurate diagnosis and allow simple modeling of the required defect. Combined with accurate 3D printing; visualizing site of surgery becomes a great advantage as it offers multiple approaches for treatment. Design, print, insert concept will be demonstrated as a solution for crown and bridge restorations, in the field of implant dentistry, and in the field of facial cosmetics. Cone beam CT images are used to create a skeletal library for each patient. Converting DICOM files to STL files is the first step towards obtaining 3D models that could be adjusted and tailored according to application. Finally, printing the required restorations using various materials ranging from polymers, waxes, ceramics, and even metals could be accomplished with high precision and accuracy. Applications range from pressing ceramics, milling CAD/CAM zirconia implants, printing complicated metallic frameworks, implant over dentures, to even more challenging applications as printing live cells or organizing complicated tissue structure.
Everyday endodontic challenges; a clinical guide to deal with broken endodontic files, open apices, calcified canals and missed root canals

The variation and difference in morphology and configuration of pulp and root canal space creates challenges in everyday endodontic practice. This diversity dictates unique and customized treatment plans for various cases. Despite the breakthrough in techniques and instruments used in the field of Endodontics, yet still the clinical tips and tricks provide a clinical guideline and more convenient ways to deal with various challenges. In this lecture, we are going to discuss some of the clinical challenges faced by the endodontist or general practitioners in daily practice.
Composite vs ceramic in the anterior sector: which is the right decision?

Back in time, the dental treatment was limited to removing the decay and easing the pain, even if that meant no tooth, no pain. The future appearance of the patient was not taken into consideration.

Today this is not the case. Nowadays, the world of dentistry is turned into world of esthetics.

The high demand of the patient for beauty, puts the dentist in a situation where reaching status of health is not enough anymore. The patient should also improve his look.

In our presentation, a comparison will be made between ceramic and composite. Reported cases will be shown, using the above mentioned materials.
Les béances en orthodontie peuvent être d’origines dentaires ou squelettiques. Les étiologies sont multiples allant d’un simple problème fonctionnel à un problème d’erup­tion dentaire altérée ou à un problème squelettique d’hyperdivergence. Leurs corrections se font-elles par un simple alignement des dents ou posent-elles toujours un défi en orthodontie?

Suivant le diagnostic, les moyens et les techniques de traitement sont multiples et les réponses varient chez un patient en période de croissance ou chez un adulte. Évidemment la correction impose systématiquement un contrôle rigoureux du sens vertical. Avec l’évolution des techniques orthodontiques, et l’utilisation fréquente des minivis, les corrections des béances, même­s sévères, se font de plus en plus sans recours à la chirurgie orthognatique. Dans cette présentation, nous allons essayer de traiter ce sujet, tout en illustrant par des cas cliniques.

Les béances dentaires: toujours un défi ou un simple alignement ?

Akl Roula
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Update of oral lichen planus management: diagnosis and treatment

Lichen planus is a relatively common chronic dermatologic disease that often affects the oral mucosa. Association of cutaneous and oral mucosa affection represent 50% of cases. Oral lesions present several types as reticular, plaque, erosive, atrophic. More often erosive and atrophic types carry a risk for malignant transformation. In this presentation, a brief review of these lesions, an update of management of lichen planus, recommended exams for diagnosis, topical and systemic therapy, and follow-up will be discussed.
Molar distalization is an increasingly popular option for the resolution of Class II and Class III malocclusions. The treatment decision becomes especially more controversial in border line cases with mild to moderate arch discrepancies where new advance mechano-therapy and continuously developing treatment concepts have made the distalization decision a forefront approach among many orthodontists. This has been witnessed by the great variety of appliances that have been anticipated for molar distalization during the two last decades. This lecture attempts to highlight the different distalization modalities and appliances with emphasis on clinical mechanics making use of skeletal and intermaxillary anchorage and probes on potential future.
Orthodontic mini-screws for temporary anchorage have become a routine part of daily clinical practice. With increased published evidence based data, the application of mini-screws has seemed to increase exponentially. The objective of this lecture is to present the fundamentals of the mini-screw concept, demonstrate the screw placement procedure and present unusual application mechanics for the use of mini-screw.

Unusual applications of mini-screw in orthodontics
Molar Incisor Hypomineralization (MIH) is a qualitative defect of enamel affecting one to four permanent first molars (PFM) with or without one or more permanent incisors. The etiological factors are not fully elucidated, and it is still difficult to identify the different factors that disturb the ameloblasts from the prenatal period through the first 3 years of a child’s life, the period during which mineralization occurs in the PFM.

Bisphenol A (BPA) is an environmental ubiquitous pollutant associated with a growing health concern. BPA is a chemical substance produced in large quantities to be used primarily in the production of polycarbonate plastics and epoxy resins. It may be found everywhere, in water bottles, lining of canned foods, medical devices, vinyl gloves, resin dental fillings, etc..

Recent studies showed that BPA affects teeth and the window of sensitivity to BPA covers the perinatal period, and therefore BPA shows features of an enamel hypomineralizing factor and can be considered to be a causative agent of MIH.
We will limit ourselves to the injury of the inferior alveolar nerve in implant dentistry. We will review the applied anatomy and radiology of the IAN. Present clinical cases of how to avoid & manage the trauma to the nerve during implant placement eg., All on 4, Edlan-Medjar flap & bone grafting from the ramus region.

**The 10 most common surgical mistakes in implant dentistry**

Barakat Nabil
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Professor, Founder and Former Chairperson, Department of Oral and Maxillofacial Surgery, Faculty of Dental Medicine, Lebanese University, Beirut, Lebanon
President, Lebanese Association of Osseointegration

Dental pulp stem cells (DPSCs) derived from impacted third molar teeth are considered a new source of stem cells that could be used for regenerative medicine.

The aims of this project were to isolate, culture and characterize dental pulp derived-cells from human impacted wisdom teeth and to study the effect of Epidermal Growth Factor (EGF) and osteogenic inducers on osteogenic differentiation of dental pulp stem cells (DPSCs).

Our data shed the light on the synergistic effect of the combination of EGF and osteogenic inducers with human dental pulp stem cells; this could be an effective stem cell-based therapy for bone tissue engineering in maxillofacial surgery.
Sinus lift procedure has become the most scientifically recognized bone augmentation technique in posterior maxilla in oral implantology. Yet, intraoperative complications such as sinus membrane perforations, high rate of patient morbidity related to extensive surgical trauma and insufficient implant primary stability still cause surgeon’s and patient’s discomfort. Therefore in recent years intraalveolar (internal) sinuslift has been getting more popular. But especially in cases with advanced 3-dimensional alveolar bone atrophy internal sinuslift is contraindicated. Therefore Shakibaie developed and published the new technique of MGES (Microscopically guided external sinus floor elevation) in 2008 and 2010 with new microsurgical external sinuslift instruments as a minimally traumatic alternative to internal sinuslift. MGES enables the microsurgically experienced surgeon to reduce the trauma of sinuslift significantly and to increase the safety and predictability of this technique too. MGES main conditions are optical magnification of surgical microscope or loupe, specially developed microsurgical sinuslift instruments, technically trained surgeon and assistance.
The healing process of the extraction socket results in a three-dimensional loss of volume of the alveolar ridge accompanied by crestolingual displacement of the mucogingival line. Combined hard and soft tissue resorption of this kind prevents the insertion of the implant in prosthetically correct position causing possible related long-term hard and soft tissue complications which makes additional augmentative treatments of alveolar ridge in almost all cases unavoidable. Recent prospective clinical research show a significant protection of 3D-form of alveolar ridge due to the natural hard and soft tissue resorption using new techniques of minimally invasive tooth extraction and socket preservation with xenogen particulate bone substitute material and gelatin sponge.
Photobiomodulation (PBM) has been used in clinical practice for more than 40 years. In clinical applications, photobiomodulation has been used to successfully induce wound and bone healing, pain reduction and anti-inflammatory effects.

A newly developed handpiece provides homogeneous irradiation over a 1 cm² surface and has the same irradiation area (spot size) from contact to 135 cm of distance from the target tissue. With the introduction of this new flattop handpiece, it is now possible to irradiate a target surface with a homogenous energy density, using relatively high power densities, in less time without any risk of thermal damage. This would make the application repeatable and not operator sensitive.

The aim of this study is to present original in vitro and in vivo researches on a new flattop handpiece for biomodulation.
External and internal sinus lift, bone augmentation with simultaneous implantation, utilizing intelligent system combined with allograft. The management in severe bone resorption.

The wide spread of implant installation among dentists, combined with an aging community, led to more difficult and complex implant cases in the upper maxilla. This presentation will show with a high definition illustrations, the step by step measures and techniques for an early loading of intelligent implants and techniques in both external and internal sinus lift cases. These implant surgeries are done with simultaneous bone augmentation and implant installation. This presentation will allow a very clear vision for the practitioner who will enjoy the power of simplicity in one of the most challenging dental situations.
Molar incisor hypomineralisation: anything new?

