2019 SCIENTIFIC POSTER COMPETITION

UNDERGRADUATE CLINICAL CASES

Matthew Yeung
Virginia Commonwealth University

1st Place Winner

Restoring the Esthetic Zone Using In-House CAD/CAM Monolithic Lithium Disilicate Crowns

Patient presented with failing restorations and esthetic needs for maxillary anterior teeth and first premolars with a desire of whiter teeth. Increased horizontal and vertical overlap of the existing restorations led to fremitus of the maxillary incisors. Guidance was improved in the diagnostic wax-ups which were used to fabricate bis-acryl provisional restorations which assessed shade, shape and function. After a three week evaluation, in-house CAD/CAM workflow was used to scan, design, and fabricate lithium disilicate crowns. Treatment successfully accomplished in three appointments using digital workflow to satisfy the patient's chief complaint, shade and gingival recession, while improving functional occlusion.

Margaret Duszyk
University of Pennsylvania

2nd Place Winner (tie)

Combined Direct-Indirect Technique for Prepless Composite Veneers

With the implementation of 3-D Digital Smile Design tools, facially integrated digital wax ups are useful for diagnosis and treatment communication with patients. A direct-indirect technique for CAD/CAM veneers milled from resin blocks was applied. The goal was to avoid a conventional veneer preparation to preserve as much tooth structure as possible. Direct restoration of multiple teeth in the esthetic zone is rather challenging and a prepless veneer approach is difficult to apply in triangular teeth with proximal undercuts. The minimally invasive combined direct-indirect technique allows for proper facial contouring with CAD/CAM-designed and -milled veneers while proximal areas are restored directly with composite resin.

Lyndsey Theriot
New York University
College of Dentistry

2nd Place Winner (tie)

Peg Lateral Smile Transformation with Porcelain Veneers

Peg-shaped maxillary lateral incisors are dental anomalies likely linked to a variation in the expression of a genetic trait. This tooth morphology demonstrates a strong heredity component. The prevalence varies by race, population type, and sex.

Patient's Chief Complaint: "I want to correct the shape of my peg laterals." After a comprehensive evaluation, the minimal treatment plan involving porcelain veneers and diode laser gingivectomy was devised to correct the tooth morphology of the patient's maxillary lateral incisors as well as correct the midline cant to improve overall esthetics and harmony of her smile.

Oksana Nad
New York University
School of Dentistry

3rd Place Winner

Transformation of Gummy Smile and Traumatized Central Incisor with Laser Gingivectomy and Porcelain Veneers

This is a clinical case presentation of an esthetic smile transformation. This patient presented with various chief complaints about his smile as he is often on camera and does TV shoots. After a thorough evaluation, it was determined that this case was mostly additive as the patient's teeth were fairly small and lacked the Golden Percentage. A laser gingivectomy was done to reduce the "gummy" smile and 10 maxillary feldspathic porcelain veneers were placed. The goal was to preserve a healthy dentition using a minimally invasive preparation technique, while achieving the best possible esthetic outcome.

Gayane Avakyan
Nova Southeastern University

Direct Resin Composite Restoration for Class IV

S.J 39 year old patient, male, American, ASA II and NKDA presents for emergency appointment with chief complaint:" I am visiting my family for Thanksgiving, where my ex-wife will be as well. I can't appear as I am right now. Please help me look good and confident when I talk and smile."
Medical History: Depression, anxiety and dental phobia. No current medications.
Dental History: Extractions, Composite restorations, Gold crowns. No Periodontally compromised teeth. Intra-oral and extra-oral exams show no history of or current lesions. Poor oral hygiene.
Diagnosis: Partial edentulism, Erosion and Abrasion, open margin on some crowns, tooth discoloration, edge to edge bite.
Social History: Construction worker/contractor, single, smoker.

