انجمن متخصصین دندانپزشکی ترمیمی شاخه خراسان برگزار می کند:

نوزدهمین همایش سالانه انجمن متخصصین دندانپزشکی ترمیمی ایران

دندانپزشکی زیبایی: آنالوگ تا دیجیتال

محورهای همایش:

- روشهای نوین در درمان های ایمپلنت
- کامپوزیت در ترمیم های زیبایی
- دندانپزشکی مبتنی بر دیجیتال
- سرامیک ها در دندانپزشکی
- باندینگ ها و سمان ها
- طراحی لبخند

کتابچه خلاصه مقالات

با ۱۵ امتیاز بازآموزی

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بسمه تعالی

فهرست


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۱۳۸۴

دکتر جمشید باقری

ریاست همایش

با سلام و عرض ارادت

خوش‌آمد می‌گویم به دوستان عزیزم، سخنرانان، برگزارکنندگان کارگاه‌ها و ارائه‌دهندگان پوستر. بدون شرکت این عزیزان برگزار چنین همایشی مفهومی نداشت و امکان‌پذیر نبود. تشکر از صمیم قلب از برگزارکنندگان سمپوزیوم، دوستانی که شب و روز نشناختند تا کار به نحو احسن انجام شود.

اما در مورد موضوع همایش که نیاز آن شدیدا احساس می‌شد و امیدوارم در طول چند روز آینده شاهد جذاب بودن و مفید و کارساز بودن آن باشیم. دوستانم توجه دارید که روند پیشرفت علم و به روز بودن آن، انکار ناپذیر است. بحث آنالوگ، آنچه تا به حال انجام می‌دادیم و دیجیتال، آنچه پس از این انجام داده خواهد شد نیاز به بررسی تمامی ابعاد آن دارد. از عکاسی دیجیتال، کاربردهای کامپیوتری در بایگانی و پرونده بدون کاغذ، استفاده از اسکنرها به جای قالبگیری آنالوگ، ساخت ترمیم‌ها، کرون‌ها و کارهای این چنین کاملا مورد قبول اکثر دندانپزشکان است. بسیاری از روش‌های طراحی و ساخت خیلی هم جدید نیستند. شاید از حدود بیست و چند سال پیش طراحی با کامپیوتر و ساخت ترمیم‌ها و کرون‌ها با کامپیوتر آغاز شده است. پرینترهای سه بعدی کار را از آنچه هست آسانتر نموده است و هر روز دقیق‌تر و راحت‌تر به کار می‌آید. با این تفصیل لازم است با دیجیتال آشتی کرد و آن‌را به کار گرفت، بی‌تردید که آینده در دندانپزشکی دیجیتال است. امیدوارم در این چند روز پاسخ سوالات خود را بیابید و مورد استفاده قرار دهید. استقبال شما عزیزان برای شرکت در این گردهمایی دلیلی بر اشتیاق شما برای یادگیری است. حضور شما همکاران محترم را در مشهد مقدس و در این همایش ارج می‌نهم و از یکایک شما که این گردهمایی را پر بار کرده اید صمیمانه تشکر می‌کنم.

دکتر محمد جواد مقدس

دبیر اجرایی همایش

با نام و یاد خداوند قادر متعال و درود و سلام وعرض ادب خدمت همکاران گرامی

ستاد اجرایی نوزدهمین همایش سالانه انجمن متخصصین دندانپزشکی ترمیمی ایران افتخاردارد در تاریخ ۲۳ لغایت ۲۵ مرداد ماه ۱۳۹۸ درشهرمقدس مشهد ودرمجلل ترین مجتمع این شهرفرصت ارائه خدمت شایسته و در شان جامعه دندانپزشکی ایران را به همکاران محترم دندانپزشک داشته باشد. هدف اصلی همایش دراین دوره، بروزرسانی اطلاعات علمی دندانپزشکی بوده وجهت نیل به این هدف تلاش بی حصری انجام گرفته است. همایش درطی سه روز برگزاری علاوه بردعوت از اساتید برجسته ومطرح دندانپزشکی ازداخل وخارج کشورسعی نموده است آخرین دستاوردهای دندانپزشکی را درقالب سخنرانی وکارگاههای متنوع دراختیار همکاران گرامی قرارداده و همچنین با دعوت ازشرکت های معتبر دندانپزشکی جدیدترین تجهیزات ومحصولات و فن آوریهای دندانپزشکی را دراختیار بازدیدکنندگان گرامی قرار دهد. امیدوارم با تلاشی که همه همکاران و دست اندرکاران ودانشجویان عزیز نموده اند بتوانیم همایشی درشان شما بزرگواران برگزار نموده و به هدف اصلی همایش که همانا ارتقا علمی همکاران و افزایش سطح بهداشت و درمان که رسالت اصلی ما است دست یابیم.

دکتر علیرضا بروزی نیت

دبیر علمی همایش

انجمن متخصصین دندانپزشکی ترمیمی شاخه خراسان مفتخر است که امسال میزبان همکاران ارجمند از سراسر کشور بوده تا با همیاری آن ها نوزدهمین همایش سالانه انجمن متخصصین دندانپزشکی ترمیمی ایران را به بهترین شکل ممکن برگزار نماید. با توجه به پیشرفت و گسترش کاربرد دستگاههای دیجیتال و نرم افزار های کامپیوتری به ویژه در دندانپزشکی زیبایی، شعار همایش " دندانپزشکی زیبایی: آنالوگ تا دیجیتال" قرار داده شد، تا با بررسی و مقایسه علمی روشهای نوین با روشهای معمول بتواند در مسیر درمان بیماران راهگشای همکاران ارجمند باشد .همچنین با در نظر گرفتن پنلها و کارگاههایی با موضوعات تخصصی در کنار پنلهایی با موضوعات عمومی سعی شده است تا این همایش برای تمام همکاران شرکت کننده مفید واقع گردد. از سخنرانان ارجمندی که همواره اندوخته ارزشمند خود را بی دریغ و خالصانه در اختیار همکاران خود قرار میدهند سپاس ویژه داشته، بی شک حضور این بزرگواران باعث افزایش غنا و اعتبار کنگره میگردد. ثمره تلاش شبانه روزی کمیته اجرایی و علمی ظرف چند ماه اخیر، اکنون در قالب خلاصه مقالات " نوزدهمین همایش سالانه انجمن متخصصین دندانپزشکی ترمیمی ایران" تقدیم شما دوست و همکار ارجمند میگردد. امید است همکاران عزیز بر کاستی های برنامه چشم پوشیده و از نقاط قوت آن حداکثر بهره را ببرند.

شورای برگزاری همایش

رییس همایش: دکتر جمشید باقری

دبیر اجرایی همایش: دکتر محمد جواد مقدس

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مسئول تشریفات و نمایشگاه: دکتر بیتا لاچین

مسئول تبلیغات: دکتر زهرا حسینی پور

مسئول کارگاه های علمی : دکتر رویا امیری دلوئی

مسئول کمیته دانشجویی: دکتر رویا امیری دلوئی

ثبت نام همایش : خانم زهره میرزایی

کمیته علمی: دکتر جمشید باقری، دکتر محمد جواد مقدس،دکتر علیرضا بروزی نیت،دکتر سارا مجیدی نیا، دکتر حمیده سادات محمدی پور، دکتر رویا امیری دلوئی، دکتر ثمین علوی،

دکتر عبدالرسول رنگرزی

مسئول سمعی و بصری: دکتر حسین چالاکی نیا

مسئول تدارکات و پشتیبانی: دکتر احمدرضا عدالتی

مسئول انتشارات: دکتر ثمین علوی

کمیته دانشجویی: فرناز ناظرزاده، ندا درخشان، شهرزاد دلشاد، فرزانه رییس ستاری، مهناز اجتهادی، آیدا افتخاری، ندا دانشمند، دانیال تقوی، فرزانه خسروی، مهرزاد خورشید، صدف صدیق، بشری خراسانچی، نیوشا یاوری، نگین وطن پرست، سپهر ظفرشاه نژاد، علیرضا دنکوب، سیاوش باقری، شمیم اسدی، آرش اسماعیلی، نگین جباری، صبا منطقی، علی لبافچی، نگار اعظمی، نگین اخوان، فرزانه خسروی، امیر بلوریان ، یاسمن یزدان دوست

سخنرانی‌ها

عوامل موثر در انتخاب ونیرهای قدامی: سرامیک یا کامپوزیت

سخنران: دکترفرخ آصف زاده

استادیارسابق گروه ترمیمی، دانشکده دندانپزشکی دانشگاه علوم پزشکی شاهد

امروزه با توجه به پیشرفت های چشمگیری که در زمینه تولید سرامیک های دندانی شده ، کاربرد آن ها از ساخت روکش های ساده به موارد زیادی تعمیم یافته است .

پرسلن های لیتیوم دی سیلیکات علاوه بر دارا بودن استحکام مکفی ، با توجه به قابلیت اچ و باند شدنشان به نسج دندان می توانند در بازسازی نسوج از بین رفته خصوصا به صورت تکه ای یا partial coverage ، مانند ونیرها ، اینله و آنله ها نقش به سزایی را اعمال کنند . به عبارتی دیگر ، نیازی به برداشتن نسوج سالم دندان برای تامین گیر اضافی نمی باشد .

از همین فلسفه می توان در موارد انتخاب شده برای افزایش ارتفاع عمودی یا VD و جبران سایش های سطوح دندانی سود جست .

در این سخنرانی علاوه بر معرفی انواع جدید پرسلن های نامبرده ، روشی محافظه کارانه جهت بازسازی سطوح جونده و لبه انسیزال دندان هایی که در اثر سایش از بین رفته اند و همچنین باز کردن vertical dimension صحبت خواهدشد.

سمان های رزینی سلف اچ و توتال اچ

سخنران: دکتر علیرضا ابریشم چیان

PhD مواد دندانی

با به بازار آمدن رستوریشن های هم رنگ دندان و همینطور تمایل به درمان دندان‌هایی با ساختار باقیمانده ی ناچیز و تاج کلینیکی کوتاه ، نیاز به سمانهایی با خواص فیزیکی-مکانیکی و زیبایی بهتر با معرفی سمانهای رزینی مرتفع شدهاست.

این سمانها خاصیت چسبندگی واقعی به سطح داخلی رستوریشن و اتصال به ساختار دندان را یدک میکشند. در این گفتار در باب انواع Total-etch و Self-etch این سمانها از نظرگاه علم مواد و کلینیک نکات چندی بحث خواهد شد.

کاربرد اوپکر و تینت ها دردندانپزشکی زیبایی برای رسیدن به حداکثر نمای طبیعی

سخنران: دکتر حسن اسلامی

استادیار گروه ترمیمی، دانشکده دندانپزشکی دانشگاه علوم پزشکی شهید بهشتی

با پیشرفت سریعی که در دو سه دهه اخیر در دندانپزشکی ادهزیو رخ داده و نتایج کلینیکی مطلوبی که ترمیمهای کامپوزیتی و سرامیکی بدنبال داشته تلاش بسیاری برای ساخت مواد ترمیمی با حداکثر شباهت به ساختار طبیعی دندان شده است. ساختار شیمیایی و آناتومیک دندان بصورتی است که حالات اپتیکی متغییری از خود نشان می دهد و یک دندانپزشک یا سرامیست برای اینکه بتواند از عهده بازسازی یک دندان با ظاهری کاملا طبیعی برآید نیازمند آن است که دانش و تجربه خود را در این زمینه در حد بالایی افزایش دهد. امروزه مواد کامپوزیتی و سرامیکی بسیار متنوعی از نظر ویژگیهای اپتیکی ساخته شده اند و دندانپزشکان و سرامیست ها با گذراندن دوره ها خاص می توانند به دانش و مهارت کافی در زمینه استفاده از آنها دست یابند.

در این سخنرانی سعی بر این خواهد شد که بطور اجمالی به کاربرد تینت ها و اوپکرها و نقش آنها در ایجاد ترمیمهایی با ظاهر طبیعی پرداخته شود.

آشنایی با انواع سمان های رزینی سلف ادهزیو و کاربرد کلینیکی آنها

سخنران: دکتر شیلا امامیه

استادیار گروه ترمیمی، دانشکده دندانپزشکی دانشگاه علوم پزشکی شهید بهشتی

Self adhesive resin cement

Self-adhesive resin cements utilized as luting agents are defined as cements based on filled polymers that adhere to the tooth structure in the absence of tooth surface pretreatment. In contrast to their simplified application, the compositions of self-adhesive resin cements are complicated. Moreover, incompatibility between acidic functional monomers and other resinous components can have adverse effects on the mechanical properties of self-adhesive resin cements. This presentation will explain what is known or can be inferred about their chemical composition and its effect on the setting reaction and adhesion to various substrates, their physical and biological properties and other materials science aspects that may help to predict their ultimate performance, and the important clinical considerations that will determine their indications, handling and limitations…

آشنایی با کاربرد کلینیکی انواع کامپازیت ها

سخنران: دکتر حسین باقری

PhD مواد دندانی، استادیار گروه ترمیمی، دانشکده دندانپزشکی دانشگاه علوم پزشکی مشهد

با توجه به آمار بالای شیوع پوسیدگی دندانی در ایران و نیاز به انجام درمانهای ترمیمی از یک سو و افزایش درخواست بیماران برای درمانهای ترمیمی زیبایی و همرنگ دندان از سویی دیگر، کامپوزیتهای دندانی جایگاه ویژه ای در میان مواد ترمیمی پیدا کرده اند. با توجه به تنوع مواد کامپوزیتی موجود در بازار مواد دندانی با ویژگیهای کاربردی مختلف، آگاهی از خواص انواع گوناگون این مواد می تواند در انتخاب درست و ارتقای نتیجه درمان نقش اساسی داشته باشد.

مواد ترمیمی کامپوزیتی موجود در بازار امروز را میتوان با توجه به جنبه های متفاوت ویژگیهای آنها طبقه بندی نمود. مطابق مطالعات انجام شده طول عمر ترمیمهای کامپوزیتی خلفیدر صورت کاربرد صحیح در مقایسه با آمالگام قابل مقایسه است. همچنین دستیابی به نتایج مطلوب زیبایی در نواحی قدامی نیاز به آشنایی با ویژگیهای انواع کامپوزیتها با توجه به ویژگیهای فیزیکی آنها دارد. بنابراین، با توجه به گستره وسیع کاربردکامپوزیتهای رزینی در دندانپزشکی ترمیمی، انتخاب صحیح کامپوزیت در ابتدای درمان گامی مهم محسوب می شود.

در این بحث قصد داریم با توجه به پیشرفتهای انجام شده در حوزه مواد ترمیمی کامپوزیتی طی سالهای اخیر، با بیان و نقد ویژگیهای انواع این مواد، آگاهی بیشتری در زمینه انتخاب درست و ملاحظات بالینی مرتبط با آنها پیدا کنیم.

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All-Ceramic and Zirconia Restorations in 2019: Clinical steps

سخنران: دکتر ناصر برقی

پروفسو بخش دندانپزشکی ترمیمی و زیبایی دانشگاه سن آنتونیوی تگزاس

Innovations in digital dentistry and high-strength all-ceramic systems in conjunction with advanced CAD/CAM technology provide us with more opportunity to offer esthetic and function not only in the esthetic zone, but also in high stress posterior occlusion. Each system requires specific tooth preparation, laboratory communication, surface conditioning for luting. Current ceramic primers and luting cements have made these a reality.

All-Ceramic Restorations in 2019 is an in-depth look at concepts, procedures and products to enhance the durability of these restorations.

Course Objective

This course is designed to provide participants with practical information on indications, selection, tooth preparation, laboratory communication and bonding of current types of all ceramic restorations in light of current scientific and clinical information. Failures of esthetic restorations and steps for intra-oral repairs will be discussed.