Molar incisor hypomineralization (MIH) is one of the major developmental defects of dental enamel. While this condition has generated growing interest in the last decade, it still is a significant challenge for clinicians worldwide. Much has been written on MIH to provide dental community with an array of insights on its etiology, prevalence, diagnosis, clinical features and classification, evolution and treatment options including prevention. The purpose of this lecture is to update the recent literature to better manage this condition on a short and long term approach to optimize patient outcome.
Indirect pulp capping: latest trends

Dental caries is the most common chronic disease of childhood. The treatment of deep caries has progressed over recent years and can be performed in a reasonably conservative manner. Up to now, four vital pulp therapy options for treatment of deep dental caries close to the pulp: indirect pulp treatment, direct pulp treatment, partial pulpotomy, and apexogenesis when root development is not complete. Indirect pulp treatment has regain popularity with the conservative philosophy to caries management. Promoting regeneration of tertiary dentin and arresting demineralization of carious dentin by inactivation of residual bacteria under properly sealed restoration while preserving the pulp vitality is the ultimate goal of indirect pulp capping. Several medicaments are advocated for indirect pulp such as mineral trioxide aggregate, calcium hydroxide, resin modified glass ionomer, dentin bonding agents and bioactive material. This lecture will expose current update on these different materials in respect to successful outcome of indirect pulp capping.
Prosthetically Guided Regeneration (PGR): a new way to plan complex cases in implant dentistry

Despite Prosthetically Driven Implantology that represents today a well consolidated concept, this is not always applied, with potential negative results of the implant supported rehabilitation. The Prosthetically Driven concept can be even more difficult to apply, in presence of bone defects that can influence negatively the 3-D implant position. The concept of Prosthetically Guided Regeneration (PGR) has been codified to create a rational diagnostic and treatment protocol to complex implant cases presenting bone defects. A special wax-up including the atrophic ridge and teeth will allow to recognize and to define precisely the presence of defects and will guide the following steps of treatment. The PGR protocol will also allow to classify different degrees of atrophies, and to select the more appropriate reconstructive technique. A more accurate planning, and a better communication with the patient and between the different components of the team can represent other benefits of this approach.
Anterior teeth crowding continue to challenge general dentists when patients refuse comprehensive orthodontics and opt for instant ceramic veneers. When ultraconservative treatment modalities are chosen, an innovative minimal invasive protocol has been developed in order to achieve maximum preservation of dental hard tissues and particularly accomplish a predictable and desirable esthetic outcome.

Progressive Smile Makeover Concept (PSMC)
Clinical tips in TMD. A problem based learning program.

Diagnosis and history is the pillar of a good TMD treatment. Reviewing clinical cases and searching for red flags will help general practitioners find solutions and answers in their everyday practice.
A case becomes complicated where a tooth is extracted when it should not have been, but also where a tooth is kept while it should have been sacrificed. Moreover studies have shown that strategic teeth with compromised prognosis, can have a high survival rate if treated properly meaning that dental implants should not be used to replace viable natural teeth. But on the other hand, whenever one or more teeth are lost for whatever reason, the gold standard would be to replace them with dental implants.
The Field of esthetic dentistry has substantially expanded over the last two decades. New materials and technologies were introduced. Digital dentistry in combination with “esthetic” dental materials as zirconia, lithium disilicate, and resin-ceramic offered a new trend of fast and reliable solution. Digital smile design is also considered as a diagnostic and treatment tool that will enhance dentist-patient communication and assure a better outcome of the proposed treatment plan.

Laser technology has become increasingly utilized in clinical dentistry. Laser expanded opportunities to cut and remove hard tissue including enamel, dentin, caries, osseous tissues, and to achieve a pain free cavity preparation.

This lecture will address the “success recipe” combining laser, Hygiene, and Esthetic treatments discussing clinical cases with evidence based background.
The original implant systems used abutments to unite the dental restoration with the implant fixture. These components were all screw retained. Since then many new abutment systems have been introduced to enable fabrication of esthetically pleasing restorations and to overcome positional and angulation problems. In recent times, cemented type restorations have become popular. Many types are available from prepable abutment, to stock abutment either straight or angulated, to castable abutment, to CAD-CAM type abutment. A detailed description will be presented on the subgingival contours, and emergence profile of the healing, temporary and final stock or custom or cad-cam abutments.
Dental aesthetics and minimal invasiveness have become increasingly important during the last decade when considering diagnosis and treatment planning. Adhesive dentistry has changed the daily work routine of dentists, since it has provided many benefits for both patients and professionals. However, the advances in adhesive dentistry come with an increasing challenge for dentists, as adhesive techniques are more sensitive than conventional ones. So, field isolation is not a luxurious procedure during different restorative treatments. Conventional rubber dam isolation is still the gold standard protocol concerning field isolation, but the operators may face some obstacles isolating specific areas during their restorative procedures using such conventional techniques. These may include the cervical areas of teeth or deeply seated margins requiring some solutions to achieve hermetic seal for more predictable outcomes. The aim of this session is to present different new isolation techniques using either rubber dam or other isolation methods that facilitate different restorative procedures.
Lasers in fixed prosthodontics

The use of lasers is becoming increasingly widespread in the fields of medicine and dentistry due to its technological advances providing improved quality and a wider range of use and benefits; and as such, the need for a deeper understanding of the procedures and their effects is now more critical than ever. There are many different types of lasers to choose from as a dental practitioner ranging from the Diode lasers, the Nd:YAG laser, the Erbium family of lasers to the Carbon Dioxide laser. Research and development of these lasers is a vastly growing field of study with specific emphasis on how they work in order to optimize their usage in several cases.

The aim of this presentation is to offer an overview of the lasers’ different applications in the fixed prosthodontics field and to highlight on the advantages of this innovative tool over the conventional procedures.
Oral Presentation

The goal of this presentation is to introduce 3-D bracket positioning on the teeth using computer assisted indirect bonding techniques and dental scanners. Dentists with minimal training in orthodontics along with Orthodontists in general, are always interested in new products and procedures that can increase clinical effectiveness and improve patient satisfaction. Indirect bonding of orthodontic brackets helps in achieving greater accuracy and effectiveness in orthodontic treatment. Also, for perfect finishing, ideal bracket placement from the onset of treatment should be the goal for every practitioner. The digital indirect method involves placing the brackets first onto a virtual dental cast of the patient’s teeth, and later transferring the brackets to the patient’s mouth using custom made trays or jigs. Latest innovations in the industry will be introduced.

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Introducing computer assisted indirect bonding of all orthodontic bracket systems: reinventing the past using dental scanners and 3-D printers.
Orthopedic and orthodontic prognosis: compromise and limits

In period of growth, the prognosis of transverse, sagittal and vertical corrections depends on the age, the potential and the direction of growth. Some orthopedic treatments have been validated, in particular in the transversal dimension. In the worst cases or when there is no further growth, dento-alveolar compensations are possible if they are integrated in a balanced context. If the functional and aesthetic limits are exceeded, the compromise is not acceptable and should turn into orthognathic surgery.
Adult orthodontics

The adult orthodontics is a specific type of orthodontics where the interdisciplinarity is crucial. We will discuss the relationship between orthodontics, periodontics and orthognatic surgery.
Dentistry continues to roll through an “esthetic revolution,” with more restorative choices than ever. With a view to achieving ideal esthetic outcomes, some reference parameters must be followed. On the other hand, these clinical parameters may be questionable, since esthetics is a subjective notion. This presentation is designed to advance the knowledge and skills of the 21st century dental practitioners and their team in the art and science of Esthetic Dentistry. Focus will be on: Where should smile esthetic planning begin? What are the most relevant aspects considered in esthetic treatment? Which scientific references should be considered in a given therapeutic approach? There are at least 10 milestones to consider in order to achieving predictable successful esthetic restorations. In this presentation the 10 degrees will be discussed.
Teeth bleaching is a highly claimed dental procedure. Dentists use different techniques to reach the results desired by patients. One of these techniques involves the use of diode laser which is gaining more and more popularity.

The procedure for teeth bleaching, which will be introduced in this lecture, involves the use of the flat-top hand-piece in diode laser bleaching. The use of this hand-piece, originally intended for biomodulation, allows for a bleaching procedure that reduces treatment time to less than 10 minutes while maintaining excellent bleaching results and decreasing teeth hypersensitivity.
Implant placement at the time of tooth extraction has been described as a successful technique in terms of osseointegration and esthetic outcomes, mainly in the anterior area. More recently, immediate implantation in molar sites has become an accepted alternative. However, it is technically demanding and new techniques have been described regarding this issue. Moreover, questions are still very commonly raised regarding what should be done in terms 1) of filling the gap between the buccal bone plate and the implant surface and 2) of soft tissue management around the freshly implanted socket 3) of placing an implant in a site where a real or a potential source of infection is present? Based on the literature, these issues will be discussed with clinical cases illustrating different immediate implantation situations in the maxilla and the mandible.
CBCT permits oral surgeons to visualize all the anatomical structures and the needed information about all problems in the oral cavity and jawbones as it will be seen in the operating theater and allows surgeons and implantologists to plan the operation before it starts. CBCT can be used to interpret information in detail. Clinical diagnosis of existing pathology can be assessed accurately by using CBCT. In addition, 3-D imaging contributes to more accurate and less traumatic surgical exposure and maximizes the chance to do minimal invasive surgery. The use of CBCT occasionally can be the difference between the success and the failure of the operation in some cases.