Samantha Evans
University of Texas at Houston

Managing the Risk and Improving Esthetics on Failed Porcelain Veneers

50 yo male presents with a chief complaint of "I need to replace my broken veneers." Patient had orthodontics as a child to move his canines to the lateral incisor position. Veneers were placed at that time for esthetic reasons to make canines appear as laterals. Over the years patient has lost several teeth and existing veneers due to catastrophic failures. Patient was told veneer fractures would remain at high risk without restoring posterior teeth - patient accepts risks. In order to redistribute load, conventional veneers were placed on #5-6, #8-9, #11-12 and cusp tip veneers were placed on #20-21 and #28-29. This case aims to document improving esthetics of failed history of porcelain veneers and managing future risks of fracture.

Julia Feige
UAB School of Dentistry

Combined Ceramic Restorations for an Improved Esthetic Outcome

People strive for perfection for self-fulfillment, success, empowerment, and acceptance. Regardless of age, we still want to look and feel beautiful. With new and more esthetic materials it is very possible for clinicians to achieve a more natural and esthetic smile.
Careful planning and consideration of biological, functional, and esthetic aspects of the smile as well as accessibility to the newer and improved dental materials and techniques can help dentists meet patient's expectations and improve dental esthetics in more objective and predictable ways.

Claudio Franco
New York University College of Dentistry

Restoring Peg Laterals & Disproportionate Teeth with Porcelain

Peg laterals are a developmental abnormality. Understanding the etiology of a dental anomaly is important in determining the course of treatment. This is a clinical case that involves restoring peg laterals and disproportionate teeth with porcelain veneers.
Outcomes I tried to attain include: correcting abnormal axial inclinations of teeth, correcting abnormal incisal embrasures, and correcting disproportionate teeth sizes of both maxillary lateral incisors. The discipline involved in the final result was restorative dentistry, and the material used in the case was feldspathic porcelain veneers.

Justin Montenegro
Harvard School of Dental Medicine

Navigating Hypomineralization to Achieve an Optimal Esthetic Outcome

Hypomineralized enamel can be challenging to restore in the esthetic zone. Subsurface porosities in hypomineralized teeth leads to altered translucency, resulting in a range of surface colors from tan to chalky white. In this case presentation, we demonstrate how porcelain characterization, if used appropriately, can be used to obtain a natural yet esthetic restoration. Our patient's initial composite veneers were not pleasing to her. External bleaching was performed to decrease the discrepancy between hypomineralized areas on her natural dentition. Subsequently porcelain characterization in lab fabricated IPS Emax veneers were used to achieve an esthetic balance between natural dentition and areas of hypomineralization.

Riley Robinson
Virginia Commonwealth University

One-Day Dentistry Workflow for Six Maxillary Anterior Monolithic Lithium Disilicate Veneers

40 year-old male, presented with staining/fracturing of his maxillary anterior composite veneers and a chief complaint of, *"I want my front teeth fixed."* A treatment plan was developed to replace the unaesthetic/defective restorations with lithium disilicate veneers via a one-day digital workflow. To assess esthetics/function, provisional composite veneers were fabricated and left in function to later be used as a template for the final restorations. The definitive veneers were designed and fabricated to satisfy the patient's chief complaint while maintaining a natural appearance. The patient was pleased with the improvement in overall tooth shape, color, and time efficiency.

Giselle Serrano
University of Colorado School of Dental Medicine

Restoring Anterior Guidance with Lithium Disilicate in a Worn Smile

A 46-year old female presented to the Colorado School of Dental Medicine in good health as a referral from the local hygiene school for evaluation of wear and the completion of operative dentistry. She presented to the clinic with the chief complaint: "I want to fix my broken front teeth". A comprehensive examination revealed no canine guidance from a combination of parafunction and erosive wear. The prosthodontic treatment plan aimed to establish anterior guidance through equilibration and anterior lithium disilicate pressable ceramic #6-#11. After meeting esthetic and functional demands the next phase of treatment is to restore one full arch.