Topics to be Discussed

- All ceramic restorations in 2019
- Clinical considerations of zirconia and IPS e.max lithium disilicate restorations
- Minimal invasive procedures with CAD/CAM zirconia restorations
- Bonding and cementing zirconia restorations in light of current scientific information

A. Discuss clinical considerations of zirconia and IPS e.max lithium disilicate restorations
B. Discuss clinical indications for various type of ceramic restorations
C. Present steps in bonding zirconia restorations in light of current scientific information
D. Discuss minimal invasive procedures with CAD/CAM zirconia restorations
E. Discuss achieving ideal esthetic outcome with monolithic zirconia restorations.

نکات کلینیکی کاربرد مواد قالبگیری

سخنران: دکتر مهدی جوان

متخصص پروتزهای دندانی

قالبگیری دیجیتال در مقایسه با روش های معمول قالبگیری: مزایا و معایب

سخنران: دکتر زهرا خاموردی

استاد گروه ترمیمی، دانشکده دندانپزشکی دانشگاه علوم پزشکی همدان

امروزه بازسازی دندانهای بشدت تخریب شده با استفاده از رستوریشن های غیر مستقیم جز لاینفک دندانپزشکی ترمیمی شده است. همچنین، برای تحت فانکشن بودن ایمپلنت های دندانی بایستی یک رستوریشن مناسب با تطابق کافی تهیه گردد. لازمه ساخت یک رستوریشن غیر مستقیم، قالبگیری دقیق می باشد. مطالعات نشان داده اند قالب گیری غیر دقیق، یکی از عوامل عمده شکست رستوریشن ها می باشد.

با پیشرفت مواد و تکنولوژی قالبگیری دیجیتال به عنوان یک جایگزین مناسب برای قالبگیری معمولی معرفی شده است. در قالبگیری معمولی استفاده از مواد قالبگیری یکی از ارکان حائز اهمیت می باشدو مواد قالبگیری مختلف دارای خصوصیات گوناگونی بوده و این امر موجب می شود که در خصوصیات رستوریشن نهایی تغییراتی ایجاد شود. در قالبگیری دیجیتال از دوربین های داخل های استفاده شده و نیازی به ماده قالبگیری نیست. در این ارائه درمورد قالبگیری دیجیتال توضیحات کاملی داده خواهد شد و به مقایسه آن با روش قالبگیری معمولی از جنبه های مختلف پرداخته می شود.

علل ایجاد تغییر رنگ های دندانی و درمان آن

سخنران: دکتر زهرا خاموردی

استاد گروه ترمیمی، دانشکده دندانپزشکی دانشگاه علوم پزشکی همدان

هر فردی متقاضی داشتن لبخند جذاب و زیبا می باشد. یکی از فاکتورهای مهم در زیبایی داشتن دندانهای سفید و بدون تغییر رنگ است. تغییر رنگ دندان یک حالت غیر طبیعی چند علتی ناشی از سبک زندگی، بیماری، آسیب، و فرایندهای فیزیولوژیکی است و توسط فاکتورهای مختلفی از جمله مصرف برخی داروها، نقص ژنتیکی، بیماری، تروما، پوسیدگی دندان و بالا رفتن سن ایجاد می شود.تغییر رنگ دندانی می تواند ظاهر دندان را از حالت طبیعی خارج کرده و در نتیجه فاکتور زیبایی را برای افراد مختل سازد. دندان ها به علل مختلفی (سیستمیک یا اکتسابی) دچار تغییر رنگ می گردند و درمان این تغییر رنگها یکی از عمده ترین مسائلی است که کلیه دندانپزشکان با آن مواجه هستند. تاکنون روشهای محافظه کارانه و غیر محافظه کارانه ای زیادی ازاستفاده از سفید کردن دندان تا انجام یک روکش برای درمان تغییر رنگهای دندانی معرفی شده است که هرکدام اندیکاسیون و کنترا اندیکاسیونهای مختص به خود را دارند.در این ارائه به انواع تغییر رنگ های دندانی و روش درمانی اختصاصی برای هریک از آنها با توجه به شواهد علمی مفصلا پرداخته می شود.

مروری بر مزایا و معایب کاربرد بیومتریال ها در درمان های بلیچینگ

سخنران: دکتر مریم خروشی

استاد گروه ترمیمی، دانشکده دندانپزشکی دانشگاه علوم پزشکی اصفهان

Forced Eruption

سخنران: دکتر محمد درهمی

استادیار گروه پروتزهای دندانی، دانشکده دندانپزشکی دانشگاه علوم پزشکی مشهد

هنگامی که دندانی به علت پوسیدگی یا شکستگی نیاز به روکش پیدا میکند، باید لبه سالم دندان از لبه لثه بالاتر باشد. به این ترتیب هم امکان قالبگیری به خوبی فراهم میشود، هم دندان دارای فرول کافی خواهد بود و هم سیمان کردن آسان تر خواهد شد.

اگر لبه سالم دندان از لبه لثه پایی تر باشد،با انجام جراحی افزایش طول تاج مساله حل میشود ولی جراحی افزایش طول تاج عیوبی دارد از جمله آسیب دیدن استخوان دندان های مجاور . force eruption سریع روشی است که طی آن ریشه از استخوان بیرون کشیده میشود و به این ترتیب معایب جراحی افزایش تاج برطرف و نتایج عالی از کار حاصل میشود.

آشنایی با انواع سمان غیر رزینی و کاربرد کلینیکی آنها

سخنران: دکتر محسن رضایی

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The number of choices for indirect restorations has evolved greatly over the last decade. Today proper selection of dental cements is a key factor to achieve a successful restoration and will greatly increase the chances of long-term success of the restoration and is usually based on a practitioner's reliance on experience and preference and less on in depth knowledge of materials that are used for the restoration and luting agent properties. In recent years, many newly formulated dental cements have been developed with the claim of better performance compared to the traditional materials. Unfortunately, selection of suitable dental cement for a specific clinical application has become increasingly complicated, even for the most experienced dentists. The purpose of this article is to review the currently existing dental non resin cements and discusses physical properties, biocompatibility and other properties that make a particular cement the preferred choice depending on the clinical indicationto help the dentists choose the most suitable materials for clinical applications.

بایدها و نبایدها در لامینیت ها

سخنران: دکتر کیوان ساعتی

استادیار گروه ترمیمی، دانشکده دندانپزشکی دانشگاه آزاد اسلامی تهران

ونیرهای سرامیکی پوسته های نازک و ترانس لوسنسی از جنس سرامیک می باشند که از آنها جهت بهبود رنگ ، شکل و ظاهر کلی دندانها استفاده می شود این ونیرها ظاهر و لبخند راتحت تاثیر قرار داده و بعضی مواقع بعنوان ارتودنسی سریع نامیده می شوند. ونیر های سرامیکی مشکلات بسیاری را در ناحیه لبخند بر طرف می سازند که شامل موارد زیر می باشد: فواصل زیاد بین دندانها/ دندانهای بد شکل و یا وجود ترک در دندانها/ دندانهای شکسته و یا لب پریده/ دندانهای با تغییر رنگ شدید داخلی و خارجی/ ترمیم های بد رنگ دندانی

ونیر های سرامیکی ظاهر دندانها را تصحیح می کنند اما منجر به حرکت فکین و یا تصحیح روی هم قرار گرفتن دندانها نمی شوند در نتیجه این درمان برای هر فرد و یا هر دندانی مناسب نمی باشد. انتخاب بیمار در این درمان محافظه کارانه بسیار حائز اهمیت است در زیر به بعضی موارد که کاندید مناسبی برای ونیر سرامیکی نیستند اشاره می کنیم:دندانهای پوسیده با بیماری فعال لثه ای قبل از انجام ونیر باید ترمیم شوند و لثه ها سلامت خود را بازیابند/ دندانهای با تخریب وسیع و یا ترمیم های حجیم که دندانهای ضعیفی هستند جهت ونیر استحکام کافی را ندارند/ هنگامی که میزان مینای دندان ناکافی باشد ونیر نامناسب است چراکه ونیر به مینای دندان بهتر باند می شود/ افرادی که دارای عادات پارافانکشن می باشند ونیرنامناسب است چراکه سایش دندانها بر روی هم به راحتی باعث شکست ونیر ها می شود در این موارد نایت گارد درمان مناسبی است/ افرادی که ثبات در جویدن ندارند/ در مورد دندانهای با موقعیت نامناسب و بسیار نامنظم بهتر است ارتودنسی انجام شود

در این سخنرانی تمرکز مطالب بر روی چگونگی انجام ونیر سرامیکی و انتخاب بیمار مناسب برای این درمان می باشد.

علل ایجاد حساسیت های عاجی و درمان آن

سخنران: دکتر مهسا شیخ الاسلامیان

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حساسیت دندانی یک مشکل شایع کلینیکی است که در تمامی سنین با هر گروه سنی ممکن است دیده شود. معمولا کانین و پره مولر هر دو فک را درگیر کرده و در سطوح باکال بیشتر از سطوح لینگوال دیده می شود. معمولا عاجی اکسپوز در این نواحی دیده می شود که درد تیز و کوتاه مدت ایجاد کرده است. اما در تحقیقات دیده شده است که همه عاجهای اکسپوز منجر به حساسیت دندانی نمی شوند و زمانی درد ایجاد می شود که لایه اسمیر ازروی توبولهای عاجی برداشته شود و در واقع توبول عاجی اکسپوز گردد.

علل مختلفی برای حساسیت های دندانی ذکر شده است که می تواند مسیر درمان را منحرف کند. لذا معاینه دقیق و گرفتن تاریخچه کامل از رژیم غذایی تا روش مسواک زدن الزامی است. درمان چنین حساسیت هایی از درمانهای خانگی تا درمان های حرفه ای در مطب متفاوت است.کاهش حساسیت اعصاب به کمک ترکیبات نیترات پتاسیم، رسوب پروتیئن با ترکیبات نیترات نقره و گلوتار آلدئید، پلاگ کردن توبولهای عاجی با ترکیبات سدیم فلوراید و استانوس فلوراید، استفاده از سیلر های عاجی مانند وارنیش،به کار بردن لیزر و درمانهای هومیوپاتیک با پروپولیس موثر واقع شده اند. نهایتا اگر در بیماران با درد های شدید حساسیت دندانی موفق به کاهش درد و حساسیت نشدیم درمان اندودنتیک تنها چاره خواهد بود.

مدیریت پالپ دندان های تروماتیزه

سخنران: دکتر مهشید شیخ نظامی

متخصص درمان ریشه، مسئول کلینیک "ترومای دندانی" جهاد دانشگاهی مشهد

دندان های دائمی در کودکان و نوجوانان ممکن است به علت ضربه یا پوسیدگی، قبل از تکامل ریشه دچار اکسپوژرپالپی شوند. در چنین مواردی به علت آپکس باز و ریشه های تکامل نیافته، امکان درمان ریشه ایده آل وجود ندارد و از طرفی کشیدن دندان وجایگزینی آن با ایمپلنت به دلیل عدم تکامل رشد فک و استخوان آلوئولار امکان پذیر نمی باشد. آپکسوژنزیس روشی است که به وسیله ی آن پالپ اکسپوز شده دندان های دائمی نابالغ جهت ادامه ی تکامل ریشه حفظ می شود و نهایتا موجب افزایش ضخامت عاج در دیواره ی ریشه و استحکام آن، افزایش طول ریشه و بسته شدن آپکس خواهد شد. لذا با انتخاب صحیح مواردی که نیاز به درمان آپکسوژنزدارند، می توان پالپ اکسپوز شده را وایتال نگه داشت و انتظار داشت ضخامت عاج در دیواره های ریشه و نسبت طول تاج به ریشه افزایش یافته، آپکس بسته شود و همزمان استخوان آلوئولار مجاور نیز فرصت بیشتری برای تکامل و رشد طولی و عرضی داشته باشد تا چنانچه در سنین بزرگسالی دندان از دست برود مشکلی برای جایگزینی ایمپلنت وجود نداشته باشد.یکی از مهمترین نکات در کیس سلکشن مناسب تشخیص بموقع دندانهایی است که دچار اکسپوژر پالپی شده اند. باوجود اینکه تشخیص کلینیکی پالپ اکسپوز شده در بسیاری از کیسها اسان به نظرمیرسد، موارد بسیاری از شکستگیهای تاج با میکرواکسپوژرهای پالپی همراه هستند که با چشم غیرمسلح قابل تشخیص نیستند ولذا بموقع تحت درمان اپکسوژنز قرار نمی گیرند و با عوارض نامطلوبی از قبیل نکروز پالپ، تحلیل ریشه و عدم تکامل ریشه همراه خواهند بود.

طبقه بندی سرامیک های دندانپزشکی

سخنران: دکتر روزبه صدری منش

متخصص پروتزهای دندانی

پیشرفت های موجود در معرفی سرامیک های مختلف سبب گردیده ، انتخابهای درمانی متفاوتی در حوزه بازسازی ساختار تاجی فراهم گردد. طبیعی است که هر کدام از این مواد نیاز به آماده سازی دندانی ، تکنیک و ملاحظات کاربری متفاوتی داشته باشند.

هدف این سخنرانی معرفی و طبقه بندی بالینی انواع سرامیک های موجود و نگرشی سریع بر تکنیک و پروتکل کاربری هر یک میباشد

مروری بر باندینگ ها

سخنران: دکتر پوران صمیمی

دانشیار گروه ترمیمی، دانشکده دندانپزشکی دانشگاه علوم پزشکی اصفهان

ادهزیو دنتیستری در دهه های اخیر پیشرفت های زیادی نموده است و کمتر رشته ای از دندانپزشکی است که از مزایای این فیلد بهره مند نشده باشد. امروزه یکی از کانسپت های مهم مطرح شده در دندانپزشکی اصل حداقل می باشد .طرح این کانسپت بر اساس انامل-دنتین ادهیژن میباشد.انامل-دنتین (minimall-invasive)تهاجم ادهیژن از طریق دو استراتژی قابل حصول است:

۱- etch&rinse

۲-self-etch

در سال های اخیر یک خانواده جدیدی از ادهزیو ها به نام ادهزیو های یونیورسال یا چند روشی وارد دندانپزشکی شده که با هر دو استراتژی قابلیت کاربرد دارد

هدف از کاربرد باندینگ ها روی نسوج دندانی تعویض سطح نسج دندان با مواد رزینی و انتشار این مواد به داخل نسج دندان برای ایجاد گیر و جلوگیری از میکرو لیکیج میباشد.هرچه لایه هیبرید حاصله کمتر ابدوست باشد و بیشتر در ان کیورینگ صورت گرفته باشد دوام باند کلینیکی بیشتر خواهد بود معایب و مزایای ادهزیوهای مختلف برای انتخاب یک ادهزیو مناسب در کلینیک مورد بررسی قرار می گیرد.

ساخت رستوریشن های غیر مستقیم با استفاده از روش CAD/CAM

سخنران: دکتر امید صوابی

استاد گروه پروتزهای دندانی، دانشکده دندانپزشکی دانشگاه علوم پزشکی اصفهان

Computer-aided design and computer-aided clinical and technical procedures are continuously improving in treatment planning and performance. The CAD/CAM procedures are needed to process restorative biomaterials like high-strength ceramics and to customize the reconstruction component. These new technological possibilities also offer new options with respect to the selection of materials used for various restoration options. Beside ceramics different types of metal can also processed.

Various prosthetic aspect have a significant impact on the result. A non-ideal choice of materials can lead to problems of the final outcomes. As an example metal-based reconstruction can lead to grayish discoloration. Application of all-ceramic reconstruction in contrast can lead to high risk of fracture.