In the lecture, we will focus on the main benefits and advantages of using CBCT in management of complicated operations in oral and maxillofacial surgery by presenting many cases with different diagnosis and treatment plans.
Different tools are available in our dental profession for bone cutting: Mechanical
conventional techniques, piezosurgery & recently lasers.
Each technique has its pros & cons that may lead to unwanted damage through
photo thermal, photo acoustic, photo chemical & photo mechanical effects like
cell death, micro fractures, irregular cutting edges and presence of debris etc.
Do lasers present a new hope?
Laser-assisted bone surgery offers considerable advantages. But this new
technology applied for bone osteotomy presents number of obstacles as well as
adverse effects imposing concerns; drawbacks such as: Difficulty in creating deep
osteotomies specially for implant cavities, prolonged operating time, possible risk
of stall-out, financial aspect & procedure cost.
Erbium laser osteotomy is showing promising results when the operator is skilled,
has a learning curve & of course controls the device.
The creation of an adequate space for the proper placement of prosthetic margins on a compromised tooth can be achieved surgically or orthodontically or by combination of both, pre-prosthetic surgery has been generally performed applying the concept of the biologic width (BW) which stems from an early histologic description in cadavers (mean of 2.04 mm). The height of supracrestal gingival tissues (SGT) including the BW and the sulcular depth has been recently theorized as a genetically determined dimension that re-established itself post-surgically and was proposed as a more representative dimension to apply in CLP as it accounts for the variability of sulcular depth. Can the standard average of 2.04mm be applied on all cases? Can we consider histological finding as clinical norms in our clinical practice? During the communication, steps to follow for maintaining periodontal tissues health and better prosthetic aesthetic results will be developed based on clinical research.
This lecture will highlight CBCT, intraoral scanning, laboratory side, and will present a resume of the digital protocol combining chair office and laboratory as well as clinical cases.

Digital and aesthetic dentistry
The goal of any root canal treatment is to clean, shape and fill the root canal system. This procedure seems simple for experienced clinicians nevertheless it is still challenging in difficult anatomies, narrow canals and retreatment cases despite the use of new instrumentations such as NiTi flexible files, active irrigation systems, ultrasonic tips and obturation armamentarium. The dentist should adapt his technique and instrumentation to any given clinical situation. A poor management of an apical curve could lead to shaping errors such as blockage, stripping, zipping, perforation and file separation. In this presentation, we will review the management of complex cases using reciprocating motion, and we will discuss for each situation the proper technique of shaping, cleaning and tri-dimensionally filling the root canal system. This will give the patient the optimal treatment possible.
Cell transplantation is the most established practice in regenerative medicine. It does not always give the best results because of the low survival rate of transplanted cells. In addition, the use of ex vivo manipulated cell products faces many translational hurdles in treating non-vital disease. Recently, the body cells are focused as a potential source for therapeutics. Some researchers have demonstrated that endogenous stem cells may be recruited to a desired anatomic site pharmacologically. This is spurring interest in developing new generation of biomaterials that incorporate and release selected powerful extracellular influences in a near-physiological fashion, and subsequently capture endogenous cells and influence their fates for regeneration. The use of patient-derived products such as platelet-rich preparations that contain a multitude of endogenous growth factors and proteins is a clinically translatable biotechnology for this proposes. These simple and cost efficient procedures may have a potential impact in reducing the economic costs for standard medical treatments in regenerative endodontics.
The third dimension in conventional radiology was always considered as a problem due to the image superposition. A three dimensional object is always represented in a two dimensional image (Christian Frei et al.). With the progress of the computers in the imaging field and specially the cone beam CT, this third dimension is easily revealed (Paul S. Wright) by the coronal and sagittal cuts. But these cuts are always a two dimensional images viewed in another plan. That’s what we call a pseudo third dimension. With the use of cone beam CT studies and the 3d volume reconstructions, this third dimension is really revealed. By the mean of numerous clinical cases, we are going to expose, in this presentation, how we can benefit to the maximum from the 3D volume rendering programs in orthodontic studies and others.
The "one curve" new single file heat treated in continuous rotation

In the heart of this large panoply of endodontic instruments, a new tendency towards the simplification of canal shaping techniques is actually in rapid growth. It mainly depends on the development of a unique instrument for canal preparation to simplify the instrumentation sequence and to shorten overall duration of endodontic treatment.

In this oral presentation, we will describe the One CURVE instrument proposed by MICRO-MEGA, a single file in continuous rotation with new heat treated alloy, and will elaborate its operating protocol, its advantages and its limits in several clinical cases.
We stand on the world of revolution in endodontics: understanding, treating and ultimately preventing the causes of pulpal diseases. We will present and discuss the basic principles of wound healing, repair & regeneration in endodontics, differentiate between the three entities in the context of endodontics, importance of growth factors in regenerative dentistry, knowledge about the preparation of first and second generation platelet derived modalities, coronal seal and methods of achieving and role of Stem cells in endodontic regeneration.
Les exigences esthétiques de nos patients sont de plus en plus élevées dans notre quotidien. Pour des raisons d’économie tissulaire, et d’actes de moins en moins mutilants, les facettes en céramique prennent une place importante dans nos cabinets. Au cours de cette présentation, nous allons expliquer les exigences esthétiques et scientifiques sur lesquelles nous devons nous baser pour réaliser, en collaboration avec notre technicien de laboratoire, le projet esthétique en wax up. Par la suite, transférer le wax up en mock up pour avoir une visibilité et une prévision sur le résultat final de notre projet esthétique.
Beaucoup de médecins dentistes, même après avoir suivi plusieurs formations ont peur de faire le grand pas dans le monde des facettes dentaires. L’une, pour ne pas dire la principale cause d’échec du traitement par les facettes dentaires reste le décollement. Actuellement une multitude de matériaux existent sur le marché dentaire apportant leur lot de confusion et de complexité. L’évolution apportée à ces matériaux par les fabricants par simplification des protocoles, ou encore l’augmentation des propriétés physiques améliorent et augmentent les chances d’un bon collage.

Le collage des facettes: pour une pérennité

El Merini Adnan
Doctorat en médecine dentaire
D.U en parodontologie et implantologie orale
Ex Vice-Président du conseil national de l’ordre des médecins dentistes du Maroc.
Traditionally, implant diameter selection has been determined based on anatomic and prosthetic parameters such as distance to adjacent teeth, residual ridge width and restorative emergence profile. Current research emphasizes on the importance of implant tridimensional positioning and appropriate diameter selection in order to minimize loss of peri-implant tissues and render predictable gingival stability. Furthermore, recent studies have isolated specific variables that will directly impact the behavior of peri-implant tissues over time. The aim of this presentation will be to analyze the classic parameters of diameter selection from a historical perspective and update classic concepts with an evidence-based approach.

Implant diameter in the esthetic zone: a paradigm shift

Mesquida Juan
DDS,
Masters in Implant Dentistry, ESI Barcelona
Assistant Professor and Program Director, Implant Dept., LLUSD
FDI Continuing Education Program
Implants placed in fresh extraction sockets provide an effective treatment alternative for the replacement of failing teeth in the esthetic zone. This lecture will discuss immediate implant placement and immediate provisionalization and how these procedures can impact the soft tissue condition around single anterior implants. The information provided in this lecture will be supported by clinical cases and literature data. Several aspects will be analyzed such as biotype and tissue thickness, bone quality and condition, implant position, implant diameter selection, and prosthetic emergence.

Mesquida Juan
DDS,
Masters in Implant Dentistry, ESI Barcelona
Assistant Professor and Program Director, Implant Dept., LLUSD
FDI Continuing Education Program

Immediate implant placement in the esthetic zone 2017.
An evidence based update.
Nowadays aesthetic is fundamental for our patients. In parallel, in our dental treatments we must always combine aesthetic with functionality, longevity and bio-compatibility.

While the adhesive technologies move towards simplifying the application steps, the indications have significantly broadened.

With this adhesive improvements the availability of indirect materials to execute conservative procedures also increases, as the cad/cam composite materials and different ceramics.

Aesthetics and good clinical features including function and ability to adhere to cements have always been the goal of research in dental materials for indirect restorations.

With its tooth-like characteristics and features, this material satisfies both the function and aesthetics required in indirect restorations. We will address the practical step by step aspects in how to work with this material: material selection, tooth preparation, adhesion and maintenance.
Conserving a treated tooth with good prognosis is the goal that any dental clinician is looking for. To achieve this purpose, the root canal treatment should be performed respecting the objectives of Cleaning and Shaping. The aim of this presentation is to discuss the different clinical situations of previously treated teeth and the challenge we are facing in our daily practice whether to leave the tooth without interference, retreat, extract or refer.

Why to do retreatment?
In today’s dental world, thinking outside the box is recommended to find simple, practical and conservative solutions to many dental situations for our patients. Patients sitting in our dental chairs have different expectations and goals, all related to their psychological, financial, and time limitations.

Dentists were trained to achieve ideal treatment results for our patients including surgeries, orthodontics, and heavy restorative work. Is this what patients want and/or need? Do we have plan B as an option without compromising our patient’s health?

In this clinically oriented lecture, we can try to find answers to some of our daily dental practice aesthetic and restorative challenges.

Veneers: priorities and more in everyday practice
Implants in the aesthetic zone, a restorative challenge

Implants are the standard of care nowadays, doctor skills and treatment planning knowledge in a teamwork environment can guide us to predictable aesthetic results, not only by using implants, but by incorporating other aesthetic restorative options to achieve pleasing and functional results.
Digital workflow in my general practice: from iOS to chair side CAM. What is working on a daily base?