Courtney Vindigni
Columbia University

Restoring Health and Aesthetics in a Clinic Setting

Patient presented to the clinic for comprehensive care to improve the health and aesthetic of his smile. Patient was clear that he could only undergo treatment covered by insurance; therefore, treatment planning was influenced by Medicaid coverage.
Caries controlled with composite restorations on #2, #13, and #14. Post and core completed following root canal therapy re-treatment on #6-#8. To address the discrepancy in size and color, porcelain fused to zirconia crowns with custom shade on #6-#9 were inserted and composite veneers placed on #10 and #11. Non-carious facial composites on #3, #4, #5, finished and polished.

UNDERGRADUATE MATERIALS SCIENCE

Alan Meskin
New York University
College of Dentistry

1st Place Winner

3D Printed Interim Crowns: A Literature Review

Recent trends in digital dentistry have moved from computer-aided manufacturing (CAM) milling systems to 3D printing of dental restorations. To date, 3D printing allows the fabrication of various dental applications, but scientific evidence is limited when compared to traditional processes. The purpose of this review is to evaluate the literature on the effect of 3D printing processing and mechanical properties on the fit and durability of interim restorations. After conducting a comprehensive electronic search via EBSCO Discovery.

POST GRADUATE CLINICAL CASES

Fabio Perez Rubio
New York University
College of Dentistry

1st Place Winner

Clinical Management of a Large Arch Length/Tooth Size Discrepancy

The treatment of the patient described is this poster revolved around the patient's desire to close the spaces between her anterior teeth without undergoing orthodontic treatment.
The severity of each of the specific diastemata and the lack of room for the tongue were addressed. Porcelain laminate veneers were used to close the spaces, producing a result that was satisfying from both aesthetic and functional perspectives.

Juliana Gil Andrade
New York University
College of Dentistry

2nd Place Winner

Financially Driven Treatment Planning: When Six Will Suffice

This poster describes the treatment of a patient presenting to the NYU College of Dentistry Advanced Program for International Dentists in Esthetic Dentistry clinic seeking treatment to correct the shape of her teeth and to eliminate the multiple spaces between her front teeth. The patient had just completed 3 years of orthodontics. The use of preparation techniques aimed to maximize the conservation of tooth structure is presented. The correction of tooth form was also accomplished with minimal compromise of the surrounding dentition. Ultimately, six maxillary veneers solved the esthetic issues.

Shun Chien
Tufts University
School of Dental Medicine

3rd Place Winner

Smile Rehabilitation of Bulimic Patient with Esthetic Crown Lengthening and Lithium Disilicate Crowns

Bulimia nervosa patients often present with eroded dentition due to purging of acidic content. Coupled with bruxism, the teeth can be heavily damaged. Behavior modification and diet counselling play a big role in rehabilitation. In this presented case, the patient suffered from short and eroded anterior crowns. Behavior counselling and oral hygiene were reinforced. Esthetic crown lengthening surgery improved teeth proportion according to smile design principles. Lithium disilicate crowns were delivered to restore esthetics and function of maxillary anterior teeth #6-11. Finally, a flat plane occlusal night guard provided protection from parafunction activity.

Ahmed Abuzinadah
Nova Southeastern University

Esthetic Rehabilitation of Traumatic Injury to Anterior Maxilla

A case report of a patient who lost his upper anterior teeth due to trauma.

A 19 years old male patient presented with fractured upper anteriors due to trauma.
Extractions were done for both #8,9 After evaluation and examination. Minimal tooth preparation was done by superficial enamel reduction to place IPS-e.max for both #7,10.

Rayyan Alfirdous
Tufts University School of Dental Medicine

Anterior Implant Esthetic Rehabilitation of Congenitally Missing Lateral Incisors

The aim of this case presentation is to emphasize the rationale and treatment considerations to ensure maximum esthetic results for patients receiving implant rehabilitation for missing maxillary lateral incisors. A 23-year-old female patient presented for treatment of her congenitally missing #7,10. The final rehabilitation consisted of implant level screw-retained porcelain fused to zirconia crowns on #7,10 and feldspathic porcelain veneers on teeth #6,8,9,11, for enhancing the adjacent teeth alignment and patient's esthetics.