In conclusion, the selection of material is a very complex process today. The aim of the presentation is to introduce new materials and their indication to fulfill new expectations.

Smart Material Selection in Digital Dentistry

سخنران: دکتر امید صوابی

استاد گروه پروتزهای دندانی، دانشکده دندانپزشکی دانشگاه علوم پزشکی اصفهان

ملاحظات زیبایی در درمانهای ایمپلنت ناحیه قدامی

سخنران: دکتر رضا طایفه دولو

استادیار گروه ترمیمی، دانشکده دندانپزشکی دانشگاه علوم پزشکی گیلان

ملاحظات زیبایی در درمانهای ایمپلنت ناحیه قدامی ازسخت ترین چالشهای دندانپزشکی محسوب میشوند واین امر بویژه در هنگام جایگزینی دندانها با ایمپلنت دو چندان سخت تر میشود. با توجه به اینکه انساج استتیک زون درمانهای ترمیمی و پروتز ناحیه زیبایی یا نگاهدارنده اطراف ایمپلنت با دندان طبیعی کاملا متفاوت هستند، تامین ظاهری کاملا مشابه دندان طبیعی تلفیقی از علم وهنر را میطلبد. امری که از هنگام خارج کردن دندان معیوب اغاز گشته وبا مدیریت بافتهای نرم بویژه پاپیلای بین دندانی ادامه می یابد ودر نهایت به جایگزینی با ایمپلنتی که در فاصله و زاویه وجایگاه مناسبی قرار میگیرد و نصب سوپراستراکچر وروکشی مشابه ومتقارن درهماهنگی با زیبایی وفانکشن می انجامد .دراین فرصت به بررسی نکات اصلی تامین زیبایی ایمپلنت دندانهای قدامی خواهیم پرداخت.

ترمیم دندان های سایش یافته

سخنران: دکتر رضا طایفه دولو

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درمان سایشهای دندانی در حقیقت بازسازی سطوح دندانی است که بدلایل مختلف کمیکال یا فیزیکو مکانیکال از دست رفته اند بعبارتی درمان سایشها همانند دیگر درمانهای ترمیمی چیزی جز درمانهای اکلوزالی نیست وتنها فرق این تکنیکها با روشهای پراستتیک در شیوه محافظه کارانه درمانهای ترمیمی است بطوریکه گاه بجای درمانهای ریشه وپست وکور غیر ضروری بکمک تکنیکهای ادهزیو وباند به سطوح دندانی بازسازی سیستم جونده انجام میپذیرد .بدین لحاظ برای درمان موفق میبایست ابتدا وضعیت مفصل فکی ورابطه کندیل با دیسک وسطوح مفصلی وهمچنین وضعیت نرمال یا اسپاستیک عضلات واثرات متقابل اکلوژن با شاخص خلفی وقدامی را شناخت. این مجال به بررسی الزامات درمانی این عارضه می پردازد.

استراتژی سمان کردن انواع مختلف رستوریشن های سرامیکی

وایتال پالپ تراپی

سخنران: دکتر کسری طبری

متخصص دندانپزشکی ترمیمی و زیبایی

اسکنرهای دیجیتال در درمان ایمپلنت های دندانی

سخنران: دکترحسین عباچی زاده

متخصص دندانپزشکی ترمیمی و زیبایی

برای ساخت پروتزهای متکی بر ایمپلنت با کیفیت، انتقال دقیق موقعیت فیکسچر از داخل دهان به محیط لابراتوار ضروری است. روش های مرسوم قالب گیری ایمپلنت، مشتمل بر استفاده از مواد مختلف قالب گیری در داخل تری، ارسال قالب به لابراتوار و ساخت و ارسال مجدد پروتز برای دندانپزشک است که امکان ایجاد خطا در مراحل متعدد و زمان بر بودن از جمله معایب آن میباشد. در طی دو دهه گذشته استفاده از اسکنر های داخل دهانی به دلیل دقت بالا و سهولت کاربرد، برای انواع قالب گیری ها از جمله قالب گیری ایمپلنت ها مورد استفاده قرار گرفته اند. با استفاده از اسکنر های داخل دهانی دندانپزشک در زمان بسیار کوتاهتر، امکان ساخت پروتز های متکی بر ایمپلنت بدون جنبه های ناخوشایند مواد قالب گیری مرسوم برای بیمار را خواهد داشت. در این مقاله انواع مختلف سیستم های قالب گیری داخل دهانی دیجیتال و دقت آنها در مقایسه با روش های قالب گیری مرسوم بررسی می شود. همچنین هزینه ها، زمان مورد نیاز و کنترا اندیکاسیون های هر دو روش مرور خواهند گردید.

اصول انتخاب رنگ

سخنران: دکتر همایون علاقه مند

دانشیار گروه ترمیمی،دانشکده دندانپزشکی دانشگاه علوم پزشکی بابل

همگی معتقدیم که رنگ جزء کلیدی در مجموعه زیبایی در دندانپزشکی است. در واقع رنگ حس روانی است که توسط بازتابش نور از اجسام به چشم ، توسط مغز فهم و تفسیر می شود. و به ۳ جزء منبع نور ، جسم و بیننده نیاز دارد.

در این سخنرانی در ابتدا رنگ و ابعاد و مختصات آن تعریف و نحوه تعیین آن از نظر کمی و کیفی مشخص خواهد شد. سپس خواص دیگر فیزیکی ماده مانند Opacity , translucency, specular glossy, contrast glossy, sheeny, surface texture, opalescence, fluorescence, iridescence, ... مورد بررسی و تعریف قرار خواهند گرفت. در ادامه انواع روشهای تعیین رنگ دنان به صورت بصری و با استفاده از دستگاه برای ساخت رستوریشنهای غیر مستقیم و نیز برای ترمیمهای همرنگ دندان مورد بررسی قرار خواهند گرفت. انواع راهنمای انتخاب رنگ با مدلهای مختلف، شرایط انتخاب رنگ ونیز معایب و محاسن آنها مورد بررسی اجمالی قرار خواهند گرفت.

در پایان چند مورد case رستوریشنهای مستقیم و غیر مستقیم و نحوه رنگ آمیزی آنها توضیح داده خواهند شد

آشنایی با انواع اسکنرهای داخل دهانی در دندانپزشکی

سخنران: دکتر همایون علاقه مند

دانشیار گروه ترمیمی، دانشکده دندانپزشکی دانشگاه علوم پزشکی بابل، رئیس مرکز تحقیقات مواد دندانی بابل

با توجه به اینکه اسکنرهای داخل دهانی جهت نصویر برداری دیجیتال از دندانهای آماده شده جهت ساخت رستوریشنها، توسط تکنیک CAD/CAM طراحی و ساخته شده اند، در این سخنرانی به بررسی آنها خواهیم پرداخت.در این رابطه در ابتدا مزایا و معایب استفاده از این اسکنرها مورد بحث قرار خواهد گرفت. این موارد شامل زیر می باشند.

مزایا: ۱- کاهش ناراحتی بیمار ۲ – راندمان زمانی بهتر ۳ – سادگی روشها برای دندانپزشک ۴ – عدم استفاده از کستهای گچی ۵ – ارتباط بهتر با لابراتوار ۶ – ارتباط بهتر با بیمار

معایب : ۱ – سیکل ترس از یادگیری ۲ – سختی در شناسایی ختم تراشهای عمیق ۳ – قیمت تمام شده.

سپس به تفاوت آنها با قالبگیری معمولی (توسط مواد قالبگیری) اشاره خواهد شد. موارد اختلاف بین انواع سیستمهای اسکنرهای داخل دهانی بررسی خواهد شد. این موارد شامل ، استفاده یا عدم استفاده از پودر، سرعت تصویر برداری، اندازه سر دوربین، رنگی بودن تصاویر، باز بودن به سیستم IOS وروشهای تعیین فاصله در این اسکنرها است.

در پایان یک مورد Case همراه با فیلم اسکن داخل دهانی و ساخت رستوریشن نمایش داده خواهد شد.

دستگاه های جدید تشخیص پوسیدگی، مزایا و معایب

سخنران: دکتر کامیار فتح پور

استادیار گروه ترمیمی، دانشکده دندانپزشکی دانشگاه علوم پزشکی اصفهان

New devices for caries detection, advantages and disadvantages

Early detection of caries lesions is the first step for treatment and preservation of tooth structure. New methods based on new technology such as Optical Coherence Tomography, Polarization Sensitive Optical Coherence Tomography, Fibre Optic Transillumination, Quantitative Light induced Fluorescence, Laser induced Fluorescence, Transillumination with near infrared light, Infarred Fluorescence have been introduced. Fiber optic trans-illumination uses light transmission through the tooth. Devices such as FOTI, DIFOTI, DIAGNO-cam use this technology.

There are some more devices based on fluorescent response of organic part of tooth structure. Devices such as DIAGNO-dent and FACE are designed based on fluorescent effect. QLF is a device that uses combination of camera and fluorescence systems. Soprolife, LIFEDT and Vista-scan are other devices based on fluorescent effect. The Canary device uses heat and light to scan teeth for the presence of dental caries; this system is a Laser-based system. There are at least two devices that detect caries based on electrical conductivity/ impedance. Electronic Caries Monitor is based on electro-conductivity. The Caries Scan is another device that uses electrical impedance of tooth structure to detect caries. Another device is available that uses infrared light to produce cross section images of biological tissues. Optical Coherence Tomography is a non-ionizing imaging technique.

This lecture will discuss about advantages and disadvantages of these new devices. Also basic concepts of these devices will be presented

عوامل موثر در دوام باند ترمیم های کامپازیت

سخنران: دکتر امیر قاسمی

استاد گروه ترمیمی، دانشکده دندانپزشکی دانشگاه علوم پزشکی شهید بهشتی

امروزه باندینگها در تمام عرصه های زندگی موارد مصرف فراوانی پیدا کرده اند. اصول فیزیکی ومکانیکی حاکم بر این چسبها در بسیاری کاربرد های بیولوژیک ان سالهای متمادی است که در طبیعت بکار گرفته میشود. چسبهای دندانپزشکی نیز با فلسفه ای مشابه نقش ویژه ای در اکثر درمانهای دندانپزشکی به خود اختصاص داده اند گرچه کارایی مناسب بالینی جای شک شبه ای ندارد امادوام طولانی مدت همیشه مورد سوال بوده است. بررسی شکستهای بالینی ولابراتواری اطلاعات بسیار مهمی در مورد نقاط ضعف تکنیکهای مختلف چسبندگی را ارایه میدهد. شناسایی این نواقص وتلاش در جهت بهبود کاستی های این روشها وارایه راهکارهای لازم دوام وکیفیت باندینگها را بالا برده و طول عمر درمانهای وابسته به باندینگ را افزایش می‌دهد.

کاهش پلیمرهای ابدوست به ایده ال نزدیک ساختن میزان حلالها تبخیر کامل حلال افزایش میزان پلیمریزاسیون استفاده از مهار کننده های انزیمهای پروتءولیتیک کاربرد لایه های هیدروفوب و کامپوزیتهای قابل سیلان کاهش استرس در اینترفیس باندینگ تراشهای محافظه کارانه از جمله این روش هاست که هدف از این ارایه خواهد بود

چالش های بالینی ترمیم های کامپوزیت و دلایل شکست آن ها

سخنران: دکتر مریم قوام

دانشیار گروه ترمیمی، دانشکده دندانپزشکی دانشگاه علوم پزشکی تهران

اعتلای کیفیت رزین های کامپوزیت در طی چند د هه ای که ازمعرفیشان میگذرد منجر به استفاده روز افزون آنها در ترمیمهای دندان های قدامی و خلفی شده است.مطالعات متعددی میزان شکست سالیانه این ترمیم ها را تا سه درصد برای دندان های قدامی و تا پنج درصد برای دندان های خلفی گزارش کرده اند .معمولا در دندان های قدامی نقص در زیبایی و در دندان های خلفی پوسیدگی های ثانویه و شکستگی ها عامل اصلی شکست گزارش شده اند.البته در دورههای مختلفی که مطالعات انجام شده علل شکست تغییرات جزئی داشته است..با بهبود کیفیت کامپوزیت ها فاکتور هایموثر در دوام ترمیم ها بیشتر متوجه انتخاب مناسب مورد و طرح درمان صحیح ونیز تکنیک درست کار میشود.نوع دندان، وسعت ترمیم، ریسک پوسیدگی بیمار ،اکلوژن و عوامل اجتماعی –اقتصادی در انتخاب کیس باید مد نظر قرار گیرد.در رابطه با تکنیک عمل کننده بی تردید تسلط کلینیسینو تجربه کاری بعلاوه در اختیار داشتن وسایل مورد نیاز و تجهیزات لازم اهمیت قابل اعتنایی دارد.یکی از مسائل حائز اهمیت تجربه کافی در تشخیص نقایصی است که نیاز به مداخله ندارد یا با ترمیم ساد های میتوان نقص را برطرف کرد و ترمیم را تجدید نکرد. تردیدی نیست که با آگاهی از علل عمده شکست ترمیم های کامپوزیتی و تشخیص صحیح –و نه سلیقه ای- ترمیم های شکست خورده گام مهمی در کاهش هزینه های بیمار و افزایش اعتماد او بر خواهیم داشت.

بازآفرینی لبخند بر اساس نقشه راه دیجیتال

سخنران: دکترمهرداد کاظمیان

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در این سخنرانی آنالیز و بازسازی لبخند بر اساس فتوگرافی و طراحی دیجیتال با روشهای دوبعدی و سه بعدی ارایه می شود . در بررسی و ارایه مورد سعی شده است روشهای ساخت مدل یا ماک آپ و اسکن دیجیتال و طراحی رستوریشن های سرامیکی ارایه و نمایش داده شود.

تشخیص و طرح درمان ضایعات غیرپوسیده سرویکالی

سخنران: دکتر سارا مجیدی نیا

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The etiology and treatment plan of NCCLs

It appears that Non-carious cervical lesions (NCCLs) are unique to the modern man. In an anthropologic study of skulls of humans living in the copper age and middle age no NCCLs were found in 3927 teeth from 259 individuals. Today NCCLs can be found in the teeth of children as well as adult teeth. Prevalence in varying patient and population groups ranges from rare to 89%. Several studies show incidence increasing with age .NCCLs are characterized by a loss of hard dental tissue near the cement-enamel-junction. Commonly, their shape is like a wedge with the apex pointing inwards. Other times, they appear as regular depressions, like a dome or a cup. Their main characteristic is the presence of hard-mineralized tissue. NCCLs are currently classified as erosion, abrasion, or abfraction. Their etiology seems to be related to different factors: hexogen and endogen acids, mechanical abrasive action, tooth flexion under axial and non-axial loads. Moreover, it seems that a fundamental role is ascribable to tooth bending phenomena due to the strength components parallel or oblique to the occlusal level, which occur during the normal function as well as during parafunctions. Until recently, glass-ionomer-based materials were considered the treatment of choice in most of the NCCLs, although consistent improvements are still required. Today, based on the excellent esthetic properties and the good clinical performance, there is a general indication to use composite in NCCLsby combining the surgical root coverage with the correction of the emergence profile by composite.Early failures of these restorations are probably due to the same factors causing the onset of the original lesion. The aim of present lecture, is to evaluate the etiology and treatment plan of NCCls.