The lecture will present the basics of a digital workflow in a general dentistry office. Starting from Intra-oral scanning, technical aspects of Scanners, understanding data management and cooperation with an external dental lab and the chair side option of the digital workflow. The use of iOS, CAD/CAM and CBCT is widely accepted in implant dentistry. Even before implant placement, fully digital prosthetic planning can be performed based on intra-oral scans, ideal implant locations can be determined and restorative materials and abutments can be chosen.
LIVE TRANSMISSION
Digital workflow in my general practice: from iOS to chair side CAM. What is working on a daily base?
Un sourire produit beaucoup. Il enrichit ceux qui le reçoivent sans appauvrir celui qui le donne. Personne n’a autant besoin d’un sourire que celui qui ne peut le donner aux autres. Aujourd’hui la dentisterie accède à l’embellissement esthétique du visage et du sourire. Les nouvelles technologies et la relation interdisciplinaires sont au service de la création d’émotions. Au travers de quelques histoires de sourires et témoignages de vie, avec une pincée de numérique, nous parlerons de la genèse de la reconstruction d’une image de soi.
Heat treatment is one of the latest procedures used to optimize microstructural and durability of NiTi. In this presentation we will highlight the different thermomechanical processing and manufacturing technologies. A focused review will address the impact of these modifications on instrument flexibility, resistance to cyclic fatigue, torsional failure, brushing motion and wear resistance. Moreover, a comprehensive approach of the advantages and draw backs of these processes will be discussed at the different stages of root canal treatment.
Modern root canal filling in harmony with minimally invasive strategies

Modern endodontics is oriented to a less invasive approach. Tridimensional disinfection, shaping and filling are nowadays gained through standardized steps and instruments which preserve as much as possible the original anatomy of the root canal system. 3D filling is the final step of a well standardized procedure to ensure a successful outcome and the stability of a healthy status. In the lecture will be illustrated different options of root canal filling in relation to correct diagnosis, respect of the original canal anatomy and selection of the instrumentation protocol.
3D imaging and microendodontic techniques for the management of complex cases

The availability of the operative microscope and cone-beam imaging in surgical and non surgical endodontics has increased the success rate of the procedure up to 95%, drastically improving post-operative quality of life of the patients. Lighting and magnification offers to the clinicians new options and strategies of treatment planning. The lecture will overview decision making process in secondary treatment cases with a focus on the actual surgical endodontic principles and procedures with the use of a dental operating microscope.
Shaping, cleaning and sealing of root canals is essential for successful outcomes in endodontics. Recent advances in material science have brought with it new instrument design for mechanical debridement, Irrigant agitation techniques and single cone obturation concepts. But are they better than existing technology? The aims of this lecture are to explore contemporary single file endodontic concepts, their advantages and limitations, the role and methods of supplemental irrigant agitation techniques and single cone obturation with premixed calcium silicate sealers.

From shaping to sealing: is 3D endodontics a reality?

Prichard James
DDS (ULond), MSc (ULond), LDSRCS (Eng), MFGDP (UK), FIADFE (USA), FHEA(UK), FBARD (UK)
Visiting Professor and Programme Leader, MClinDent in Endodontology, BPP University working with the City of London Dental School
Skeletal anchorage and corticotomies in interdisciplinary patients

The aim of this presentation is to show the biological basis, the indications and some clinical examples of skeletal anchorage and corticotomies in interdisciplinary patients.

Skeletal anchorage is usually used by means of miniscrews or miniplates. Their power comes from the primary stability because no osteointegration is pursued. Skeletal anchorage can be charged by orthodontic forces immediately and can be inserted in many different locations in the mouth. Their main indications are problems that cannot be effectively managed with conventional mechanics. Although skeletal anchorage and corticotomies are techniques that can be used for only orthodontic patients their scope of use is broad and are indicated in many interdisciplinary patients. Both are procedures used routinely among the interdisciplinary team.
There are two important clinical issues when talking about post-surgical orthodontics: 1) the information that the ortho-surgical team gives to the patient, and 2) the different clinical situations that the orthodontist faces when the patient has been operated with a conventional orthognatic protocol or when a surgery first or an early surgery has been performed.

The patient should be informed about how change can affect physical well-being, stomatognathic system function, emotional well-being and the possible oral health complications and sequelaes during the first 24/48 hours and days after surgery. The post-operative recovery is always better when the patient is aware of all of those changes that he will experience after surgery.

The management of the post-surgical orthodontics is not always the same if the procedure has been conventional or a surgery first/early surgery. But in both situations it includes when to begin after the surgery, the control of the occlusion, decide whether is necessary to re-operate again, the removing of the final surgical splint, the different arches used in these stages, the role of the elastics and the occlusal finishing, the management of the vertical dimensión in cases of open bites and the management of the transversal dimension in maxillary segmented patients.
How the cloud will transform information management in your clinic for good

Understand why it is time to act now, what needs to be done in the dental practice, how your operation’s efficiency will improve and most importantly how your patients will benefit. Essential elements in a digital clinic will be discussed: patient communication and records, clinic load, financial management, data analytics, dental team organization.
Colour in direct restorative dentistry: from art to knowledge

Direct aesthetic restorations have been a challenge, overall in anteriors, for too long time! Dentists tried different techniques with different materials, with different shade guides during their career never founding a real solution. They believed that the solution was to change “guru” hoping to follow magical protocols to solve “the problem”. The truth is that only knowledge can be transferred, but not the perception or even luck. The aim of the lecture is to show a predictable way to get the color only following knowledge and the tooth anatomy. All this, of course, becomes feasible and teachable techniques both in anteriors and posteriors.
The guidelines of modern restorative dentistry are adhesion and minimum invasiveness. Composite materials are now leading on the market as a permanent and universal restoration solution: there is no treatment planning which does not include the use of composite materials either for sealing, anterior or posterior restoration or prosthetic crown support. The perfect knowledge of the advantages and limits of these materials is fundamental for all dentists: a superficial approach to the use of composites may lead to failure and very long chair-work times. Rules changed with new materials and finally we have the possibility to do difficult things in a very simple way. “Simplexity” is the new trend. Therefore, clinicians now have the possibility of optimising to the maximum the advantages which these materials bring to the profession.
The creation of an aesthetic smile with a gingival architecture in harmony with the adjacent dentition remains the final objective in dentistry. The challenge in Esthetic Periodontology is to manage the hard/soft tissue complex and to be as close as possible to the natural smile appearance of the patient in the smiling zone.

The process of soft and hard tissue healing must be understood and incorporated into a carefully coordinated sequence of therapy such as crown lengthening and mucogingival plastic procedures.

Even though aesthetics represent an essential part of the actual oral treatment, the value of the results, the predictability of the different therapeutic modalities and the long-term prognosis involve a scientific approach in all clinical procedures using one or several delicate osseous and/or muco-gingival plastic surgeries.

**Achieving predictability in esthetic periodontology.**

**Mucogingival plastic surgery**

Saadoun André
DDS, MS, Associate Professor, Dept. of Periodontics, University of Southern California, Diplomate of the American Academy of Periodontology

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Achieving predictability in esthetic periodontology.  
Crown lengthening procedures

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Timing of orthodontic treatment to achieve an optimal outcome in the treatment of Class II, Division 1 malocclusions is a challenging issue to the clinician. Despite considerable available data, controversies still revolve around which malocclusions should be treated in the mixed dentition (8-10 years) in a 1st phase treatment followed by a 2nd phase in the permanent dentition, and in which conditions the malocclusion should be corrected in the early permanent dentition. Clinicians who advocate early treatment list the following advantages: better orthopedic effects, greater cooperation, shorter 2nd phase treatment time, less need for extraction, prevention of trauma to incisors, psychosocial advantage. Focus in this lecture will be on the evidence for and against these observations. Treatment reports will help illustrate how to better select Class II, Division 1 patients most likely to benefit from early treatment. Good versus bad responders will be identified regardless of a one or two-phase approach, helping draw reasonable guidelines for clinical practice.
Au cours des premières années, une grande partie de l’attention des parents est portée sur le développement général de l’enfant plus et particulièrement sur son langage. La survenue des diverses malformations cranio-faciales constituent un défi à son parcours langagier et aura ses incidences sur le processus de la déglutition. Le traitement orthophonique constitue, en plus des progrès de la prise en charge chirurgicale primaire selon le format adopté par l’équipe pluridisciplinaire, une atténuation des séquelles de la malformation et de son amplitude. La thérapie précoce et intensive est particulièrement importante avant que l’enfant n’entre à l’école, afin que son intégration ne soit pas limitée par une mauvaise intelligibilité.
The role of the orthodontist in the management of cleft lip and palate patients

Restoring the normal aesthetics and function of cleft lip and palate patients will remain one of the most important objectives and a real challenge for the health care delivery team. Since oral and Para-oral structures are congenitally and severely mutilated, a special care from highly qualified medical and dental team of professionals is required from birth to adulthood. The team includes: plastic–maxillofacial surgeon, orthodontist, prosthodontist, periodontist, implantologist, speech therapist and psychiatrist.