Fahad Baabdullah
Nova Southeastern University

Anterior Implant Crown: Esthetic Challenge of Anterior Single Tooth Replacement

Implant placement and restoration to replace single tooth in esthetic zone is challenging particularly in sites with bone or soft tissue deficiencies. The presented case depicts a missing tooth # 9 of a 55-year-old-male presented bone and soft tissue deficiency. Implant was placed in association with Guided Bone Regeneration, followed by immediate temporization. Shade was selected using Vitapan 3D-Master® shade guide aided by Rite lite2™. Clinical photos and master model were used to communicate with the lab to achieve better texture and characterization. Lithium-Disilicate (IPS-e.max®) implant crown with titanium nitrate abutment. Semi-permeant luting composite (Telio® CS Cem Implant) was used as a final cement.

Nojoud Balubaid
Nova Southeastern University

Restorative Management of Congenital Missing and Peg Lateral Incisors

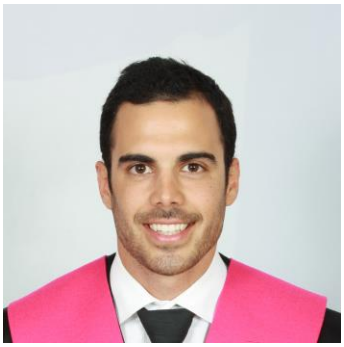
A case report of congenital missing and peg lateral incisors will be presented. 25-year-old-female presents with congenital missing #7 and Peg lateral #10. She is dissatisfied with her smile and shape of her teeth. Orthodontic treatment was done to insure sufficient space to restore #7. After Orthodontic treatment, Implant was placed #7 and esthetic crown lengthening #10. Upper and lower In-office bleaching was performed. Old veneer was sectioned and minimal preparation #10. Lithium-Disilicate (IPS-e.max) implant crown with Zirconia abutment #7 and IPS-e.max #10 veneer were cemented with light curing resin cement (RelyX- veneer, 3M ESPE). Multiple composite restoration was performed.

Yasko Darkoue
University of Alabama at Birmingham

Photoshop Smile Design for Anterior Esthetic Treatment with Minimalistic Feldspathic Veneers, An Interdisciplinary Conservative Approach

Adobe Photoshop software can be a useful tool for diagnosis, esthetic analysis and to aid in the design of the final restorations. Utilizing photoshop smile design, we aimed to apply the ideal esthetic parameters through a sequenced treatment plan in an Interdisciplinary approach. A PMMA custom-made surgical guide was used for the surgical phase of the treatment to achieve more ideal gingival position. Then, the restorative phase consisted of micro-abrasion (Opalustre), bleaching (Opalescence) and ten minimalistic feldspathic veneers restorations (VM13) which were planned and fabricated to ensure a minimally invasive, conservative treatment approach for best durable esthetic outcomes.

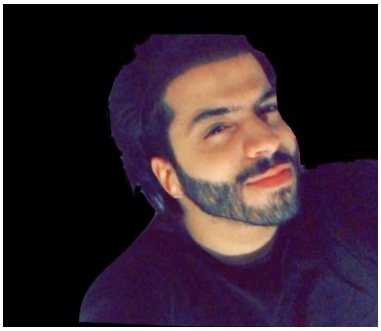
Javier de la Fuente Balboa
University of Rochester
Eastman Institute for Oral Health



Direct Resin Veneers and Single Implant Placement

A patient with a diagnosis of congenitally missing lateral incisors and displaced midline presents to the clinic seeking a more esthetic smile. A combined case type of direct composite bonded veneers from #7 to #12 with a single implant placement in area of #6 is planned. The aim is to reshape the patient's existing and mesially shifted maxillary canines into lateral incisors, and place an implant to occupy the space left by the shifted teeth. All anterior teeth were restored with Renamel Microhybrid and Microfill composite then contoured and polished with 3M Sof-lex discs to achieve the final result.