اتمام و پرداخت ترمیم های زیبایی کامپوزیت و سرامیکها در دهان

سخنران: دکتر مهشید محمدی بصیر

دانشیار گروه ترمیمی، دانشکده دندانپزشکی شاهد

دوام و پایداری و نیز ثبات رنگ و درخشندگی انواع ترمیم های زیبایی شامل کامپوزیت ها و سرامیک ها درمحیط دهان بسیار وابسته به روش اتمام و پرداخت نهایی آن ها میباشد و این موضوعی است که در مقالات و کتب مختلف کمتر مورد بحث و بررسی قرار گرفته است. بعلاوه به دلیل دشواری و تعدد مراحل کلینیکی ترمیم های زیبایی، معمولا مرحله نهایی که اتمام و پرداخت این ترمیم ها است، از طرف دندانپزشکان مورد توجه و دقت زیادی قرار نمیگیرد. پرداخت دقیق رستوریشن های زیبایی علاوه بر ایجاد سطح صاف و صیقلی و بسیار زیبا ، موجب کاهش تجمع پلاک ، سهولت در تمیز نمودن توسط بیمار و عدم ایجاد التهاب در اطراف بافت های لثه ای مجاورمی گردد. این مرحله به ویژه دارای تاثیر مستقیم بر روی استحکام ترمیم های سرامیکی می باشد. بسیاری از مقالات حاکی از آن است که سطح سرامیک پرداخت شده حتی میتواند از سرامیک گلیز شده نیز صاف تر و صیقلی تر باشد. مقالات جدید حاکی از آن است که انواع سرامیک ها من جمله ترمیم های تمام سرامیک همچونe.max ونیر های فلدسپاتیک و زیرکونیای مونولیتیک را میتوان در دهان بیمار به طور کامل پرداخت نمود. این موضوع به خصوص در مواردی که پس از سمان نمودن رستوریشن نیاز به تنظیمات اکلوزالی باشد بسیار حائز اهمیت است. به علاوه با توجه به تاثیر ساینگی انواع سرامیک ها بر روی مینای مقابل، بسیاری از منابع و مراجع بر پرداخت متوالی و دوره ای ترمیم های سرامیکی تاکید دارند. این مقاله روش های پرداخت انواع کامپازیت ها و سرامیک های زیبایی را در دهان بیمار مورد بررسی قرار میدهد و مروری بر انواع سیستم های پرداخت موجود در بازار دندانپزشکی صورت می گیرد.

عوارض ناشی از بلیچینگ، پیشگیری و درمان

سخنران: دکتر حمیده سادات محمدی پور

استادیار گروه ترمیمی، دانشکده دندانپزشکی دانشگاه علوم پزشکی مشهد

در اصلاح بد رنگی های دندانی درمان های متعددی مطرح می شود که محافظه کارانه ترین آنها سفید کردن (بلیچینگ) با مواد اکسید کننده است. در اثر کاربرد مواد اکسید کننده عوارض مختلفی روی خواهد داد که یکی از شایع ترین آن ها به ویژه در روش بلیچینگ در مطب بروز حساسیت های پالپی است. میزان بروز حساسیت پس از کاربرد کاربامايد پراکسید ده درصد ۱۵-۶۵ درصد گزارش شده و در موارد کاربرد هیدروژن پراکسید همراه با حرارت از این مقدار فراتر رفته و به ۶۷-۷۸ درصد می رسد. غالبا این حساسیت گذرا بوده و به طور طبیعی ظرف مدت ۴ روز از بین می رود. اما در مواردی تا یک ماه پس از درمان ادامه می یابد. شدت بروز این حساسیت گاهی به قدری است که منجر به ایجاد وقفه در درمان قبل از به دست آوردن نتایج مطلوب می شود. یکی از راه های کاهش حساسیت، سیل کردن توبول های عاجی باز به منظور محدود کردن جا به جایی مایعات در آن ها (کاهش جریان هیدرودینامیک) است. بنابراین پروتکل های مختلفی جهت کاهش حساسیت پالپی همراه با بلیچینگ ارائه شده است. در این روش ها مواد حساسیت زدا و یا سیل کننده توبول های عاجی باز قبل، حین و یا بعد از بلیچینگ به کار می روند. از این ترکیبات می توان به ترکیبات حاوی فلوراید، نیترات پتاسیم، بیوگلاس، ترکیبات حاوی کلسیم مانند آمورفوس کلسیم فسفات و ... اشاره نمود.

Save or Extract?

سخنران: دکتر محمد جواد مقدس

دانشیار گروه ترمیمی، دانشکده دندانپزشکی دانشگاه علوم پزشکی مشهد

هنگامی که به تاریخچه دندانپزشکی نگاه میکنیم دندانپزشکان عمومی به کمک متخصصین رشته های مختلف دندانپزشکی تلاش زیادی در جهت حفظ دندان کرده اند. با این وجود باز هم عده ای از انسان ها دچار پوسیدگی دندانی، ناراحتی لثه ای و یا تروماهای مختلف میگردند که گاهی تشخیص بین نگهداری یا حذف دندان را مشکل میسازد. در این موارد پاسخ چند سوال کلیدی میتواند راهنمای مناسبی برای تصمیم گیری نهایی ما باشد. اولین و اساسی ترین سوال مسیر این است که آیا دندان قابل ترمیم میباشد و آیا میتوان بر روی دندان فوق سوپر استراکچر قرار داد؟ برای سوال دوم باید پرسید که آیا دندان مذکور میتواند یک درمان ریشه موفق را دریافت نماید یا خیر و تمام چالش ها و گزینه های پیش رو باید مطالعه شود. نهایتا در راستای پاسخ به آخرین سوال کلیدی باید قابل انجام بودن درمان های لثه ای لازم برای این کیس را مورد بررسی قرار داد . پاسخ به این سه سوال مهم و چالش های موجود در هر کدام میتواند ما را به سمت تصمیمی درست برای نگهداری یا حذف آن دندان -به صورت علمی- سوق دهد. رویکردی همه جانبه و جامع برای تشخیص و طرح درمان در این پروسه بسیار با ارزش محسوب میشود؛ همچنین تبحر و مهارت بالا، تجربه های قبلی و استفاده از تمام ابزار های تشخیص حائز اهمیت خواهند بود.

آشنایی با نرم افزارهای طراحی لبخند:
دورنما ، مزایا و محدودیت ها

سخنران: دکتر رضا ملا

متخصص جراحی لثه،فلوشیپ لیزر در دندانپزشکی، فلوشیپ ترمیمی_زیبایی

گرایش روز مراجعین مراکز درمانی دندانپزشکی به سمت انجام درمانهای زیبایی سبب گردیده تا عمده فعالان حوزه درمان سعی در ارائه چنین سرویسهایی به مخاطبین خود داشته باشنددر تناسب بین بافت نرم و سخت ناحیه استتیک و در اصلاح بی نظمی و یا بدرنگی دندانهای ناحیه قدامی بهبود استتیک همیشه از همکاری چند بخشی بین درمانهای ارتدنتیک، پریودنتال و ترمیمی زیبایی حاصل می گردیده و معمولا نتیجه درمان برآیندی از تجربه تیم درمانی و نگاه بین بخشی و همه جانبه برای بهبود درمان بوده است.با این حال با اینکه طرح درمان پیشنهادی همیشه در معرض قضاوت و تایید بیمار قرار می گرفته است اما نتایج درمان کمتر از سوی وی قابل پیش بینی و یا جرح و تعدیل بوده است. طی سالیان گذشته فراهم شدن امکان طراحی دیجیتال لبخند برای مخاطبین درمانهای زیبایی دندانپزشکی به بهبود تعامل درمانگر_ بیمار کمک شایانی نموده و این امکان را فراهم ساخته تا مخاطب به شکل فعالانه در طرح ریزی درمان دخالت داده شده و با بررسی آلترناتیوهای درمانی به بهبود نتایج و حصول رضایت بیشتر از جانب بیمار منتهی گردد. با این وجود این نرم افزارها از لحاظ داده های ورودی، سهولت کالیبراسون و آنالیز ابعاد، قابلیتها و تنوع ابزارهای طراحی، تنوع طرحها و آناتومیهای پیش فرض و ... تنوع چشمگیری را نشان می دهند. در این ارائه سعی بر این داریم تا با بررسی مقایسه ای نرم افزارهای شایع مورد استفاده در این زمینه با امکانات و محدودیتهای طراحی دیجیتال لبخند آشنایی پیدا کنیم.

ترمیم دندانهای معالجه ریشه شده

سخنران: دکتر منصوره میرزایی

دانشیاربازنشسته گروه ترمیمی، دانشکده دندانپزشکی دانشگاه علوم پزشکی تهران

یکی از چالش برانگیزترین درمانهای دندانپزشکی باز سازی دندانهای اندو شده است . در اغلب موارد ترمیم دندانهای اندو شده مشکل تر از دندانهای زنده است . ترمیم دندانهای اندوشده باید انقدر گیر واستحکام داشته باشد تا در برابر نیروهای جویدن مقاومت نماید و ساختمان دندانی باقیمانده را نیز محافظت نماید . استحکام دندانهای اندو شده به عوامل گوناگونی ازجمله سن ، تعداد دندانهای مجاور ،تماسهای دندانی ، موقعیت دندان در قوس دندانی ، نوع دندان .پایه و به میزان نسج سخت از دست رفته وعوامل دیگری بستگی دارد.

در این سخنرانی سعی خواهد شد به گاید لاین های مهم جهت ترمیم دندانهای اندو شده اشاره نمود

گاید لاین های مهم شامل:

۱- درمان اندو با موفقیت انجام شده باشد

۲- هنگام تهیه حفره واماده سازی برای دندان اندوشده حد اقل از نسج سالم برداشته شود

۳- اگر چه با افزایش طول پست گیر واستحکام افزوده میشود ولی سیل اپیکالی به مخاطره میافتد

۴ - ایجاد حداقل ۲میلیمتر فرول در ناحیه سرویکال جهت جلوگیری از شکستگی تاج

۵- در دندانهای قدامی اندو شده که نیاز به کران دارند، معمولا به پست وکور نیاز دارند

۶- در هنگام چسباندن پست تمرکز استرس باید حداقل باشد

۷- پرکردن کانال دندان با گوتا نقش مهمی در سیل اپیکالی دارد

۸- نوع سمان حداقل اهمیت را در گیر ومقاومت دندان دارد

۹- بطور ایده ال از فلزات مشابه جهت پست وکور وکران بکار ببریم

۱۰- کاربرد سمانهای رزینی جهت پستهای همرنگ توصیه میشود

در این سخنرانی به تفصیل این موارد مورد بررسی قرار خواهد گرفت

Resin Modified Glass-ionomer Materials

سخنران: دکتر حسام میرمحمدی

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This presentation attempts to provide information about the current status of the resin modified glass-ionomer materials. I will try to highlight some of the dilemmas, in the hope that this will help careful consideration of their use. Clinical use, indications and contraindications will be discussed.

How minor tooth movements can improve cosmetic dentistry?

سخنران: دکتر فرزین هروی

استاد گروه ارتودنتیکس ، دانشکده دندانپزشکی دانشگاه علوم پزشکی مشهد

In recent years, trend is toward cosmetic dentistry, especially for adult patients with crooked anterior teeth who want to have anelegant smile through a short-term treatment. Many times, restoration of these teeth may lead to a great damage to the teeth and their supporting tissues.

Minor tooth movements by orthodontic appliances can help restorative dentists to preserve dental tissues and improve patient's satisfaction by offering them a better appearance.

In this lecture we will review clinical methods for moving a group of teeth to an appropriate position for operative dentistry. Furthermore, new methods and more tolerable appliances will be introduced which can facilitate these movements and lead to better result for patients. Using clear aligners, fiber-reinforced composites, and mini-implants will be discussed during this presentation.

Direct Acid-Etched Bridge

سخنران: دکتر علی یزدانی

متخصص دندانپزشکی ترمیمی و زیبایی

پوسترها به ترتیب

حروف الفبای

اسامی ارائه دهندگان

Effects of Carbamide Peroxide Bleaching Agent on Color and Translucency Changes of Three Composite Resin Types with or without Bonding Agent

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**Presenter: Sanaz Abbasi*

ABSTRACT:

Introduction: The bleaching agents can lead to color and translucency changes in composite resins. Due to the increasing use of nano composites and silorane-based composites, this study aimed to examine the color and translucency changes of restorations after applying the bleaching agents.

Materials and Methods: In this experimental-laboratory study, 132 composite discs were divided into three groups based on the composite type, including the microhybridcomposite Z250, nanohybrid composite Z350, and silorane-based composite P90. After acid etching on half of the samples in each group, they were covered with resin bonding agent. Then the color and translucency evaluation was performed by reflectance spectrophotometer using CIELAB system (USA, II-Xrite). Each composite subgroup was divided into two new subgroups, namely 20% carbamide peroxide bleaching agent and control groups. Final color and translucency changes were calculated and assessed after applying bleaching agent. The statistical analysis was carried out using the one-way analysis of variance, Tukey's Honest Significant Difference test, and t-test.

Results: The effects of composite and bleaching agent types, as well as bonding agent, on the samples' surface were statistically significant ($P<0.001$). The color changes in the microhybrid composite were higher than those of nanohybrid and silorane-based composites ($P<0.001$). Moreover, the color changes in 20% carbamide peroxide bleaching group were higher than that of the control group ($\Delta E>3.3$; $P<0.001$). The results of translucency changes were consistent with the findings of color change measurements.

Conclusion: According to the results of the present study, most of the color changes in the microhybrid composite appeared after applying 20% carbamide peroxide bleaching agent. The rebound samples were less affected by the bleaching agents. The least color and translucency changes were associated with nanohybrid composites.

Key words: Bleaching, Microhybrid composite, Nanohybrid composite, Silorane-based composite, Translucency

Surface treatment with a fractional CO2 laser enhances shear bond strength of resin cement to zirconia

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**Presenter: Farzaneh Ahrari*

ABSTRACT:

Aims: The present study investigated the effect of different surface treatments on shear bond strength (SBS) of resin cement to zirconia.

Materials and methods: Ninety zirconia blocks were prepared and divided into 6 groups of 15 by treatment. Group 1 served as the control group, whereas groups 2 and 3 were treated with air abrasion and a universal primer (Monobond plus), respectively. The remaining zirconia copings were treated with a fractional CO2 laser for 10 seconds using 10 W/10 mJ (group 4), 10 w/14 mJ (group 5) or 20 W/10 mJ (group 6). A luting cement (Clearfil SA) was bonded to the treated zirconia surfaces and cured for 40 seconds. SBS was measured with a universal testing machine and the type of bond failure was determined.

Results: There was a statistically significant difference in SBS among the study groups ($p<0.001$). The highest SBS values were observed in the groups treated with the fractional CO2 laser at settings of 20 W/10 mJ (28.1 MPa) or 10 W/14 mJ (27.4 MPa), followed by the specimens treated with the universal primer (22.8 MPa). The control specimens exhibited the lowest SBS (9.4 MPa) among the study groups ($p<0.05$). There was no significant difference in the distribution of failure modes among the groups ($p=0.871$).

Conclusions: The application of fractional CO2 laser can improve bond strength of resin cement to zirconia ceramic, and thus it could be considered as an appropriate alternative to conventional methods of zirconia surface treatment.

Key words: Zirconia , bond strength, laser, ceramic, porcelain, fractional, CO2.

Evaluation of polymerization shrinkage and polymerization stress of different bulk filled composites after soft start and conventional light curing

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[*]*Presenter: Fatemeh Ahmadi Bamroud*

ABSTRACT*:*

Aim and Purpose: The aim of the present study was to evaluate the polymerization shrinkage and polymerization stress of different bulk filled composites after the soft start and conventional light curing.

Methods & Materials: In this study, 3 different bulk filled composites (In Ceram Bulk fill, Filtek bulk fill, Extrafill) were tested. LVDT was used to evaluate polymerization shrinkage. 10 samples were prepared for each group, 5 were cured by soft start method and 5 by conventional. Universal Testing Machine was used to determine polymerization stress. 10 samples of each group were prepared with the same weight and thickness of 1 mm, they were divided into two groups according to curing mode and the stress was being evaluated at the same time. Data was analyzed by the TWO WAY ANOYA and Tukey test.