In this lecture, different treatment approaches for rare cleft cases will be presented emphasizing on the collaboration between the team members that facilitated the achievement of standard treatment outcome. The author will also stress on the role of the orthodontist in preparing and analyzing the collected data and records, organizing meetings and consultations with the team, enhancing maxillary growth and expansion to establish normal arch form and size and allow for the reconstruction of cosmetic lips, nose, dental occlusion and beautiful smile.
Implants replacement of endodontically compromised teeth in the posterior dentition

The aim of this presentation is to overview the scientific and the technical aspects of using implants as a replacement of endodontically compromised teeth in the posterior dentition. After reviewing the literature on implant placement in sites with endodontic pathologies, different clinical approaches are going to be discussed based on the indication for extraction and on anatomical considerations; the delayed implantation, the delayed implantation after socket preservation, the immediate implantation and the immediate implantation with immediate temporization. A special note will be given to internal sinus lifting with simultaneous immediate implantation in upper molars.
Oral health prevention in children in Bulgaria has 106 years history. In April 2009, the Bulgarian Dental Association (BgDA) and Dr. Nikolai Sharkov proposed a National Program for Prevention of Oral Diseases in Children 0-18 in Republic of Bulgaria (NPPODC) was adopted by the Bulgarian Council of Ministers. The Programme was prolonged for 5 years more – 2015-2020 with a decision of the Council of Ministers in 2015. The responsible body for the NPPODC is the Bulgarian Ministry of Health. Situational analysis, organizational structure, operations control, priorities, strategic goal of the programme, operations goals, expecting results etc. were and are in action. Statistically proved results are reported in front of the Minister of Health every year.
A distinction should be made between dental fear, a natural emotion usually seen in small children, and dental anxiety and phobia, a disorder-like phenomena among more mature children and adults because the treatment approach (psychological and dental) should be different.

The multidimensional responses of dental anxiety involve cognitive, emotional, behavioral and physiological components and measurement techniques try to evaluate all, or some, of these components.

Many measurement techniques are in use, such as self-report questionnaires, behavioral ratings, physiological measures and projective techniques.

Management of patient anxieties is a must in the best dental practices. It has to be done through communication, relaxation therapies, distraction, reduced annoyance factors and sedation in countries, in which it is permitted.
Creating esthetic soft tissue around natural teeth and implants

Natural look of teeth and implant is highly demanded among patients nowadays. However, this is not possible all the time to achieve due to the progression or past history of periodontal diseases, that usually results in lack of both soft and hard tissue around teeth and their substitutes. These circumstances pose great challenges to dentists and in many occasions lead to unhappy patients. However, based on experience and research we can, to certain extent, overcome these challenges in periodontally compromised patients. This presentation will focus on how we can overcome these challenges to achieve healthy periodontium and happy patients. We will discuss different methods from simple management of the normal biological healing to different type of grafting to achieve acceptable esthetic and functional outcome.
Immediate implant and provisionalization after extraction for best esthetic outcome and soft tissue regeneration

Missing teeth in the anterior zone pose great challenges to dentists because of its great concerns to patients today. The traditional treatment requires at least three surgeries at three different time points to achieve relatively acceptable results: extraction, implant placement and implant uncovering. In many cases a 4th and 5th surgery to achieve GBR or soft tissue coverage may be needed. Immediate implant was proposed more than 15 years ago. However, it did not reach the success that researchers and patients hoped for. This presentation will focus on 10 years evolving work at the University at Buffalo on immediate implant placement and a protocol was developed to achieve ideal esthetic and functional outcome.
Ni Ti is a very interesting alloy; we are still discovering several of its properties by either modifying the crystalline structure in order to improve the flexibility and the torsional properties, or a different rotational system in order to get the best clinical results. The question is that after so many years with experience with this alloy are there anything left to discover and why? And what heat treatment is adding to the clinical improvement? Blue-gold-silver colors are the results of surface oxidation, what do we need to know about it.

For long time irrigation remained a somewhat mystical part of the process, with a general agreement that a good rinse is necessary but without a standardized sequence of irrigation. While various tools for irrigation and activation of solutions were studied extensively, the first sequence was suggested only in 2005, and it brought it to the attention of the clinicians that alternating solutions could be as beneficial as the use of negative pressure in order to achieve a clean root canal space and diminish post-operative pain.
Entre traitements préventifs et curatifs, les soins dentaires sont une nécessité chez les enfants et tous les praticiens sont formés pour accomplir certains actes pédodontiques. Cependant, alors que certains enfants s’avèrent parfois difficiles à gérer au cabinet dentaire, principalement à cause de l’anxiété liée aux soins, beaucoup de généralistes sont eux-mêmes stressés par l’idée de devoir s’affronter à un enfant pour lui procurer ces soins.

Cette présentation vise à faciliter l’application des soins dentaires pédiatiques au cabinet du praticien généraliste, en lui donnant les principales lignes- guides et petites astuces employées par les spécialistes. À travers des exemples concrets de situations- types que tout dentiste peut être amené à confronter, le but de cette communication est d’aider le généraliste à prendre et appliquer les décisions cliniques optimales pour ses patients pédiatiques.
Cleft palates are among the most common serious congenital anomaly to affect the facial region and if left untreated can lead to serious medical and physical problems. Cleft palates vary in width, completeness, amount of hard and soft tissue available, and palatal length. The surgical technique and timing used to close palate deformities are extremely varied. Palatorrhaphy (palatoplasty) is usually performed in one stage or two. The main goal of cleft repair is to create a mechanism capable of speech and deglutition without interfering with maxillary growth. A new 3 stage technique is created and adopted by the author and other surgeons over many years. This lecture will describe the main concepts of the biodynamic of the 3 stage technique. Case reports with follow-up of more than 20 years will be demonstrated.
Conscious sedation by inhalation of a mixture of oxygen and nitrous oxide (Part I)

Dental care sometimes comes up against the patient's lack of cooperation due to fear or anxiety. Getting the patient to accept the care greatly improves working conditions and thus contributes to the quality of the care. When the psycho-behavioral approach is not enough, the use of conscious sedation by inhalation of a mixture of oxygen and nitrous oxide is recommended. It is a safe and effective fear and anxiety management technique that provides valuable help by encouraging patient cooperation. Conscious sedation is a good alternative of management but it has some limitations. In some situations, general anesthesia will be indicated. The latter must remain the ultimate resort of access to care. After speaking of this "continuum" of management, conscious sedation by inhalation of a mixture of oxygen and nitrous oxide will be our preoccupations. The pharmacokinetics, pharmacodynamics and toxicity of nitrous oxide will be discussed in order to better understand this gas and thus to better understand what it will bring to us in our clinical practice.
The conscious sedation by inhalation of a mixture of oxygen and nitrous oxide is a safe and effective in patient’s management if the protocol and its indications/contraindications are respected. The clinical aspects of conscious sedation will be addressed from its indication to practical implementation through patient selection, adverse effects, limitations and failures. The methods of administration as well as the protocol of a complete session will be detailed step by step.
Major changes are taking place in the dental profession as a result of new digital technologies. In this presentation the audience will be introduced to the digital impressions and the range of layered fabrication technologies and suggestions and how these might be used in dentistry. Additive fabrication is a process in which the final desired part is manufactured by adding multiple layers of material on top of one another. The key idea of this innovative method is that the three dimensional CAD (3D-CAD) model is sliced into many thin layers and the manufacturing equipment uses this geometric data to build each layer sequentially until the part is completed. Rapid prototyping has been also used in dentistry for a range of dental specialties including oral and maxillofacial prosthodontics and surgery, dental implantology as a surgical guide or physical model and prosthodontics. The “3D Printing” model is employed to improve medical diagnosis and to provide a precise surgical treatment plan. The technique would help shorten the surgery time and consequently reducing the patients’ risk.
Immediate post extraction implant placement: new paradigms

Surgical techniques for optimized tissue architecture. Tissue regeneration is a controversial issue among practitioners. The predictability of the implant placement just after an extraction is a longley debated issue with different surgical protocols advocated in order to compensate the bone resorption and to promote tissue regeneration for optimal esthetics results. This presentation will set the standards for an optimal implant vertical and horizontal position, suggesting a method to predict the volume of hard and soft tissues after the healing period.
LIVE TRANSMISSIONS

Full mouth immediate loading implant surgery

A full mouth rehabilitation will be performed during the day for a patient. The extractions and the case analysis as well as the implant placement and the impressions will be performed during the morning session. The fabrication of the provisional prosthesis will follow, and the insertion will take place in the afternoon session with the possibility of interactive communication with the surgeon during the operative procedures.
This workshop incorporates case scenarios in order to help the dentist recognize and manage various medical emergencies in the dental office such as syncope, hypoglycemia, seizures, anaphylaxis, angina, asthmatic attack, myocardial arrest, choking, etc. It also discusses ways to organize the office and office team to deal with such emergencies.
The concept of Prosthetically Guided Regeneration (PGR) has been codified to create a rational diagnostic and treatment protocol to complex implant cases presenting bone defects. A hands-on workshop, including Guided Bone Regeneration, will be provided. Cases will span from ridge preservation, ridge augmentation, and the treatment of cases from an esthetic point of view.

Prosthetically guided regeneration and post-extraction sockets techniques

Casentini Paolo
DDS,
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Co-author of 10 text-books about Implantology, Pre-Implant Surgery and Oral Surgery
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CES Fixed and Removable Prosthesis, University of Paris 6, France  
Certificate in Prosthodontics, University of California, Los Angeles (UCLA)  
Ms in Education, University of Southern California (USC), USA  
Associate Professor at Loma Linda University, California, USA  
Board Certified Prosthodontist  
Fellow in the American College of Prosthodontists  
Fellow in the International College of Dentists

Ask the specialist in implant prosthodontics:  
everything you wanted to know about implant fixed prosthodontics but shy to ask.

Implant treatment for the partially and completely edentulous patient is challenging due to inherent anatomic esthetic and biomechanical problems. Moreover, controversy persists as to factors critical for implant and prosthetic success. Some established criteria for design of the implant prosthesis are emerging. This workshop will review the indications of implant prostheses available with an emphasis on number, length, and distribution of implants, connected or not connected anchorage systems, type of abutments, immediate loading or delayed loading protocols, maintenance, provisionals in the esthetic zone, and patient satisfaction.