Feras Shaheen
New York University College of Dentistry



A Positive Outcome for The Negative Space

This poster presents the treatment of a patient seeking 6 veneers to improve the shape of his teeth and overall smile. Motivational mockups were created; one included only the 6 anterior teeth and the other included teeth #'s 4,5,12,13. The smaller mockup corrected the shape of the teeth. The more extensive mockup reduced the space between the teeth and the corners of the lips (the negative space). A critical component of the more extensive mock-up was not only to improve the shape of the teeth, but to add sufficient labial porcelain to the additional so as to reduce the negative space. The patient ultimately agreed to do feldspathic veneers from #'s 4-13.

Halah Thanoon
Nova Southeastern University

Smile Rejuvenation by Instant Orthodontics

Smile rejuvenation is the process of improving the appearance of the smile through cosmetic dentistry procedures. One of the methods used in smile rejuvenation is Instant orthodontics, which is an approach to enhancing your smile with porcelain veneers and crowns. The treatment approach involves no braces or orthodontic devices, but still provides the aesthetic results achieved with orthodontic treatment

POSTGRADUATE MATERIALS SCIENCE

Shelyn Yamakami
Harvard School of Dental Medicine

1st Place Winner

Effect of Desensitizing Treatments in the Evolution of Erosive Lesions in Dentin

Dentin hypersensitivity causes daily discomfort to patients affecting their esthetics and habits. This study evaluated the desensitizing agents in the evolution of the erosive lesions(EL) on dentin. It is hypothesized that there is no difference among treatments in the EL progression. Dentin specimens were immersed in 6% citric acid and randomly divided into 6 groups(n=15): G1=no treatment; G2=oxagel(Kota,Brazil); G3=nano-hydroxyapatite(FGM,Brazil); G4=MI Paste™(GC Corporation,Japan); G5=experimental-paste; G6=970nm-diode laser-0.7W/10Hz/70mJ(Sirolaser,Germany). Thereafter, they were cycled through erosive challenge(0.3%citric acid/9-days) and treatments were applied every 3-days. Samples were evaluated by confocal laser scanning microscopy/permeability test. Data were compared by ANOVA, Friedman and Tukey's Test(α=5%). Nano-hydroxyapatite was able to control the EL in dentin and experimental-paste was effective on dentin tubule occlusion/permeability.

JUNIOR FACULTY CLINICAL CASE

Dhanny Medianti
New York University
College of Dentistry

1st Place Winner

Multidisciplinary Treatment of Short Tooth Syndrome

This poster presents the treatment of a patient who came to our clinic with a chief complaint of short teeth. The process of coming to a diagnosis and arriving at a treatment plan for this patient is presented. Ultimately it was determined that the patient suffered from short tooth syndrome as a consequence of a lack of passive eruption. This poster will review the techniques required to come to a diagnosis and to formulate a treatment plan that will result in a predictable esthetic outcome. The multidisciplinary approach used in this case is presented.

Bhavna Gangwal
New York University
College of Dentistry

2nd Place Winner

Managing Both Pink and White: A Multidisciplinary Approach

This poster presents the treatment of a patient who came to the NYUCD Program in Advanced Esthetic Dentistry seeking esthetic improvement of peg and missing maxillary lateral incisors. Critical in the treatment planning of this case was visualizing where we would need gingival tissue as well as the additional tooth. The treatment planning process for rehabilitation of the gingival papillae, replacing a missing tooth, and correcting a peg tooth is discussed. The multidisciplinary approach used to achieve optimal esthetics for this patient is presented in this poster.

Ruth Schmuelian
New York University
College of Dentistry

3rd Place Winner

Full Mouth Reconstruction: Advanced Principles and Practice for the GP- Implants, Aesthetics and Occlusion

A 51-year-old female, cigarette smoker, presented to the clinic with the chief complaint: “My teeth are a mess - I am losing them and I don’t like my smile.”