Results: Based on this study, there were significant differences in polymerization shrinkage between Inceram cured with the conventional method and other groups. Inceram composites showed significant lower polymerization shrinkage while were cured by the soft start method. In other groups, light curing method had no effect on polymerization shrinkage. Filtek composite was cured by both two different methods showed significant difference with other groups in polymerization stress and they showed the least stress.

Conclusion: Inceram composites showed the highest polymerization shrinkage and soft start curing was completely effective to reduce it, but in other groups, it was not significant. Filtek composites had the lowest polymerization stress and it didn't matter which method they were cured and light curing method had no effect on polymerization stress.

Keywords: Polymerization shrinkage, polymerization stress, soft start, comp

Perception of smile esthetics among patients and dentists in Tehran, 2018

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**Presenter: Neda Amirimehr*

ABSTRACT:

Aim and Purpose: Concepts of beauty can vary among people with different age, gender, educational level, and cultural background. This study purposed to evaluate the perception differences of smile esthetics among female patients, dental students, general dentists and specialists.

Materials and Methods: A smiling photograph of a young adult female was taken and digitally altered for three components by Adobe Photoshop software. Seventy three individuals were asked to assess the modified photographs and select the most attractive and unattractive pictures respecting each component. Data were statistically analyzed with SPSS soft-ware. Kruskal-Wallis and Mann-Whitney tests were used to verify significant differences among individuals
($P<0.05$).

Results: This study was conducted on 73 subjects including 29 males (40%) and 44 females (60%), age ranged between 24-68 years and mean±SD of 38.4±10.9 years. In respect to selection of most unattractive gingival exposure, female patients had significant differences from dentists ($P<0.05$). Female patients' perception of most unattractive lateral-to-central incisors length ratio was significantly difference to opinions of dentists ($P<0.05$). There was no significant differences in genders ($P>0.05$).

Conclusion: According to findings of this study, esthetic Perception differs among individuals with various professions.

Keywords: smile design, gingival display, esthetic perception**.**

Evaluation of microshear bond strength of Tri-Calcium Silicate-based Cements (Biodentin ،TheraCal LC) to Different composites

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**Presenter: Mina Ansarolhoseini*

ABSTRACT:

Introduction: the aim of this study was to campare microshear bond of different composites to biodentin and theraCal LC, as pulp capping using a silane-containing universal adhesive.

Methods: Forty disks of TheraCal LC and Biodentine were prepared.The specimens were divided into 4 subgroups according to the composite applied: Arabesk top (micro-hybrid),Grandio (nano-hybrid), Admira fusion (ormocer based), everX posterior (short fiber-reinforced).Scotchbond universaladhesive was applied on the surface of all specimens with self-etching method. Composites were placed on the specimens using clear plastic tubes. Their micro-shear bond strength were measured by a MTD-500 Plus machine. Data were analyzed by one way ANOVA and Tukey test.

Result: No significant difference was observed between the bond strength of Biodentin and TheraCal LC to composites. Admira fusion composite showed higher bond strength to theracal LC compared to other composites, but statistically it was only different from everX posterior composite.The bond strength of Admira fusion composite to biodentin in comparison with the other composites was significantly higher.Overall there were no significant difference in the bond strength of Arabesk top, Grandio and posterior everX composites to pulp capping agents. The predominant failure mode was cohesive in pulp capping materials.

Conclusion: The placement of ormocer-based Admira fusion composite using Scotchbond Universal Adhesive on Biodentine and Theracal LC increased the bond strength compared to methacrylate-based composites

Keywords: Biodentin, TheraCal LC, Micro-shear bond strength, composites.

Esthetics in Anterior Implant Prosthetic Restorations: Case Series

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**Presenter: Negar Azami*

ABSTRACT:

Achieving a satisfactory anterior esthetic outcome is a considerable challenge for most dentists. Multiple interdisciplinary approaches are necessary to resolve esthetic defects, especially in cases of missing tooth and excessive space between anterior teeth. The prostatic rehabilitation of a single missing anterior tooth has always been a challenging task for a clinician. Very often drifting of teeth to edentulous area causes a hindrance in the restoring process. In these situation golden proportion is a use full tool for the evaluation of summery, dominance and proportion in the diagnosis of tooth arrangement.

This case report describes an interdisciplinary approach used for a 38-Year-old female with diastema between central incisor and peg-shaped right lateral incisor and missing of right canine. The interdisciplinary treatments included spaces analysis to achieve golden proportion in anterior reign and so implant placement and restorative treatments. Composite laminate veneers for central incisors and right lateral incisor and an implant in canine reign were successfully applied to correct esthetic problems and achieve improved esthetic and functional outcomes

Investigating the Effects of LED and QTH Light Cure Devices on Composite Hardness

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**Presenter:Amir Ali Behdani*

ABSTRACT:

Aim and Purpose: Light cured composites allow dentists to begin the process of polymerization on demand. According to the importance of curling on the mechanical properties of composites, the purpose of thismeta-analytical study is to compare the effectiveness of light curing LEDs and QTH devices on the hardness of composites.

Materials and Methods: In this meta-analysis review articles from the PUBMED, SCOPUS, and ISI databases were analyzed without any limitations in language or time, to compare the hardness of composites after curing with LED and QTH devices .Two analyzes were carried out with out any limitation in time or language, with a radiation intensity of less than 500 and more than 500 mW / cm2. The thickness of the cured composite in both groups was considered to be 2mm. Non-matched articles with the variables mentioned in the study were deleted. Data were analyzed using the random effects model (α=0.05).

Results: Using the random effects model, there was no significant difference between the hardness of 2 mm thickness of the composite after curing with LED and QTH at light intensity higher than 500 mW / cm2 (p = 0.43) but there was a significant difference (p=0.000)at an intensity less than 500 mW/Cm2.

Conclusion: The lightcure LED device was better in terms of its effect on the hardness of composites at below500 mW / cm2 intensity than QTH, but did not show differences at higth intesity.

Keywords: Composite Resin, Hardness, Curing Light.

Microleakage Evaluation of Class II Composite Resin Restorations with Different Thicknesses of Resin-Modified Glass Ionomer

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**Presenter:Shahrzad Delshad*

ABSTRACT:

Aim and Purpose: one of the weaknesses of class II composite resin restorations is gingival microleakage which contributes to postoperative sensitivity and secondary caries.The aim was to evaluate the microleakage in class II composite resin restorations with different thicknesses of resin-modified glass ionomer (RMGI).

Materials and Methods: : in this in-vitro study, standardized class II slot cavities were prepared on the proximal surfaces of 90 molars.in group 1.total-etch adhesive and composite resin were applied using the incremental technique.in group 2,total-etch adhesive and composite were applied using the bulk technique.in group3, 1 mm of RMGI was applied over the gingival floor, which was covered with increments of composite.in group4, 1 mm of RMGI was placed on the gingival floor and covered with composite using the bulk technique. In group 5, 2 mm of RMGI was applied over the gingival floor, followed by an incremental composite placement.in group 6, 2 mm of RMGI was placed on the gingival floor, and the cavity was filled using the bulk technique. After thermocycling and staining with methylene blue, the samples were sectioned, and the extent of dye penetration was examined under a stereomicroscope. Data were analysed using kruskal-wallis test and logistic regression (Alfa=0.05).

Results: the lowest and highest dye penetration were observed in the first, second, and fifth groups, respectively. the RMGI thickness did not influence the microleakage scores significantly in either composite placement techniques (P=0.828)

Conclusion: none of the restorative technique completely eliminated micreloeakage of class II composite resin restorations.

Keywords: dental leakage, composite resins, glass ionomer, open sandwich

The dentin micro-shear bond strength of the novel adhesives containing chitosan-silver (CH-Ag2O) particles

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**Presenter: Maryam sadat Daneshmand*

ABSTRACT:

Aim and Purpose: The aim of this study was to investigate the dentin micro-shear bond strength (μSBS)of the experimental adhesives containing different concentrations of chitosan-silver oxide (CH-Ag_2O) particles.

Methods & Materials: The dentin surfaces of 28 freshly extracted sound human third molars were divided into 4 groups. Two experimental etch & rinse adhesives using 1% ofCH-Ag_2O particles with two Ag_2O concentrations (20 and 60 mg), the experimental adhesive with no additives and Adper Single Bond2 as the control group were used following acid etching. After adhesion procedures and 24 h storage at a temperature of 37 °C and 100% humidity, the samples were loaded to the fracture point. The fracture modes were classified to the adhesive, cohesive and mixed failures. One-way ANOVA, Tukey-HST Post Hoc and Chi-square tests were used for comparing the μSBSs of the different adhesives.

Results: The highest mean value of μSBS was reported for the adhesive with no CH (36.05 MPa). Based on the Tukey HSD test, the adhesive containing 1% CH-Ag2O 60 was produced significantly lower μSBS (17.42 MPa) compared with SB and NC groups (P-value =0.014 and 0.001, respectively). The adhesive containing 1% CH-Ag_2O 20 showed comparable μSBS with two control groups.The adhesive failure was reported as the main failure in all study groups.

Conclusion: Experimental etch & rinse adhesive containing 1% CH-Ag_2O 20 had comparable μSBS to dentin compared with the commercial dentin bonding agent.

Keywords: Chitosan, Dentin bonding agent, Silver Oxide, Shear bond strength.

Nanoionomers, Structure and Properties – A Review

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**Presenter: Mahsa Davarpanah*

ABSTRACT:

Aim and Purpose: Glass ionomer cements (GICs) have been used for a variety of applications _such as restorative, luting, base and lining materials_ in dentistry. Moreover, and owing to their bioactivity, color match, self-adhesive properties, GICs are considered to be amongst the most popular dental materials. Also, since GICs have shown sufficient release/uptake of fluoride, they are deemed a favorable material to be used in patients with high susceptibility to caries. Nevertheless, there are drawbacks regarding GICs; poor wear resistance, brittleness, and sensitivity to moisture are instances of such. Thus, and so as to meliorate the poor mechanical and physical properties of GICs, incorporation of nanoparticles into the structure of GICs have been recently introduced.

The aim of this presentation is to investigate the structure of newly-introduced nanoionomers (NICs) and explore their properties in further detail.

Methods and Materials: A comprehensive electronic search was conducted using PubMed, Google Scholar, Cochrane and Scopus search engines; using "Glass ionomer, nano-modification and mechanical properties" as key words. The original and review articles, published between 2014 & 2019 and written in English, were chosen.

Results: Nanoionomers resemble GICs in structure; however, research has shown that the rate of acid-base reaction is more in nanoionomers than that of GICs. The FAS glass of NICs has high surface area. In addition, incorporation of nanoparticles to GICs can enhance mechanical properties _such as compressive, tensile and flexural strengths, polishability, optical characteristic, wear resistance and biocompatibility. Nevertheless, there is no significant difference in the bond strength and microleakage between GICs and nano-modified GICs.

Conclusion: Using nano-modification in GICs seems to be a promising approach to improve the physical and mechanical properties of the aforementioned materials.

Keywords: Glass Ionomer Cements, Nanoionomer Cements, Nanotechnology, Mechanical Properties

Evaluation of Micro-Shear Bond Strength in Interface of Repaired Aged Methacrylate-based Composites by Means of Silorane-based Composites after Different Surface Treatments: An In-vitro Study

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**Presenter: Abdolrahim Davari*

ABSTRACT:

Aim and purpose: As the polymerization pattern of methacrylate-based composite resins (MBCR) differs from siloran-based composite resins (SBCR) ones, the aim of present study was an evaluation of the micro-shear bond strength (μSBS) of SBCR bonded to aged MBCR after sandblasting with micro and nano abrasive particles with or without silane application.

Material and Methods: 80 samples of MBCR were prepared by light curing. After incubation, they were thermocycled for 5000 cycles. Then, the specimens were divided into two subgroups randomly. The first group was air abraded by 50 μm particle of Al2O3 and was divided into 4 subgroups (M1, M2, M3, and M4). The second head group was air abraded by 80 nm Al2O3 and was randomly divided into four subgroups (M5, M6, M7, and M8). After etching, the surface was conditioned by methacrylate-based adhesive with (M2 and M6) or without (M1 and M5) silane coupling agent. The same procedure was done for silorane-based adhesive (M3 and M7/M4 and M8). Each MBCR group was bonded to its correspondence SBCR group, and μSBS was done on each bonded samples. The collected data were subjected to Kolmogorov-Smirnov, ANOVA, Tukey and three-way ANOVA tests by SPSS software ver.20 at 5% significance level.

Results: The results manifested significant differences among all groups (P = 0.00). Furthermore, the pattern of μSBS fracture was 100% in adhesive part in all of the groups.

Conclusion: Micro sized abrasive particles provide higher μSBS than nano ones in aged composite resins. Furthermore, the application of silane prior to adhesive resins is recommended for achieving higher μSBS.

Keywords: Composite resin, micro particle, micro-shear bond strength, nano, sandblasting

Different factors that affect composite colour stability

Samaneh Eslami[1,*]
Specialist in operative & cosmetic dentistry

**Presenter: Samaneh Eslami*

ABSTRACT:

Aim and Purpose: this review article focuses on different factors can affect composite color stability & explain why some of dental composites are more susceptible to discoloration

Materials and Methods: manual & electronic searches of literature were performed from 1990 to 2018 in PubMed, Google scholar& Medline based on key words & English articles were selected

Results: there are different factors can influence the susceptibility of dental composites to discoloration. External discoloration can be the result of dietary, smoking habits, bad oral hygiene, use of different mouthwashes and adsorption or absorption of water soluble stains throughout the resin matrix. The composition and size of the filler particles affect surface smoothness and susceptibility to extrinsic staining .Intrinsic factors, such as the resin matrix of composites and incomplete polymerization, have a considerable influence on colour stability.it has been shown that some composite resins components like the photoinitiator system may have an effect on discoloration phenomenon Even the technical procedures like composite pre-heating can influence it.

Conclusion: discoloration of resin composites is a common reason for replacement of these restorations therefore understanding the factors can influence it will help the clinician to choose the best material & enable the clinician to ensure predictability of success

Keywords: Colour stability, Dental composite, Discoloration, Colour matching, Surface roughness

Post-orthodontic White Spot Lesions: Prevention and Treat

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**Presenter: Neda Eslami*

ABSTRACT:

(White spot lesions (WSLs) around orthodontic brackets are the most common side effect of fixed orthodontic treatment. In contrast to normal population, however, the microecology of orthodontic patients seems to change following the placement of fixed appliances. Prevention of WSLs begins by implementing a good oral hygiene regimen including proper tooth brushing with a fluoridated dentifrice. Additional sources of fluoride such as mouth rinses or varnishes may be beneficial for those patients with an increased caries risk. Additionally, using fluoride containing sealants and adhesives to bond brackets has been attempted.

White spot lesion occurs because of the subsurface mineral loss, while the surface enamel is intact. Larger lesions occur in gingival quadrants and in upper central and lateral incisors particularly. Diagnodent and QLF are sensitive techniques that quantitatively diagnose and assess remineralization of white spots. However, there are confounding factors that could result in false results.

The aim of the modern dentistry is to prevent the progression of white spots and return the strength, esthetics and function of the teeth. Various methods have been introduced to help remineralize the white spot. It is advisable to first allow for a slower calcium and fluoride ion penetration of the WSL from saliva or through the application of lower concentrations of fluorides. Calcium phosphate-based systems such as CPP-ACP, calcium sodium phosphosilicate, nanohydroxyapetite, bioactive glass, xylitol, self-assembled peptides are among the non-invasive techniques used to treat WSLs. Also, resin infilteration, composite restorations, and veneers can be applied when other alternative techniques fail to show satisfactory results. Changes in remineralization of WSLs can be visible at least 3 months after the start of treatment.