With the presentation of many clinical situations (before, during, and after treatment), using slides and videos, this interactive question-answer workshop will answer many questions related to the many critical factors that direct the type of dental prostheses, early in the consultation process according to the nature of the patient’s dental condition, to whether the residual ridge is visible in both relaxed lip and smiling state, to the availability of adequate inter-arch space for the indicated type of prostheses, to the need or not of a labial flange, to the presence or absence of bone, and to how many implants are needed.
Clinical dentistry has undergone a huge metamorphosis, as new data have accrued regarding biological concepts of regenerative potential of oral hard and soft tissues, and improvements in procedural techniques and materials have opened up newer treatment vistas. This has led to spurring interest in new generation of biomaterials that incorporate and release selected powerful extracellular influences in a near-physiological fashion, and subsequently capture endogenous cells and influence their fates for regeneration. The use of patient-derived products such as platelet-rich preparations that contain a multitude of endogenous growth factors and proteins is a clinically translatable biotechnology for this proposes. These simple and cost efficient procedures may have a potential impact in reducing the economic costs for standard medical treatments in regenerative dentistry.
Nowadays aesthetic is fundamental for our patients. In parallel, in our dental treatments we must always combine aesthetic with functionality, longevity and bio-compatibility.

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With this adhesive improvements the availability of indirect materials to execute conservative procedures also increase, as the cad/cam composite materials and different ceramics.

Aesthetics and good clinical features including function and ability to adhere to cements have always been the goal of research in dental materials for indirect restorations.

With its tooth-like characteristics and features, this material satisfies both the function and aesthetics required in indirect restorations. We will address the practical step by step aspects in how to work with this material.

In the Hands-On session the participants will have the opportunity to work in the workflow of a indirect partial adhesive restoration only (core build-up, tooth preparation, and restoration adhesion).

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**Monteiro Paulo**

DDS, MS  
Coordinator and Professor in Aesthetic and Restorative Dentistry  
Post-graduation program at ISCSEM, Caparica, Portugal  
Professor in the Endodontic International Post-graduation program at ISCSEM, Caparica, Portugal  
Head of Clinical Aesthetic Dentistry Advanced Consultation, ISCSEM, Caparica, Portugal
The new experience: innovation in glide path, rotary and reciprocating instrumentation

Objective of the workshop is to provide participants an effective hands-on experience with the new instruments of the NiTi series. ProGlider, new features for safer glide path; ProTaper Next the tradition revised; WaveOne Gold, efficiency in reciprocation. Wrap up end of the workshop aims to consolidate theoretical issues discussed and to share feedback in a friendly open discussion.
3D endodontics in the 21st Century

The goal of endodontic therapy is to shape, clean and seal the root canal system. Limitations of previous generations of endodontic instruments have restricted the amount of root canal wall instrumented during the shaping process. Limitations in irrigants and complex root canal anatomy have inhibited effective cleaning. Cytotoxic sealers and complex obturation techniques have created barriers to effective sealing of the canal spaces. The aims of this workshop are to show how novel metallurgy has allowed radical changes in instrument design to significantly improve canal wall contact and efficiency of irrigants, thereby improving outcomes. Simplified obturation techniques with the latest calcium silicate sealers will be taught to maximise canal sealing with predictable outcomes.
Digital transformation of the dental office management system

This workshop will explain how to upgrade the clinic to a fully digital environment accessible from everywhere to the dentist as well as to the patient.
Conscious sedation by inhalation of a mixture of oxygen and nitrous oxide

The clinical aspects of conscious sedation will be addressed from its indication to practical implementation through patient selection, adverse effects, limitations and failures. The methods of administration of the gas mixture as well as the protocol of a complete session will be detailed step by step.
The six keys of normal occlusion (LF Andrews, 1972) are considered the standards for finishing orthodontic treatment, because they are judged from tangible landmarks, they cover the entire scope of the dental occlusion, and are consistent with natural function and esthetics. Nevertheless, in some circumstances, orthodontic treatment is finished with compromised occlusion. The purpose of this presentation is to put into perspective situations where orthodontic treatment is completed without reaching an ideal occlusion. These conditions are identified and grouped into periodontal, esthetic, functional, iatrogenic and patient related reasons (e.g. age, chief complaint, financial considerations). A series of treatment reports illustrate these different scenarios.
The psychosocial impact of malocclusion: a cross sectional study

Patients with malocclusion have been reported to experience psychological concerns and variable effects on quality of life, self-perception and self-esteem, particularly when dental/occlusal problems are associated with a visible facial deviation. While studies exist on rating malocclusion for assessment of severity and treatment needs, the related indices have not been associated with psychological profiles to gauge corresponding weights of severity. We hypothesized that the more severe the malocclusion, the stronger the impact on psychosocial aspects on the individual patient. Accordingly, we aimed to determine the impact of malocclusion on the patient’s self-esteem, self-perceived esthetics, and oral health related quality of life and their associations with validated indices of malocclusion severity and treatment needs.
While mandibular prognathism (MP) segregates within families in autosomal-dominance with incomplete penetrance, its etiology also involves environmental factors.

The aim was to identify the inheritance pattern and candidate genes/loci involved in the development and transmission of MP in Mediterranean families; evaluate the dento-skeletal characteristics of affected individuals. In this first worldwide genetic study on large families with MP using NGS, novel genes (C1orf167, NBPF8 and NBPF9) were discovered with probable link to familial MP in the Mediterranean population.

Association of 3 novel genes (C1orf167, NBPF8 and NBPF9) with familial mandibular prognathism in the Mediterranean population.
This clinical report discusses the case of a mid age woman complaining from a severe periodontitis, class II occlusion with deep bite and a loss of vertical dimension. Many teeth presented severe bone loss and required extraction. Removable denture was not an option for the patient. After a full assessment of the remaining teeth, six implants were placed in the maxilla with sinus lift and bone graft, and four implants in the mandible. Strategic teeth were kept and preserved to support fixed temporaries during implant’s healing process. After a successful osteointegration, metalo-ceramic bridges were cemented on the implants, the OVD was restored, the class II occlusion was reduced with a fair esthetic outcome.
Severe craniofacial discrepancies during adolescence: to intervene or delay?

With definitive evidence lacking, timing the treatment of craniofacial dysmorphologies varies with severity of the problem and the experience and treatment philosophy of the orthodontist. Mild to moderate discrepancies are often managed through dental compensation in adults and “orthopedic growth modification” in growing children. Barring accurate prediction of growth, severe discrepancies may be started with orthopedics but still end up with orthognathic surgery. The aim of this presentation is to highlight the advantages of earlier orthodontic/orthopedic intervention during adolescence in subjects with severe jaw discrepancies who are projected to have orthognathic surgery after growth cessation. Four patients will be presented whose multi-planar severe craniofacial discrepancies underwent a first phase of orthodontic treatment addressing mainly alignment, transverse skeletal problems, and impactions, the final stage consisting of orthognathic surgery. The malocclusion severity scores were significantly reduced after phase I. Residual disparities for surgical resolution were mainly in the vertical and sagittal planes. While the results of the initial phase must be retained, the advantages of this approach include the possibility of limiting surgical movements/sites (minimizing corticotomies), avoiding extractions, and reducing treatment time.
Dry socket may occur as a postoperative complication to the removal of any tooth. However, most dry socket cases occur in the third molar region. Dry socket is multifactorial in nature. In a dry socket, blood clots dissolve, this is due to many factors including surgical trauma, infection, type of extraction, patient related factors, and/or surgeon related factors. Dry socket has been treated using various modalities with different success rates depending on many elements. This short presentation is going to show different modalities in treatment and management of dry socket.

Treatment of dry socket: past v/s future

Iskandarani Ahmad
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Dominance of mandibular components in predicting Class II, division 1 treatment outcome

Treatment outcome of Class II, division 1 (Cl II/1) malocclusion, characterized by a retruded position of the mandible relative to the maxilla, depends on the configuration and therapeutic response of constitutional components. We aimed to determine predictors of favorable treatment outcome of Class II/1 in growing and non-growing patients. All of these outcome predictors were mandibular characteristics, suggesting that treatment effect on the mandible, the main contributor to the development of Class II/1, also defines the success of treatment. Specifically, mandibular length, chin extension, mandibular incisor inclination, and the relation of mandible to maxilla were the defining components.
Le fluor est considéré comme l’un des principaux agents de prévention contre la carie dentaire. Il a une triple action reminéralisante, antibactérienne et inhibitrice de la déminéralisation. Près de 27 pays bénéficient d’une politique de fluororation de l’eau, ce qui a diminué considérablement le taux de carie dans le monde. La fluororation de l’eau au Liban reste toujours un sujet de débat malgré que les indices carieux dévoilés en 2017 des enfants libanais montrent toujours une prévalence élevée de la carie dentaire au niveau des dentures temporaire et permanente. Notre objectif sera de discuter les différentes stratégies préventives utilisant le fluor pour lutter contre la maladie carieuse au Liban.
Dental management of a 5-year-old child with Papillon-Lefevre syndrome: a case report.

Introduction: Papillon-Lefevre Syndrome (PLS) is a rare disorder discovered in 1924. It is an autosomal recessive inherited syndrome characterized by palmoplantar keratoderma and severe periodontal disease, leading to the premature loss of deciduous and permanent teeth.