Patient’s dental history at time of initial visit includes:
Missing teeth: #1, #13-#16, #17, #29-#32
Root Canal Therapy: #11, #19
Crowns: #11, #19
Restorations: #2-#5, #18
Moderate to Extensive Bone Loss

Upon pre-op clinical evaluation by previous student doctor, patient was classified as Level 7 Full Mouth Reconstruction (FMR) case: a staged approach consisting of both arches, implants, grafting and an increase in occlusal vertical dimension (OVD).

JUNIOR FACULTY MATERIALS SCIENCE

Tamer Theodory
University of New England
College of Dental Medicine

1st Place Winner

The Esthetic Outcome and the Infiltration Capacity of Three Resin Composite Sealers Compared to ICON (DMG, America)

The purpose of these studies was to compare the esthetic outcome and the infiltration capacity of three resin composite sealers: Biscover LV (Bisco Dental), Optiguard (Kerr) and Permaseal (Ultradent) to ICON (DMG, America) following artificial initial caries lesion resin infiltration.

HEAPS (HONORABLE ESTHETIC ACHIEVEMENT POSTER STUDENTS)

Bonface James
Harvard School of Dental Medicine

Esthetic Rehabilitation with Direct Composite Bonded Veneers: A Case Report

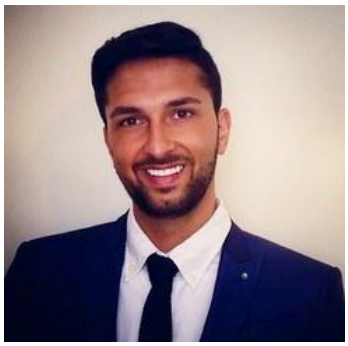
Veneering anterior teeth is a well-established treatment for esthetic rehabilitation. The development of composites and adhesive materials and techniques boosted further success of direct composite bonded veneers restorations while allowing least invasive approach to esthetic rehabilitation. This case report illustrates the comprehensive planning and analysis that led to a successful outcome.

Baleigh P. Trull
University of Texas at Houston

Managing Occlusion with Composite on Compromised Guidance of Lateral Incisor Veneer

54-year old female presents with a chief complaint of “I need veneers on my front teeth.” Patient involved in accident receiving trauma to #7-#10, initial composites placed at emergency visit had undergone staining and fracture. It was recommended that teeth be restored with porcelain veneers from canine to canine to establish anterior guidance, but patient could not afford it. A compromised treatment plan was performed by placing porcelain veneers on #7-#10 and reshaping extruded opposing mandibular incisor #26. Composite was placed on the cusp tip and lingual of #6 to establish guidance, providing lateral clearance to fabricate and reshape #7. Informed patient that future placement of veneers on #6 and #11 would be ideal.

Clement Kairouz
New York University College of Dentistry



Maxillary Diastema and Tooth Spacing Closure and Enhancement Utilizing Porcelain Restorations

Midline diastemas and tooth spacing in permanent dentition is often attributed to etiologic factors which need to be identified and addressed. These can include dental defects such as abnormality in shape and size of teeth (such as this case), periodontal defect like hypertrophic fibrous frenum and neuromuscular defect such as tongue thrusting. Patient is a 56-year old female, with medical history of Lupus, presents to NYU Dentistry Clinics with chief complaint – “I don’t like the spaces in my front teeth”

Wanhau Zou
New York University College of Dentistry

Recasting Both Players and Stage: An Esthetic Drama

This poster presents the rehabilitation of a previously restored, yet esthetically compromised, dentition. A multidisciplinary approach was used to correct both tooth morphology and gingival architecture. Post and core buildups were placed to improve the biomechanical stability of endodontically treated abutments. Crown lengthening was performed to achieve soft tissue symmetry and to enable achieving maximum ferrule effect. An implant as well as lithium disilicate crowns and veneers were placed to correct the functional and morphological characteristics of the dentition. This multidisciplinary approach produced both a functional improvement and an esthetically improved smile that established harmony between white and pink elements.