The latest techniques and researches about the prevention and treatment of WSLs are discussed in this article.

Keywords: white spot lesions, orthodontics, treatment

Enhancing to more stable dentine bonding with application molti-mode adhesive: reality or business

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**Presenter: Fariba Ezoji*

ABSTRACT:

Aim and Purpose: In current 10 years, adhesive dentistry has rapidly advanced .Recently, another group known as universal or multimode adhesives was added to the previous types total etch and self-etch. Manufactures of this types adhesive claim that universal adhesives provide significant difference in longevity and magnitude's bond to dentine. The aims of this paper, is to conduct a review of the chemical composition, performance of functional monomers exist in the bonding's content and different practical modes of this adhesive. So, this study will show that does the bonding of multi-mode adhesive to dentine vary depending on whether the etch and rinse or self-etch mode is used?

Materials and Methods: An electronic search was performed of Medline/Pubmed, science Direct

Results: The meta-analysis showed no statistically significant difference between the etch and rinse and self-etch mode in multimode Adhesive

Conclusion: the bonding of multi-mode adhesive to dentine doesnot depend on practical modes (the etch and rinse or self-etch mode).

Keywords: Multi mode Adhesive, Dentine bonding, durability

Preserving Soft Tissue of Aesthetic Zone after a Fresh Sockets Implant.

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**Presenter:Amir Fahimipour*

ABSTRACT:

Aim and Purpose: The purpose of this clinical study was to measure the height of the interproximal gingival papillae adjacent to immediate implants in fresh sockets with an immediate loading. The hypothesis was that specific positioning of the proximal contact areas of the interim crowns would facilitate the maintenance of the interproximal papilla.

Materials and Methods: Twelve participants were provided implants (n=24) in the aesthetic zone of maxillary area that were loaded with an interim crown immediately after tooth extraction. The proximal contact areas of the interim crowns were positioned 3 to 4 mm incisal to the interproximal by using a CAD/CAM template. Papilla height was classified according to a previously described papilla index.

Results: A comparison was made between the papilla height before the extraction, at interim crown placement after the implant placement, and at 6 and 12 months postoperatively.

After 1-year follow-up, the distal and mesial papilla indices increased significantly (P.Value=0.35).

Conclusion: This study shows that the Using prosthetic template for positioning a crown as an immediate implantation does prevent the regeneration of the height of the interproximal papillae.

Keywords: Dental Implants, Fresh Socket, Preservation.

The Amount of Fluoride Release and Antibacterial Activity in New Fluoride Releasing Materials

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**Presenter: Atiyeh Feiz*

ABSTRACT:

Aim and Purpose: The antibacterial activity of restorative materials depends to the potential of fluoride release from these materials into the oral environment. This study aimed to evaluate invitro fluoride release and antibacterial activity of RMGI (Fuji II LC), Zirconomer, Giomer (Beautifil), Cention N.

Materials and Methods: In this invitro study, twenty cylindrical specimens with diameter of 4mm and height of 2mm were prepared from each material. Half of the specimens were used for antibacterial activity against Streptococcus mutans by using the Direct contact test. The optical density was measured in 0,1,2,3,4,5,24,48 and 172 hours in 630 nm by ELISA device with 800 TS microplate reader. The other half of the specimens were used for measuring the fluoride release in PPM at day 1,3,7,14, and 21 by using a fluoride ion selective electrode. The data were analysed using one-way ANOVA followed by Tamhane post-hoc test and repeated measure ANOVA followed by paired T test in SPSS software (V.22).

Results: There was a significant difference in fluoride release and optical density among groups ($p<0.05$). The maximum cumulative fluoride release of day 1-7 was related to Zirconomer, followed by Cention N, Fuji II LC and Beautifil, respectively. This order remained the same until the 21 day. Within 48 hours of setting, zirconomer had minimum and giomer had maximum optical density. Zirconomer optical density increased on the 7th day but still remained at its lowest.

Conclusion: According to the limitation of this study, the most fluoride release and antibacterial activity was seen in Zirconomer, followed by Cention N, Fuji II LC and Beautifil groups.

Keywords: Streptococcus mutans, Fluoride release, Antibacterial activity, Fluoride releasing materials

The Effect of Implant primary stability on Early Marginal Bone Loss: A prospective clinical study

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**Presenter: Ali Forouzanfar*

Aim or Purpose: Dental implants could be inserted with different primary stability values depending on the bone quality and surgical procedures. Higher values of primary stabilitycould result in tissue ischemia and bone necrosis that can cause early marginal bone loss and esthetic problems around dental implants especially in the anterior part. The purpose of this research is to evaluate correlations between implant insertion torques of dental implants and early marginal bone loss.

Materials and Methods :One hundred edentulous site requiring dental implants were selected for this study. The implant surgeries performed for the patients with the same procedure and the implant primary stability measured using a calibrated ratchet for the implants. The implants with similar design and dimension were divided into two groups based on the primary stability: higher than 35 Ncm or lower. Marginal bone level as the distance between implant shoulder and alveolar crest around dental implants were measured using parallel periapical radiographs immediately after surgeries and 4 months later. Data were analyzed using Mann-Whitney U and Spearman statistical tests.

Results :One hundred dental implant with the SLA surface placed for the patients with the mean age of 54 (31% female and 69% male). Statistical analysis revealed a positive weak correlation between insertion torque values and marginal bone loss.

Conclusions :Based on the findings of this research, higher insertion torques can lead to early marginal bone loss that should be considered for dental implants in the aesthetic zone.

Microleakage of a self-adhesive composite in class V cavities

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[*]*Presenter: Sedighe Sadat Hashemikamangar*

ABSTRACT:

Aim and purpose: This study aimed to assess the microleakage of a self-adhesive composite compared to conventional composites in class V cavities.

Methodology: In this study, standard class V cavities were prepared in the buccal surface of 204 extracted teeth and randomly divided into six groups for restoration with (A) Vertise Flow (Kerr) self-adhesive composite, (B) acid etching (Kerr) + Vertise Flow, (C) acid etching + Optibond FL (Kerr) + Vertise Flow, (D) Er,Cr:YSGG laser + Vertise Flow, (E) acid etching + Optibond FL + Premise Flowable (Kerr) and (F) acid etching + Optibond FL + Z250 (3M). The teeth in each group were then randomly divided into two subgroups of with and without thermocycling (10,000 cycles between 5-55°C). Microleakage was evaluated at the enamel and dentin margins under a stereomicroscope using the dye penetration method.

Results: No significant difference was noted in occlusal margin microleakage of non-thermocycled groups, but acid etching + Vertise Flow showed the highest microleakage. At the gingival margin, the difference between acid etching + bonding agent + Z250 and laser + Vertise Flow was significant (P=0.004). In thermocycled groups, the difference in microleakage at the occlusal margin of Vertise Flow with that of acid etching + bonding agent + Premise (P=0.002), acid etching + bonding agent + Vertise Flow (P=0.009) and acid etching + bonding agent + Z250 (P=0.037) groups was significant. The difference in microleakage at the dentin margin was also significant among the groups (P<0.05). The highest and the lowest microleakage were noted in laser + Vertsie Flow and acid etching + bonding agent + Vertise Flow groups, respectively.

Conclusion: Surface preparation with acid etching and bonding agent application results in better marginal and occlusal seal and lower microleakage in class V cavities. But laser irradiation and use of self-adhesive composite increase the microleakage.

Keywords: Self-adhesive composite, Microleakage, Er, Cr:YSGG laser

Synergistic effects of sodium ascorbate and acetone to restore compromised bond strength after enamel bleaching

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**Presenter: Negin Jabbari*

ABSTRACT:

Aim: To evaluate the effect of a new experimental solution containing sodium ascorbate (SA) and acetone on reversing compromised bonding to enamel immediately after bleaching.

Materials and Methods: The buccal surface of intact, extracted human premolars (n = 60) was bleached. The teeth were then randomly assigned to 6 groups according to the type of pretreatment applied prior to adhesive procedures: 10% SA in acetone-water solution applied for 1 and 5 min (groups 1 and 2, respectively); aqueous solution of 10% SA applied for 10 min (group 3); 100% acetone applied for 10 min (group 4); no pretreatment (negative control; group 5). An additional group (positive control; group 6) comprised unbleached teeth (n = 12). Two composite microcylinders were bonded on each specimen for evaluation of microshear bond strength (MBS) and failure modes. Data were analyzed using the one-way ANOVA and Tukey's post-hoc and chi-square tests at P = 0.05.

Results: Groups 1 and 2 yielded similar MBS values to groups 4 and 6 (positive control). The mean MBS of groups 3 and 5 (negative control) were similar, and significantly lower than that of the positive control group.

Conclusion: The application of 10% SA in an acetone-water solution prior to bonding procedures can restore compromised enamel bond strength to its unbleached state within a clinically acceptable time of 1 min.

Keywords: bleaching; enamel; bond strength.

Design and manufacture of dental prosthesis by 3D printing technology

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**Presenter: Sina Jafari*

ABSTRACT:

Aim and Purpose: additive manufacturing (AM) technology found applications with metal framework of fixed partial dentures, framework of removable partial dentures, facial prostheses and titanium implants in prosthetic dentistry. Laser beam sintered the selected areas on the alloy powders and the restoration is produced layer by layer at single stage. With new research emerging for molding materials and the forming process of rapid prototyping techniques, this method is becoming more attractive in dental prosthesis fabrication. The aim of this article was to critically review the current application of AM/3D-printing techniques in prosthodontics and to highlight the influence of various technical factors involved in different AM technologies.

Materials and Methods: In this review study, articles were searched with keywords [CAD/CAM, digital impression, 3D printer, rapid prototyping (RP) techniques, selective laser sintering/melting/direct metal laser melting (SLS/SLM/DMLS), and Additive Manufacture(AM)] in the MEDLINE/PubMed, EMBASE, and Google Scholar databases for relevant articles published in English between 1990 and 2019.

Results: Laser melting/sintering techniques have been used to manufacture crowns and metal frameworks for fixed metal-ceramic restorations that exhibit marginal adaptation comparable to those fabricated using conventional techniques, with values in the range of 75.0 to 99.0 µm. In accordance, in vitro studies reported comarable or even improved marginal fit of SLM-fabricated crowns and frameworks compared to the convention-ally cast and milled counterparts. SLM technique is increasingly used for the fabrication of removable partial denture frameworks. Using the SLS/SLM-AM techniques, the fine and complex structure of the framework can be accurately reproduced as designed. Jetting technology is used indirectly for the fabrication of conventional cast metal frameworks and FPDs. SLA and DLP in Prosthodontics. The two techniques are mainly used indirectly to fabricate try-in mock-ups/plastic shells to verify esthetics, phonetics, and occlusion prior to fabrication of final prostheses.

Conclusion: AM offers new possibilities in the field of prosthodontics, though its application/use is still limited. These systems can be helpful to obtained fixed restorations, facial prostheses, titanium implants, surgical models and stents

Keywords: Rapid Prototyping, Additive Manufacture, Digital Impression, CAD / CAM

A novel method for formulation of a stable in-office dental bleaching gel and its activator

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**Presenter: Sajad Javanshir*

ABSTRACT:

Aim and Purpose: In-office Dental bleaching is considered a conservative and biologically safe treatment for discolored teeth. Dental dehydration and enamel demineralization are expected to occur subsequent of using in-office bleaching gel. Dental bleaching systems have two separated components. An activator system and another one comprise aqueous hydrogen peroxide that dispensed from a single dispenser as a mixed viscous dental bleach composition. In this study we suggested a new formulation of bleaching gel and its activator to reduce sensitivity and demineralization of teeth.

Materials and Methods: The first composition is hydrogen peroxide at a concentration 40% (w/v), carbomer gelling agent, a buffer as pH modulator and Glycerol.Second component includes a gelling agent, catalyst, a pH alkaline buffer, a redox color indicator adapted to oxidize in the presence of a peroxide from a visible color into a neutralized color. After dispensing two component, we performed three bleaching session (15 minute) in a day and change in tooth color was measured by chroma meter. Color change (ΔE) was calculated using the color-difference equation established by the Commission Internationale de L'Eclairage.

Results: Results of the whitening data showed that the mean delta E for the product containing 40% hydrogen peroxide was 7.23 ± 1.89. The produced gel remained stable and no pH alteration was observed following dispensing of the two components. The volume of the final gel remained constant, checked after 45 minutes of gel preparation.

Conclusion: Taken together, our novel bleaching gel significantly is able to whitening teeth immediately without any side effect (demineralization and dehydration).

Keywords: Tooth bleaching, Hydrogen peroxide, Tooth sensitivity, Enamel Demineralization

Stress Distribution in Endodontically Treated Maxillary Premolars Based on Restoration Type: A 3D Finite Element Analysis

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[*] *Presenter: Elnaz Karimian*

ABSTRACT:

Aim and Purpose: Restoration of endodontically treated teeth is critical. Awareness of stresses developed by oblique and vertical forces in restorative methods take a great role in treatment plan. Teeth like premolars, due to anatomical shape and inherent form of stress distribution, could be lost by fractures which caused by these forces. Some fractures like vertical fracture which is probable in endodontically treated teeth, made teeth candidate for extraction and other surgical procedures. According to this fact that dental restorations should be conservative, theaim of this study is to determine stress distribution in four composite restorative methods.

Materials and Methods: Endodontically treated maxillary second premolars were restored with composite resin in four methods. For restoration, the models representing standard MOD restoration, both cuspscapping for 1mm and 2mm, and use of woven fiber in occlusal part, were prepared. The effects of the different restorative approaches on stress distribution were analyzed using three-dimensional finite element stress analysis.

Results: highest stress was observed in MOD tooth restoration and the amount of stress in naturalpart of tooth in woven fiber was lowest.

Conclusion: The simulation results show that in all models, oblique forces caused more stress than vertical forces. Also, there was slight difference in magnitude of stress between different types of restorations but with the result of this study we can say that use of woven fiber can partly reduce stresses.

Keywords: Endodontically Treated, Restorative Dentistry, Resin Composites, Woven Fibers, Finite Element Analysis

The effective antibacterial activity of the recombinant peptide compared with two herbals against some oral disease pathogens

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[*]*Presenter: Maryam Khorasanchi*

ABSTRACT:

Aim and Purpose: The aim of this study was to investigate the antibacterial property of the recombinant peptide of bacteriocin entrocin P (EnP), the essential oil of *Cuminum cyminum*, and the extract of *Ferulago angulata* on some oral pathogens. Additionally, the cytotoxicity of EnP was assessed.

Materials and Methods: The three pathogens containing *Streptococcus mutans* (ATCC 35668), *streptococcus salivarius* (ATCC 9222), *streptococcus oralis* (ATCC 35037), and *Enterococcus faecalis* (ATCC 29212), were selected to be tested, using the microbroth dilution method. For the control group the 0.2% Chlorhexidin (CHX) mouthwash was used. Besides, the cytotoxicity analysis was done on gingival fibroblasts by the MTT colorimetric method. The data were reported using descriptive methods, and analyzed by one-way ANOVA, and Tukey's HSD test.