Case report: A 5 years-old male suspected to have Papillon-Lefevre syndrome was referred to the department of pediatric dentistry at Saint Joseph University of Beirut by his dermatologist. He showed signs of keratoderma on his feet and hands, as well as premature loss of some deciduous teeth explained by the severe bone resorption due to an aggressive periodontitis shown in the panoramic radiograph.

A genetical investigation was initiated using Fluorescent direct sequencing of the entire coding region and intronic sequences flanking each exon of the CTSC gene.

Comments: This report describes the clinical manifestations, diagnosis procedure and dental management of this case.
Recent advances in the use of sodium hypochlorite

The major cause of endodontic failures is bacterial infections; in fact, microorganisms can persist within root canals or can invade them again after the endodontic obturation. The use of irrigating solutions in combination with canal instrumentation, loosen debris, pulp tissue and micro-organisms from the irregular dentin walls so that they can be removed from the canal. Many difficulties facing the irrigation as the complexity of the root canal system, presence of numerous dentinal tubules in the roots, invasion of the tubules by microorganisms, formation of smear layer during instrumentation and presence of dentin as a tissue. Sodium hypochlorite was and still the main irrigation material used in our daily life practice because of its antibacterial capacity and the ability to dissolve necrotic tissue, vital pulp tissue, and the organic components of dentin in a fast manner. Studies have been working on improving the efficacy of NaOCL either by increasing the concentration, or with combination with other irrigants or by agitating. Further studies should be done to declare which technique is giving better results.
Botulinum toxin type A (BoTN-A), a powerful neurotoxin which is produced by the anaerobic organism Clostridium botulinum. This protein has been used by many medical practitioners over the past half-decade for the management of skeletal muscle spasticity or dynamic joint contracture. Yet, Evidence of the safety and efficacy of intramuscular BoTN-A injections is still lacking. This literature review was conducted to evaluate the safety of use of botulinum toxin type A (BoTN-A) injections in the treatment of myofascial pain syndrome. BoTN-A injections in the masticatory muscles for the treatment of TMDs can cause significant long term side effects, affecting the underlying structures such as the bone, the muscles, the joint and the genetic material.
Implants with radiotherapy: a battle for survival

Treatment modalities of malignant head and neck cancer include a combination of surgery and radiotherapy, which is followed by hard and soft tissue defects resulting in functional disabilities and esthetic deformities. Dental rehabilitation includes using both conventional prostheses - which may be disadvantageous - and dental implants, which offered many benefits over the conventional prostheses. However, dental implants rehabilitation is complex, and it was considered a contraindication in the past for irradiated patients. Therefore, it becomes extremely important to answer the following question adequately:

“Is there a useful guide to improve the success rate of implants in head and neck cancer patients after radiotherapy?”
Dental XRAYs/ CBCT in pediatric dentistry: what are the risks? How to minimize them?

Ionizing radiation, commonly known as radiographs, is a required step to any dental care treatment plan. It can be a diagnosis technique although it has a preventive role. It provides early and easy inspection of dental anomalies. International Commission of Radiological Protection (CIPR) was founded to decrease the frequency of exposure to adults or children from the radiographs. Also interest about the long-term side effects of ionizing radiation (RI) grown up from the European Directive 97/43.
Impact of root canal taper on the apical adaptability of bioceramic sealers used in a single-cone technique: a comparative micro-computed tomography study

The purpose of this study was to assess the influence of root canal taper on the apical adaptability of three root-canal sealers used in a single-cone technique by measuring the presence of voids. Bioceramic sealers showed good all-around performance demonstrating good adaptability, and reduced voids while maintaining similar characteristics when compared with conventional resin sealer. The minimally invasive (4%) preparations were less favorable in apical obturation adaptability than the conventional more tapered shaping technique.
Morphological features of Lebanese Class II, division 1 malocclusion patients

The aim of the study was to categorize Lebanese class II, division 1 malocclusion patients into horizontal types and vertical types according to the location of the fault and face height, respectively.

145 lateral head radiographs comprising two series: 58 films of males and 87 films of females with Class II, division 1 malocclusion. Age of the sample is between 16 & 26 years.

In Class II, division 1 subjects, the mandible was retruded in the majority of samples with long face pattern with a percentage of 23.44, while maxillary prognathism with short face height was the least present, 2.75%.

In conclusion Class II, division 1 malocclusion could be present with prognathic maxilla, retruded mandible, a combination of both or dento-alveolar discrepancy. In this study, the most present cause of this type of malocclusion was mandibular retrusion, which may enlighten the importance of early intervention treatment with functional appliances to posture the mandible in a more forward position.
Throughout the last decade ridge preservation was the spotlight of all implantologists and surgeons. Preservation of an atraumatic extraction socket is the talk of the town to improve prosthetic and aesthetic outcomes, and implant placement. Socket preservation procedures are effective in limiting horizontal and vertical ridge alterations in post extraction sites. Therefore, many materials are used nowadays to preserve bone height. Which leads to a simple question: “should every socket be preserved?”

3D dimensional socket preservation: how, and when?

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School teachers knowledge regarding Dental Traumatic Injuries is very important since a high number of cases are observed at school settings in children and adolescents. For this reason, this study is directed to school teachers who are usually the first individuals to respond to the traumatic incidents in schools. The aim of the study was to assess the knowledge and practice of school teachers regarding Dental Traumatic Injuries in Beirut-Lebanon. It was concluded that educational programs focusing on school teachers must be implemented in order to improve their level of knowledge and practice concerning these injuries.
Orthodontic retention among Lebanese orthodontists

Long-term stability is a major goal of orthodontic treatment. Consequently, retention is the phase which maintains the teeth in their orthodontically corrected positions following the cessation of active orthodontic tooth movement. Moreover, orthodontic retainers resist the tendency of teeth to return to their pre-treatment positions under the influence of periodontal, occlusal and soft tissue forces, and continuing dentofacial growth. There is still insufficient evidence on which to base the clinical practice of retention.

To elucidate this important stage, a structured questionnaire was randomly done and a statistical analysis was performed with the following aims:
- To survey the frequency of different types of removable or bonded retainers used, patient’s compliance, retention protocols and whether it is affected by initial malocclusion and age of the patient.
- To compare the results obtained with those of similar studies in various countries.
The impact of fixed orthodontic appliances on dietary behavior and pain experience in adolescent patients

Physical and emotional stress generated by orthodontic treatment may affect nutritional requirements. The aim of this presentation is to evaluate the effect of fixed orthodontic appliances, including pain, on dietary behavior of adolescents. The results emphasize the value of dietary advice by the orthodontist, providing patients with realistic expectations that may help improve compliance and treatment outcome. Some patients need closer attention.
Obstructive sleep apnea (OSA) is an increasingly common disease with pathophysiology based on the interaction of multiple factors. Prior to the initiation of treatment, it is essential to evaluate the severity of OSA, in which this provides a baseline to determine the efficiency of subsequent treatment. Once the OSA diagnosis has been established, patient education becomes a vital part of the management plan, and the treatment options should be discussed.
Cellules souches en dentisterie pédiatrique: tendances vers des applications cliniques et traitements

Les cellules souches représentent un des espoirs de thérapies en médecine. Elles sont capables de différenciation multi-potentielle et de prolifération extensive. Récemment, différents types de cellules souches mésenchymateuses ont été isolées dans la cavité buccale. La perte des dents de lait est un processus naturel. Ce qui facilite enormément le prélèvement et le stockage des cellules souches qu'elles contiennent. Les dents temporaires possèdent un réservoir de pulpe dentaire dont l'intérieur contient des cellules souches mésenchymateuses uniques pouvant être utilisées dans un large éventail de traitements, tels que la régénération tissulaire et osseuse. Le but de cette présentation est de faire une mise au point sur l'état actuel de la recherche dans ce domaine et de clarifier les perspectives d’application clinique de cette technologie de pointe.
Tooth size is one of the constitutional elements that orthodontists should deal with to assure proper interdigitation, overbite and overjet. Discrepancy in the mesiodistal size of the teeth makes it challenging to attain satisfying occlusion, optimal esthetics, efficient mastication and decent alignment of both arches. Pioneer investigation on tooth sizes were conducted by Black in 1902 and Neff in 1949. These studies were followed by classic work of Dr Wayne Bolton in 1958 who selected 55 cases of Caucasian population with optimal occlusion and compared the sums of mesiodistal widths of the maxillary and mandibular teeth, including first molars. Although there is an acceptance of the fact that tooth size relationship differ between populations, the mathematical values obtained by Bolton in 1958 are applied systematically by orthodontists worldwide. The aim of the study is to determine whether the mean Overall Ratio (OR) and the Anterior Ratio (AR) of the Lebanese Population would significantly differ from the Caucasian values established by Bolton.
Class II, division 1 (II/1) is associated with mandibular retrognathism, including close to normal mandibular size in posterior position and/or a micrognathic mandible. We hypothesized that the overjet in (II/1) often compensates for, thus camouflages underlying skeletal discrepancies.

The aim of this presentation is to determine associations between mandibular length in (II/1) and other facial/dentoalveolar components, particularly in relation to malocclusion severity.