Results: *S.mutans* and *S. oralis* were affected strongly by bacteriostatic and bactericidal effects of *C. cyminum* and *F. angulata* respectively (with the MIC and MBC value being 62.5 µg/mL). Generally the antibacterial properties of EnP were several times stronger than medicinal plants and CHX, except for *E. Faecalis* which CHX showed stronger bacteriostatic effects than EnP (1-14 µg/mL). Based on the cytotoxicity evaluation, no statistically significant difference observed between the cytotoxicity of the control group and that of Enp for three evaluations, except after 72 hours when the cell viability at the concentration of 3.75 µg/ml was significantly lower than that of the control group (P=0.05). However, there was no concentration of EnP to be over 50% of the growth inhibition (IC50) of the fibroblasts for the three evaluations.

Conclusion: EnP could be utilized in dental materials as a natural and safe antimicrobial agent against oral *streptococci* and *E. faecalis*, being as effective as CHX mouthwash.

Keywords: Antimicrobial peptide, Bacteriocin Entrocin P, Chlorhexidine, *Cuminum cyminum, Enterococcus faecalis, Ferulagoangulata*

Formulation of a stable at home dental bleaching gel

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**Presenter:Mehrzad Khorshid*

ABSTRACT:

Aim and Purpose: At home bleaching has been considered a conservative and biologically safe treatment used for discolored teeth. At-home bleaching systems composed of a gel include hydrogen peroxide which provides tooth lightening treatment. One of disadvantage of using home bleaching is dental sensitization and enamel demineralization which expected to occur subsequent of using of these gels. In this study we suggested a new formulation to reduce sensitivity and demineralization of teeth.

Materials and Methods: At first gel was formulate based 3% (w/w) of hydrogen proxides and the pH were set around 6.0. Then, thirty nine teeth were selected and using overnight for 14 days. For the next step, The potency of gel on teeth whitening and sensitivity of patient (pain evaluation) was measured and recorded. Change in tooth color was measured by spectrophotometer and dental sensitivity was measured by visual analog scale (VAS) system and all were compared with Whitestrips TM 6% H2O2 statistics.

Results: The produced gel remained stable and no pH alteration was observed. Furthermore, the whitening data showed that the mean delta E for the product containing 3% hydrogen peroxide was 9.42 ± 1.67. Also any hypersensitivity wasn't found on these patient. ΔE values of Whitestrips TM 6% H2O2 amounted 8.91 subsequently after bleaching.

Conclusion: Our home bleaching gel has been shown to be an effective tooth whitening product without any sensitivity (pain or gingival ressesion).

Keywords: Home Bleaching, Tooth whitening, Hypersensitivity

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The Effects of Universal Adhesive System and Snow-plow Technique on Microleakage of Cl II Composite Restorations in Primary Molars

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**Presenter: Ali Labafchi*

ABSTRACT:

Aim and Purpose: To evaluate the effects of using universal adhesive system and application of flowable composite via snow-plow technique on microleakage of cl II composite restorations in primary molars.

Materials and Methods: Ninety freshly extracted primary molars were selected. Cl II cavity preparations with gingival margin at CEJ were prepared in proximal surfaces of teeth, and then the samples were assigned to 3 groups: using universal adhesive in total-etch or in self-etch modes and conventional etch-&-rinse adhesive. Each group was divided into 3 sub-groups based on restorative techniques: restoration without flowable liner (control), application of precured flowable liner, use of flowable composite as liner via snow-plow technique. After 1000 thermocycles, the microleakage at gingival margin was evaluated using fluid filtration technique. Data were analyzed using two-way ANOVA and Tukey tests.

Results: Two-way ANOVA indicated that the type of adhesive systems, in contrast to application of liner, had a significant effect on microleakage. Also, an interaction was found between the two variables. Tukey post hoc test showed that application of universal adhesive (whether self-etch or total-etch modes) resulted in less microleakage than use of conventional etch-&-rinse adhesive. In addition, there was no statistically significant difference between the two application modes of universal adhesive.

Conclusion: Application of universal adhesive for composite restoration of primary teeth may improve the marginal seal and decrease the microleakage.

Keywords: Composite. Universal Adhesive, Microleakage, Snow-plow

Treatment of severely lingually teeth by direct method

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**Presenter: Hamid Mazaheri*

ABSTRACT:

One of the difficulties in treatment of anterior teeth for dentists is the teeth with severely lingual inclination, especially in maxillary teeth.

Although in cases of mild inclination labial veneer with composite or porcelain is an acceptable treatment but in severe cases especially when the tooth is in cross with opposite teeth, this method is questionable.

The best treatment plan in these cases is orthodontic treatment, but we must know that it's expensive and long term and many patients especially adults are not interested in it. Sometimes we can use labial veneering of the teeth (of course when we can solve the problems of occlusal interference) however, before beginning, lateral movements must be completely considered.

Treatment at first begin with uprising the zenith of gingiva because in most of these teeth, it tends to move incisally. Then, veneering the labial of the tooth will be done, until its surface becomes equal the adjacent teeth. Then it is the time to eliminate the composite in incisal so it allows the incisal edge of opposite teeth to move between two incisal edges (one is the edge of the tooth and another is made by composite). This stage continues until elimination of interferences in lateral movements.

After finishing and polishing, if the inner edge can be seen from opposite it is better to shorten the incisal edge of the tooth.

By elimination of occlusal interferences completely, durability of this treatment is acceptable

The Effect of Different Surface Treatments on Flexural Strength and Modulus of Elasticity of Fiber Posts

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**Presenter: Mohammadreza Malekipour*

ABSTRACT:

Aim and Purpose:
The aim of this study was to evaluate the effect of various surface treatments on flexural strength and modulus of elasticity of two different types of glass fiber and quartz fiber posts.

Materials and Methods:
Eighty FRC posts of two different types: forty DT-light posts (quartz fiber) and forty White post DC (glass fiber), size 2, were used for this study and were randomly divided into 4 groups (n=10): 1. No surface treatment (control), 2. Er:YAG laser irradiation (250 mj ,20 Hz)for 1minute, 3. Air-born particle abrasion (50 micrometer Al2o3) for 12 seconds and 2 bar pressure, 4. Hydrogen peroxide 10% for 20 minutes. To evaluate flexural strength and modulus of elasticity, 3-point bending test was performed in universal machine w+b following ISO 178 standard specification. The load was applied with a crosshead speed of 0.5 ml/min on similar diameter of posts (1.6mm) until fracture and maximum fracture load was recorded, then, flexural strength and modulus of elasticity were calculated with formulas. Data were analyzed by one-way ANOVA, Tukey and t- tests.

Results:
Statistical analysis showed that before surface treatment, the flexural strength and modulus of elasticity of DT- light posts were significantly higher than that White post DC. There was no significant difference in flexural strength and modulus of elasticity between different groups of White post DC with control group. But in DT-light posts, there were statistical significant differences in flexural strength and modulus of elasticity only between air-abraded group and control. ($p<0.05$)

Conclusion:
Surface pretreatments of glass and quartz fiber posts with laser and hydrogen peroxide 10% have no adverse effect on their flexural strength and modulus of elasticity.

New Development of Nanofiber Materials in Restorative Dentistry

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**Presenter: Manijeh Mohammadian*

ABSTRACT:

Aim and Purpose: Development of novel nanomaterial production in dental biomaterials science and their contribution to the composition of dental restorative materials have been improved their applications. Todays, composite restorative materials have considerably improved on size, shape and content of their which has significantly improved their properties. The purpose of this study was the historical review of the developmental process in nano-fiber composites and the factors affecting on improving the functional and mechanical properties of these materials in restorative dentistry.

Materials and Methods: In this review, the latest advancements of nano-fiber materials and their use in restorative dentistry were investigated. Published literature (2000–2018) on these materials was reviewed using PubMed and ScienceDirect resources.

Results: New composite restorative material containing biomaterials, such as calcium phosphate nanofibers, is the recent development in these materials. It was improved the strength and reliability of restorative composites. Therefore, the nanofiber-reinforced composites was efficiently improved their properties.

Conclusion: Although the development of new materials improves the biomechanical properties of dental materials, more clinical studies are needed for the successful use of these materials in restorative dentistry.

Keywords: Dental Biomaterial; Nano-Fiber; Restorative; Composite; Calcium Phosphate.

The effect of herbal plants as antioxidants on the shear bond strength of resin composite to enamel following tooth bleaching procedures: A literature review.

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**Presenter: Hamideh Sadat Mohammadipour*

ABSTRACT:

Aim and Purpose: A considerable reduction in the enamel bond strength of resin composite restorations has been reported when bonding procedure is carried out immediately after bleaching process. Different approaches, including delay of adhesion by a period of 24 hours to three weeks, reduction of enamel structure and the application of antioxidant agents have been suggested to regain the reduced bond strength. In this review the effect of some herbal-based antioxidants on the bond strength of bleached enamel was investigated.

Materials and Methods: A comprehensive electronic literature search was performed in Cochrane, Pubmed and Scopus databases up to June 2019 for studies and research that have been presented data on the efficacy of herbal antioxidants in laboratory studies. A total of 40 titles, abstracts and full-text studies were selected and reviewed.

Results: Among the plants have been evaluated, 5 and 10% of the green tea and grape seed extract showed the best favourable outcome compared with 10% sodium ascorbate on reversal of reduced bond strength of resin materials to bleached enamel. Although other plants, including *Aloe vera*, white tea, Pomegranate peel extract also revealed the promising results. Due to lack of adequate article and controversies, the determination of effectiveness of the pine bark peel, mangosteen and rosemary extract needs further studies.

Conclusion: Herbal antioxidants can be considered as an alternative method for reversing the reduced enamel bond strength immediately after bleaching. The use of them immediately after the tooth whitening can be completely neutralized or compensated the deleterious effects of bleaching and increases the enamel shear bond strength.

Keywords: Antioxidants, herbal plants, Shear Bond Strength, Composites, Bleached Enamel.

Fracture Resistance Evaluation of Endodontically Treated Teeth with Various Coronoradicular Restoration Methods

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**Presenter: Horieh Moosavi*

ABSTRACT:

Aim and Purpose: The aim of this study was to evaluate the fracture resistance of endodontically treated teeth with various coronoradicular restorations.

Materials and Methods: Sixty freshly extracted human premolars were selected and randomly divided into five groups (n=12). In 48 teeth, the crowns were cut from 3 mm above the CEJ. The MOD cavities with dimensions of 3 mm at buccolingually and the gingival margin in CEJ were prepared. After root canal treatment, in the first group, tooth color pins #1 with length approximately 8 mm were cemented in root canals with Estelite Core Quick and crown was restored with resin composite; Estelite Sigma Quick. For second group the root and crown was restored integrate with adhesive; Bond Force and light cure resin composite; Estelite Sigma Quick. For the third group, self-cured composite; Master Dent, and the adhesive in package was used to reconstruct the crown and root. In the fourth group the Panavia F 2.0 resin cement was used for cementation and crown building was done with resin composites; Clearfil AP-X. In control group, (fifth group) teeth remained intact. Samples stored in distilled water at 37 ° C for 24 hours, and thermocycled for 1000 cycles. Samples for fracture resistance test was placed into universal test device at a cross speed of 1 mm per minute. The fracture resistance values and failure patterns were recorded. Data were analysed by ANOVA, Tukey's & Fisher's Exact tests ($P<0.05$).

Results: A significant difference was observed in fracture resistance among groups 4 and 5 compared to other groups.

Conclusion: Root reconstruction with fiber post and Panavia resin cement, and crown building using light-cured resin composite resulted in increased fracture resistance equal to that of intact teeth.

Keyword: Fracture resistance; Fiber post; Resin cement.

Adding nano-Fluorohydroxy apatite particles to laboratory resin infiltrants and evaluation of its effect on the white spot lesions microhardness

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**Presenter: Seyedeh Fatemeh Namdar*

ABSTRACT:

Aim and Purpose: Formulation of a low viscosity resin infiltrant with ability to remineralize white spot lesions.

Methods and Materials: The enamel surfaces of 90 bovine incisors were divided into three equal areas. Area 1 was covered with acid-resistant nail polish (negative control). Area 2 and 3 were placed in demineralization and remineralizaion solutions, respectively for 14 days. Then zone 2 (positive control) was covered. The area 3 was etched for 5 seconds and then the samples were immersed in 96% ethanol for 2 min. After that, the samples were randomly divided into 9 groups of 10. Nine experimental resin infiltrants containing different monomeric resin composition and different filler wt% were prepared as follows :G1: BisGMA, TEGDMA, HEMA (2:1:7:0) without filler, 2 and 5% nanofluorohydroxy apatite (nFHAP), G2: BisGMA, TEGDMA, HEMA, Et-OH (2:1:5:2) without filler, 2 and 5% nFHAP, G3: BisGMA, TEGDMA, HEMA, Et-OH (2:1:2:5) without filler, 2 and 5% nFHAP. Then the areas 3 were infiltrated by resin. Subsequently, a vertical section was obtained from each sample for Vickers microhardness evaluation. The prepared section included negative control, positive control and resin treated areas, respectively. The Vickers hardness was measured at three different depths of 50, 100 and 150 microns and at three areas.

Results: The lowest and highest hardness values were related to the control group without filler and G2 with 5% filler, respectively. In all subgroups, resin infiltration led to hardness increasing at all depths; however this improvement was not significant in some depths. In all groups, addition of 5% filler led to better results, although there was no significant difference between 2 and 5% filler.

Conclusion: Addition of n-FHAP had the highest effect on the enamel resistance. Resin infiltration increased microhardness and acid resistance significantly. Solvent had positive effect on prevention of caries progression.

Keywords: Hardness; Fluoro hydroxyapatite; Resin infiltration; White spot lesions

Evaluation of shear bond strength of metal brackets attached to composite veneer surfaces using different surface treatments

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**Presenter:Maryam Omidkhoda*

ABSTRACT:

Aim and Purpose: The aim was evaluation of shear bond strength of the metal brackets connected to the surface of composite veneers with different surface preparations.

Materials and Methods: The 100composite disc with a thickness of 2mm, similar to the maxillary central incisor was built. The prepared samples were mounted in self-cured acrylic and randomly divided into 10 groups. The samples were divided into two general categories with and without Surface roughening with bur and each group has 5 subgroups (Phosphoric acid 37%, hydrofluoric acid 9.5%, total-etch G-premiobond bond with phosphoric acid and hydrofluoric acid and self- etch G-premiobond bond).Transbond XT composite was used as a composite resin to connect the brackets to the veneer surfaces. Debonding forces were reported in MPa. For data analysis, ANOVA, Tukey test and Fisher's exact test was used. The significance level of 5% was considered in the statistical test.

Results: The results of this study showed that the surface roughening with bur and the type of material used to prepare the surface have a significant effect on bond strength ($p<0.0001$). There was no significant difference between phosphoric acid and hydrofluoric acid, the highest and lowest bond strength was obtained with total-etch G-premiobond with phosphoric acid + surface roughening(10.24MPa) and no surface roughening + phosphoric acid(1.47MPa) respectively.

Conclusion: The application of phosphoric acid and hydrofluoric acid without surface roughening on the veneers before bracket insertion create an unacceptable bond strength and other methods mentioned in this study, with and without surface roughening, provide clinically favorable bond strength.

Keywords: shear bond strength; hydrofluoric acid; G-premiobond bond; composite veneers; orthodontics.

Effect of the Time of Salivary Contamination during Light Curing on Degree of Conversion and Microhardness of a Restorative Composite Resin

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**Presenter: Abdolrasoul Rangrazi*

ABSTRACT:

Aim and Purpose: Saliva contamination is a major clinical problem in restorative procedures. The purpose of this study was to evaluate the effect of the time of salivary contamination during light curing on the degree of conversion and the microhardness of a restorative composite resin.

Materials and Methods: Eight groups of 10 samples for measuring the microhardness and eight groups of 5 samples for evaluating the degree of conversion were prepared. The samples of each group were contaminated with human saliva at a certain time. The first group (T0) was contaminated before light curing. The specimens in groups T2–T30 were contaminated at 2, 5, 10, 15, 20 and 30 s after the start of light curing, respectively. The samples of group T40 were contaminated after light curing. The degree of conversion and the microhardness of the specimens were measured by Fourier transform infrared (FTIR) spectroscopy and Vickers hardness testing techniques, respectively.

Results: The results of this study revealed that there were no significant differences between the groups in terms of the degree of conversion of the composite resin. Consistent with the findings for the degree of conversion, significant differences in the microhardness between the groups were not found.

Conclusion: In conclusion, from a clinical point of view, the results of our study showed that the time of salivary contamination (before, during or after light curing of composite resin) has no significant effect on the polymerization (degree of conversion) and one of the important mechanical properties of dental composite resins (microhardness).

Keywords: saliva; contamination; composite resin; degree of conversion; microhardness

The efficacy and complications of several bleaching techniques in patients underwent fixed orthodontic therapy

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**Presenter: Salehe Sekandari*

ABSTRACT:

Aim and Purpose: This study aimed to evaluate the efficacy and complications of several bleaching methods in patients with discoloured teeth after orthodontic treatment.

Materials and Methods: This randomized clinical trial involved sixty volunteers who finished fixed orthodontic therapy at least 3 months before the study commencement and complained of discoloration on upper anterior teeth. The subjects were divided into 4 groups by treatment. The patients in group 1 received home bleaching, whereas those in groups 2 to 4 underwent in-office bleaching using a diode laser, a plasma arc and without a light source, respectively. Tooth colour was measured by a spectrophotometer at baseline, one hour after the end of the bleaching procedure, and one week later, and the colour alteration between different stages was compared among the groups. The severity of tooth sensitivity and the occurrence of gastrointestinal complications were recorded.

Results: The colour change between baseline and 1 week after treatment was greater in home bleaching and laser assisted in-office bleaching groups, and lowest in plasma arc bleaching group, although the difference between groups was not significant ($P>0.05$). Tooth sensitivity over 24-hours after bleaching was lowest in subjects underwent laser-assisted bleaching and highest in those received in-office bleaching without a light source.

Conclusion: All methods were effective in managing tooth discoloration after orthodontic treatment. Home bleaching produced favourable colour alteration. Among the in-office approaches, laser-assisted bleaching should be considered as the best option, because it produced effective results with lowest tooth sensitivity and over a shorter period of time.

Keywords: home bleaching; in-office bleaching; diode laser; plasma arc.

Enamelopalsty after orthodontic treatment to improve microesthetic

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**Presenter:* Hooman Shafaee

ABSTRACT:

Interdisciplinary treatment also has expanded to include not only soft tissue assessment of the periodontal components of the dentition and smile, but of the face as well. The next level of esthetic enhancement certainly will include facial proportionality as a key component in our patient evaluation. This paper expands the diagnostic vision of the dentist to include facial proportions and relationships of hard and soft tissues to improve diagnosis and treatment of dental and facial esthetics.

Diagnosis and treatment in orthodontics has shifted to assess tooth shape and form in the analysis of an orthodontic problem. There are principles of esthetic dentistry that orthodontists can use to enhance their finishes in order to provide a superior esthetic outcome. Because orthodontists have benefited from much technological advancement in diagnosis, wires, and brackets, often resulting in more efficient treatment times, there is more time for identifying microesthetic characteristics and enhancing the final outcomes to a degree previously not attainable.

Digital and Conventional Methods for early caries detection: Effectiveness, comparison and deficiency

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**Presenter: Arefeh Sherafat*

ABSTRACT:

Aim and Purpose: Early and correct detection of dental caries is an everyday challenge for dental clinicians. An ideal caries detection system should enable early detection of initial caries and enhance decision making regarding a suitable treatment plan.

Materials and Methods: Considering the studies in Pubmed from 2015 to 2019, with keywords of Vistacam, Digital Imaging, Diagnodent it was concluded that several methods have been suggested for detection of caries in proximal surfaces. Adjunct techniques such as bitewing radiography and fiber-optic transillumination can aid visual inspection in achieving more accurate results.

Results: In addition to visual methods of caries detection, some digital methods like fluorescence-based techniques are also regarded as suitable methods for caries detection. The mechanism of action of fluorescence-based techniques is based on the presence of chromophores in the enamel and dentin and their auto-fluorescence due to the bacteria and their byproducts.

Conclusion: This poster assess and compare the efficacy of VistaCam, Diagnodent, bitewing radiography and visual inspection for detection of enamel and dentin proximal caries.

Keywords: Vistacam, Digital Imaging, Diagnodent

Evaluation of microleakage of resin composite to Er:YAG laser and bur-prepared root & crown dentin using different bonding agents.

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**Presenter: Farzaneh Shirani*

ABSTRACT:

Aim and Purpose: The purpose of this study was to evaluate the microleakage score of composite to Er:YAG laser-ablated and bur-prepared root and coronal dentin using self-etch and total-etch adhesive systems.

Materials and Methods: Sixty caries-free extracted human premolars were sectioned axially in order to expose the dentin and randomly divided into five groups (G1-G5)). Two Standard Class V cavities were prepared separately with a regular bur and high-speed handpiece(G1,G4)or with Er:YAG laser (160 mJ , 20 Hz,29.88 J/cm^2) (G2,G3,G5) in root and coronal dentin of each tooth. Single Bond etch-and-rinse adhesive was applied in first, second and third groups (without acid etching) and Clearfil SE Bond self-etch system was applied to cavities in fourth and fifth groups for bond to composite. Dye penetration was assessed after thermocycling and statistically analyzed using the Kruskal-Wallis and Wilcoxon tests (α=0.05).
Results: The Kruskal-Wallis test revealed no statistically significant differences in microleakage between the preparation methods (diamond bur and laser) or the applied bonding agents. Regardless of the method of cavity preparation, dye penetration in coronal dentin was significantly more than in root dentin.

Conclusion: Er:YAG laser is as effective as the conventional method for preparing cavities and the extent of microleakage does not depend on the bonding agent used. Microleakage of coronal restorations was significantly more than that of root restorations.

Keywords: Crown and root dentin, Er:YAG laser, Total etch, Self-etch, Bonding agent, Microleakage, Resin Composite.

Evaluation the Effect of Fabrication Stages (Sintering and Glazing) and Cementation on the Marginal Fit of CAD-CAM Monolithic Zirconia Onlays: An In vitro Study

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**Presenter: Mehdi Shirinzad*

ABSTRACT:
Aim and Purpose: Ceramic inlay/onlay restorations fabricated by computer-aided design and computer-aided manufacturing (CAD/CAM) technology could be an appropriate choice for reconstructing the posterior teeth with extensive loss of tooth structure. The marginal fitness has been considered as one of the most important aspects of durability of CAD/CAM fabricated ceramic restorations. Different stages of the fabrication procedures in the laboratory and cementation may affect the marginal fit of monolithic zirconia onlays. The purpose of this study was to evaluate the effect of fabrication stages and cementation on marginal fitness of CAD/CAM monolithic zirconia onlays.

Materials and Methods: In this in-vitro study, gypsum casts of 12 human maxillary first premolar teeth with standardized anatomic preparations for fabricating monolithic zirconia onlays were scanned by a laboratory 3D scanner. Onlays were milled from presintered zirconia blocks with a 5-axes milling machine. A cement space of 25µm for the margins and a 50-µm space starting 1 mm above the finish lines of the teeth were virtually set in the CAD software. Totally, 432 measurements were performed on 12 specimens at 12 points over three different stages (post-sintering, post glazing and post-cementation). The VMD values were statistically analyzed by 1-way repeated measures ANOVA and Bonfferoni follow up test (α=0.05%).

Results: Different stages of fabrication and cementation had a significant effect on VMD values of the studied onlays ($P < 0.001$). The mean and standard deviation of VMD values was 65.20 ± 38.36 µm in post-sintering group, 62.43 ± 35.03 µm in post-glazing group, and 114.20 ± 51.33 µm in post-cementation, with statistical differences between post-sintering and post-cementation groups ($P < 0.001$), and between post-glazing and post-cementation groups ($P < 0.001$), while no significant difference was observed between post-sintering and post-glazing groups ($P = 0.478$).
Conclusion: Within the limitation of this study, glazing did not have any significant effect on marginal fitness of CAD/CAM zirconia onlays. Cementation significantly increased the marginal fitness of monolithic zirconia onlays.

Keywords: CAD/CAM, Zirconia, Monolithic, onlay, Marginal Fitness, Glazing

Effect of zinc oxide nanoparticles on physical and antimicrobial properties of resin modified glass ionomer cements

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**Presenter: Saba Siabani*

ABSTRACT:

Aim and Purpose: this study evaluated the effect of addition of various concentrations of zinc oxide (ZnO) nanoparticles to resin modified glass ionomer (RMGI) cement on its physical and antimicrobial properties.

Material and Methods: ZnO nanoparticles with 0-4 wt% concentration were incorporated into RMGI. The following tests were carried out. A) Antibacterial activity against streptococcus mutans testing by disc diffusion method, determination of minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC). B) Mechanical behavior assessment by measuring flexural strength (FS) and flexural modulus. C) Adhesion properties (micro-shear bond strength). D) Fluoride and zinc release test.

Results: the MIC and MBC values were 500 ug/ml 2500 ug/ml, respectively. In disc diffusion method, specimens with 2 wt% ZnO nanoparticles showed the highest antimicrobial efficacy ($P<0.05$). After one month of water storage, no significant difference was observed in FS and modulus of samples ($P>0.05$). In 2wt% ZnO nanoparticles group, micro-shear bond strength increased in the first 7 days but decreased by 17% after one month and showed a significant difference with that of the control group. The fluoride release was higher in the ZnO nanoparticle containing group compared to the control group at all time intervals.

Conclusion: incorporation of ZnO nanoparticles into the RMGI cement impart antimicrobial activity to the resins without sacrificing their mechanical properties.

Key words*:* zinc oxide, microbial sensitivity test, glass ionomer, bond strength, fluoride

The Effect of Incorporation of 0.5 %wt. Silica Nanoparticles on the Micro Shear Bond Strength of a Resin Modified Glass Ionomer Cement

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**Presenter: Saba Siabani*

ABSTRACT:

Aim and Purpose: The aim of this study was to compare the micro-shear bond strength (μSBS) of RMGI with and without silica (SiO_2) nanoparticles to dentin of permanent teeth .

Materials and Method: in this experimental study, the occlusal surfaces of 30 freshly extracted intact third molars were ground to expose the flat dentin and after conditioning with 20% poly acrylic acid, were randomly assigned to two main groups (n=15). The first group was filled with RMGI (Fuji II LC, GC) and the second group was filled with RMGI plus 0.5%wt. silica nanoparticles. Then, each main group was divided into three subgroups, and then stored in an incubator at 37 ºC with 100% humidity for 1, 7, and 30 days. The μSBS test was per-formed using a universal testing machine (1 mm/min). The data were analyzed by T-test, repeated measures ANOVA and Tukey test ($p< 0.05$).

Results: There were no statistically significant differences between the mean μSBS of the groups with and without nanoparticles along the different storage periods ($p> 0.05$). There was significant difference in μSBS values among the three different storage periods in all the tested materials ($p<0.05$) .

Conclusion: Incorporation of 0.5 %wt. silica nanoparticles did not compromise the μSBS of Fuji II LC RMGI to dentin.

Key words: Glass Ionomer; Silica ;Nanoparticles; Shear Strength

The role of orthodontic treatment in smile designing

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ABSTRACT:

The fundamental criteria for smile designing should include facial, dentogingival and dental esthetics. Tooth movements during orthodontic treatment could affect the position of dental and soft tissue components of smile. So, dynamic tooth-lip relationships should be considered in treatment planning. Incisor show and gingival display at smiling, interlabial gap, upper lip curvature, smile arc, buccal corridors, cant of occlusal plan, dental midline, upper incisor inclination, last posterior tooth visible and smile symmetry are major factors affect the esthetics of the smile. The orthodontist should consider the biomechanical effects of orthodontic treatment on the esthetics of the smile and determine how the smile is affected in three planes of space.

Correction of deep bite by intrusion of upper maxillary incisors may cause some degree of flattening of smile arc. This results in an unappealing smile. Despite the previous concepts, the recent studies showed that extraction do not affect the transverse maxillary arch widths and buccal corridors significantly, although in the case of wide buccal corridors, non-extraction treatment plan is preferred.

The extraction of upper first premolars to correct a maxillary sagittal discrepancy results in deepening of smile arc curvature. This occurs due to clockwise rotation of occlusal plan and makes the smile appears less attractive. The precise position of anterior teeth should determine during orthodontic treatment, because this affects the gingival margins. As well as, gingival heights and shapeand connectors canmodify by minimal changes in three dimensional position of teeth. The aim of this study was to assess different aspects of orthodontic treatment affecting smile designing and esthetics.

Keywords: Smile esthetics, smile design, orthodontics

Effect of hydrophobic resin following different dentin bondings application on nanoleakage of composite restorations

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ABSTRACT:

Aim and Purpose: The aim of the present study was to evaluate the effect of applying hydrophobic resin after use of different generation of the bonding systems on nanoleakage.

Materials and Methods: 20 third molar teeth were selected. The teeth were randomly divided into 4 groups of 5, each was treated using the fourth, fifth, sixth, and seven generation of dentin bonding. Then, the crown of teeth was sectioned from the CEJ region and each specimen was divided into two halves with mesiodistal cut, one half for the application of dentin bonding without the addition of a hydrophobic resin, and the other for the same dentin bonding by the addition of a hydrophobic resin. Afterwards, the specimens were restotred by composites. After placement of specimens in silver nitrate, the amount of nanoleakage was evaluated by SEM. Data were analyzed using a repeated measurement statistical analysis (α=0.05).

Results: The use of hydrophobic resins decreased nanoleakage and range of variations in all groups ($P<0.05$). This reduction was greater for total-etch dentin bonding. Higher degree of nanoleakage occurred in total-etch dentin bonding in most evaluated areas. In general, Clearfil S³ bond showed the least percent of the nanoleakage.

Conclusion: All dentin bonding systems showed some degree of reduction in nanoleakage after hydrophobic layer application and the reduction was greater in Total-etch adhesives systems.

Keywords: Nanoleakage; Adhesive; Hydrophobic resin

Evaluation of the Effect of Chlorhexidine 2% and Ethanol on Microleakage of Composite Resin Restoration to Dentin

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ABSTRACT:

Aim and Purpose: The aim of the present study was the evaluation of the effect of chlorhexidine 2% and ethanol on microleakage of composite resin restoration to dentin.

Materials and Methods: Class II cavity preparation with dentinal margin was prepared on 96 premolar teeth. All specimens were acid-etched, rinsed, and dried. And then the samples were randomly divided into four group according to dentin pretreatment: no treatment (control group); treat with ethanol 100% for 60 sec(group 2), chlorhexidine 2% for 60 sec(group 3) , ethanol 100% for 60 sec and then chlorhexidine 2% for 60sec (group 4). After treatment, each group was bonded and restored as manufactures recommendation. Microleakage evaluated by dye extraction method in two subgroup, immediately(24 hours) and after six month storage. SEM analyses for two sample of each group were also conducted. Data were analysed by two way ANOVA and Tukey test.

Results: The lowest dye absorbance was associated with ethanol group and the highest dye absorbance was associated with control group. There were significant difference in immediately and after six month storage in microleakage. (p=0.03) in each storage time, control group showed significant difference with other groups and there were difference between other the groups.

Conclusion: Ethanol-wet bonding and clorhexidine application may have potential benefits in lowering the occurrence of microleakage in long term.

Keywords: Chlorhexidine, Ethanol, Microleakage, Surface treatment