As a result, while dentoalveolar inclinations compensated for skeletal discrepancy, they camouflaged the more severe overjet expected with this discrepancy. As an isolated feature, the overjet is not a valid diagnostic indicator of Class II/1.
Immediate implant placement in the mandibular anterior zone. Case report

Preference to shortened overall treatment period and a minimum number of surgical intervention is desired by patient and clinician. Immediate implant placement in the anterior mandibular region has emerged as predictable method resulting in a high implant survival rate. This presentation describes a clinical case of immediate implant placement and soft tissue management in mandibular anterior zone from teeth extractions, implants placement to final restoration.
Incompetent lips is a term used to describe lips that are separated by more than 3-4mm and unable to close adequately at rest showing strain in the muscles around the face when a lip seal is attempted. Lip incompetence in adolescents and adults is a common finding accompanying problems of: allergic rhinitis or other airway obstructions, partial blockages such as enlarged tonsils or adenoids, short upper lip, and excess in lower facial height. Lip Incompetence can result in changes in facial development, tooth eruption and alignment, breathing, swallowing and jaw joint function. It can lead to esthetic, orthodontic, and periodontal problems. The aim of this study is to evaluate the dental and soft tissue discrepancies in subjects with lip incompetence compared to lip competence and to find the most discriminant variables among the following: dental protrusion, interincisal angle, upper and lower anterior dental height and lip dimensions.
Adjunctive surgical techniques have been advocated to reduce the duration of orthodontic treatment, but their effectiveness remains controversial. The objective is to compare, in a systematic literature review, the effectiveness of decortications and microperforations, and introduce the value of their comparison in finite element analysis.

In conclusions, corticotomy-facilitated orthodontic movement accelerates tooth movement, more predictably but with potential periodontal side-effects through decortication. More encompassing controlled clinical trials are needed to study both modalities, along with non-invasive methods, such as finite element analysis that could provide useful insights.
Component analysis of Class III malocclusion discloses a variation within the phenotype, despite the tendency to use generic approaches to treatment. Early intervention with the face mask therapy (FMT) is not predictive of final occlusion or the need for later orthognathic surgery. The aim of this lecture is to investigate immediate and post-adolescent growth spurts induced by FMT.

In conclusions, results suggest that mandibular growth was related to worsening of the malocclusion, the maxillary incisors unable to compensate for this tendency as they did prior to treatment.
**Effect of energy density on the mineral contents of Er:YAG laser irradiated dentin**

The aim of the study was to evaluate Er:YAG laser energy density level on mineral content of dentin. Forty freshly extracted human third molars were selected and sub-divided randomly into 4 groups (n=10). Teeth were cut 4 mm from the occlusal surface and dentin was standardized by wet-grounding flat surfaces. Groups were irradiated with Er:YAG laser wavelength of 2.940nm (Fidelis; Fotona, Medical Laser, Ljubljana, Slovenia) respectively with 40 mJ, 60 mJ 80 mJ and 100 mJ. EDX assessment and SEM Topographical Observation were applied to the irradiated dentinal surfaces. The levels of Ca, P, C and O in each specimen were determined, and the mineral contents were compared to sound dentin.
Complete-arch implant-supported restorations are widely accepted as a treatment option for completely edentulous patients and have been documented to have a success rate greater than 90%. Many combinations of materials have been used for these types of restorations such as metal alloy-acrylic, metal alloy-composite, and metal alloy-ceramic.

However, prosthesis-related complications with acrylic resin and porcelain-veneered metal frameworks are commonly reported over short- and long-term periods.

The evolution of computer-aided design and computer-aided manufacturing (CAD/CAM) systems has allowed the introduction of an alternative restorative approach to the complete-arch implant prosthesis such as Monolithic Zirconia prosthesis.

Considering increasing use of Monolithic Zirconia in complete-mouth rehabilitations, we will present a case including clinical and laboratory protocol to fabricate a zirconia full arch prosthesis.
Correlation between Class II subdivision malocclusion and cant of the occlusal plane: a pilot study

Although a correlation between Class II subdivision and Occlusal plane cant is noted clinically among practicing Orthodontists, the literature seems to be lacking studies that highlight such a relationship. The aim of the present study is to investigate whether there is a possible correlation between the Class II subdivision malocclusion and the cant of the occlusal plane.
The aim of this randomized control trial was to compare the analgesic efficacy of two commonly prescribed medications, mefenamic acid (Ponstan Forte) and lysine clonixinate (Dorixina) in patients undergoing dental implant surgery. In conclusion, the results of this study suggest that there is no difference in the analgesic efficacy between PF and DX when prescribed as pain medications following dental implant surgery.

Comparison of the analgesic efficacy of two medications in patients receiving dental implants: a randomized controlled trial

The aim of this randomized control trial was to compare the analgesic efficacy of two commonly prescribed medications, mefenamic acid (Ponstan Forte) and lysine clonixinate (Dorixina) in patients undergoing dental implant surgery. In conclusion, the results of this study suggest that there is no difference in the analgesic efficacy between PF and DX when prescribed as pain medications following dental implant surgery.

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Kassir Abdel Rahman
Dagher Maroun
Mokbel Nadim
Naaman Nada
Dental crowding is the most common reason for which patients seek orthodontic care. In the present study we plan to find if a relation exists between mandibular skeletal base width and mandibular dental crowding. In this retrospective study, 50 CBCTs of untreated growing children were selected, and skeletal and dental measurements were all performed on CBCTs.

**Relation between mandibular skeletal base width and mandibular dental crowding**

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This study evaluated the effect of air abrasion before and after sintering with different particle type, shape and size on the surface morphology, monoclinic phase transformation and bond strength between resin cement and zirconia surface using primer containing silane and MDP.

Airborne particle abrasion (APA) was performed on zirconia before and after sintering with different particle shape and size (50μm Al₂O₃ and 25μm silica powder). Samples were analyzed using, XRD, AFM and SEM. The samples were submitted to shear bond strength (SBS) test. A dual cure resin cement (Rely X Ultimate, 3M-ESPE) and primer (Scotch bond Universal, 3M ESPE) were used. Data were submitted to ANOVA and Tukey test (≤0.05).

We concluded that using of APA 50μm Al₂O₃ before sintering and primer containing MDP seems to be valuable methods for durable bonding to zirconia. The use of APA 50μm Al₂O₃ after sintering induced the highest (t-m) phase transformation.
Bone and cartilage tissue engineering for growth modification using poly L/DL lactide (PLDL) electrospun scaffold

Cartilage tissue engineering (CTE) through bone marrow stem cells has been extensively used in orthopedic surgery mainly in the healing of osteoarthritis. CTE could be an adjunctive therapy in orthodontics to overcome the limitations of orthopedic appliances on mandibular advancement. The aim of this study was to evaluate osteogenic and chondrogenic potential of mesenchymal stem cells (MSCs) loaded on a poly L/DL lactide (PLDL) electrospun scaffold.

In conclusion, human stem cells differentiation into bone and cartilage was possible through PLDL electrospun scaffold. A subsequent step is planned to enhance mandibular condylar growth through cartilage differentiation by adding tension to the PLDL electrospun scaffold.
The purpose of this study was to evaluate fatigue tracking system (FTS) used to control the usage of re-sterilized nickel-titanium (NiTi) endodontic rotary files with regards to canal curvature in a routine endodontic practice.

The implementation of FCT facilitates safe usage of rotary files and saves materials by ensuring proper discarding time of the file allowing the dentist to order certain files refill.

Introducing fatigue tracking system for monitoring usage of sterilized endodontic rotary files
The objectives were to determine the prevalence of the dental anomalies and missing teeth from the retrospective CBCT record of University of Dammam patients. In conclusion, missing teeth was the most prevalent anomaly followed by tooth impaction, periapical pathology and retained deciduous teeth respectively whereas root resorption, supernumerary teeth and ectopic eruption were the least prevalent anomalies.

Dental anomalies: a CBCT retrospective study from a teaching hospital in Eastern Saudi Arabia

Al Zamil Manar
Dental intern at IAU
Surface treatments of titanium miniscrews in orthodontics: a literature review

This is a non-exhaustive literature review that summarizes the main surface treatments of Titanium miniscrews. Our research was done in Pubmed/Medline and Web of Science databases. The results were that surface treatment can be done either by modifying the microscrew topography (sustraction or addition), or without changing it. A combination of sustraction (sandblasting and acid etching: “sandblasted, large-grit, and acid-etching (SLA)”) and addition (anodic oxidation: “sandblasted, large-grit, and anodic-oxidation (SLAO)”) exist.

In conclusion, surface treatments aim to reduce miniscrew loss by increasing their primary stability and, in some cases, by improving their antibacterial properties.
Chin-Throat anatomy: variation between hyperdivergent and hypodivergent facial patterns

Chin extension may be adequate anteriorly but deficient because of an increased chin-throat angle. The throat (T) line, which normally intersects the mandibular body in equal anterior (ANT) and posterior (POST) sections, was introduced to better reflect the association between chin extension and facial configuration. The aims were to determine the association between T line and facial vertical divergence.

In conclusion, the T line is affected by the skeletal components in hyperdivergent patterns, while associated with the inclination of the throat in the hypodivergent configuration.
<table>
<thead>
<tr>
<th>CONTENTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BIDM 2017 Statement</td>
<td>3</td>
</tr>
<tr>
<td>Committees</td>
<td>4</td>
</tr>
<tr>
<td>Oral Presentations</td>
<td>12</td>
</tr>
<tr>
<td>Workshops</td>
<td>94</td>
</tr>
<tr>
<td>Young Podium</td>
<td>103</td>
</tr>
<tr>
<td>Posters</td>
<td>120</td>
</tr>
</tbody>
</table>
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