



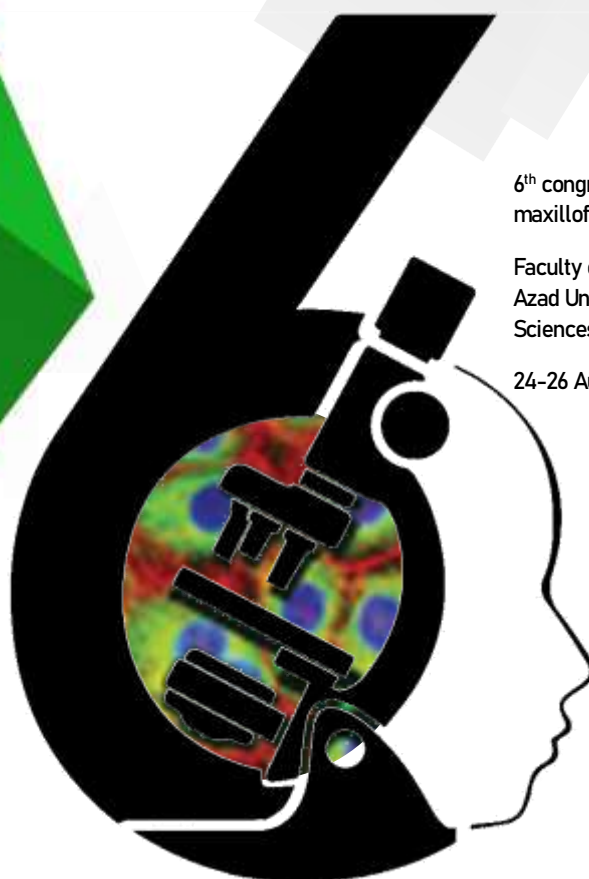
ششمین همایش آسیب شناسان دهان و فک و صورت ایران
دانشکده دندانپزشکی دانشکاه علوم پزشکی آزاد اسلامی تهران

۱۴-۱۶ شهریور ۱۴۰۱



کتابچه

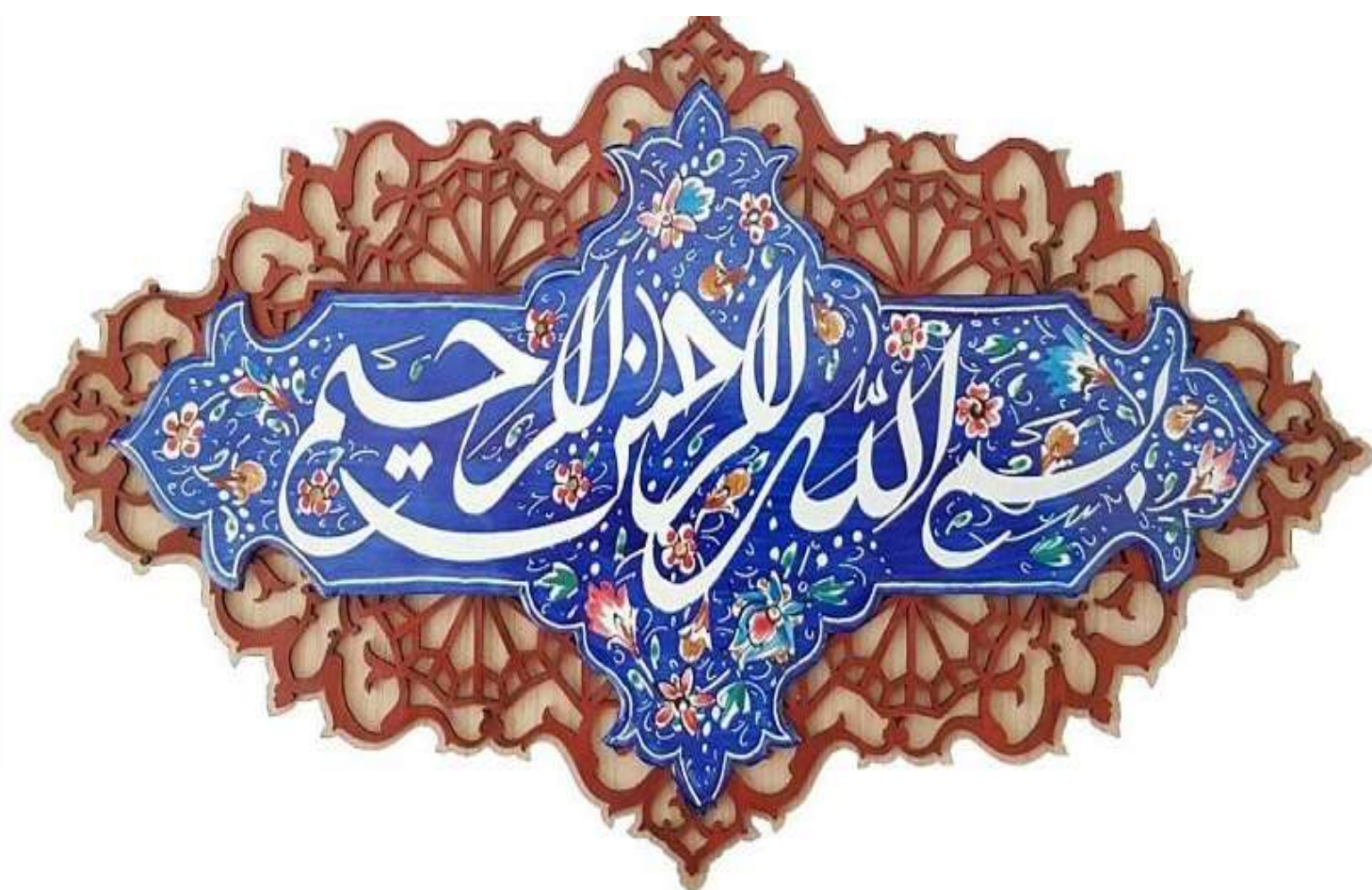
خلاصه مقالات



6th congress of Iranian oral and
maxillofacial pathologists

Faculty of Dentistry, Islamic
Azad University, Tehran Medical
Sciences

24-26 August 2022





همایش آسیب شناسان دهان و فک و صورت ایران
6th Congress of Iranian Oral and Maxillofacial Pathologists



کتابچه خلاصه مقالات ششمین همایش آسیب شناسان دهان، فک و صورت ایران



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همایش آسیب شناسان دهان و فک و صورت ایران

6th Congress of Iranian Oral and Maxillofacial Pathologists



بنام خدا

با استعانت از لطف پروردگار و همکاری هیات مدیره انجمن آسیب شناسان دهان، فک و صورت ایران، ششمین همایش این انجمن به میزبانی دانشکده دندانپزشکی دانشگاه علوم پزشکی آزاد اسلامی تهران از ۲ تا ۴ شهریور ۱۴۰۱ برگزار می گردد.

محور این همایش "آسیب شناسی دهان، فک و صورت: پلی بین علوم پایه و بالینی" می باشد که در دو بخش حضوری شامل سخنرانی، ارائه پوستر و بخش دانشجویی، و بخش مجازی شامل دو روز بین المللی با حضور اساتید برجسته جهانی برگزار خواهد شد.

ضمن دعوت از همه همکاران متخصص و دندانپزشک عمومی جهت شرکت در این همایش، برخورد واجب می دانم از همکاری بی دریغ هیات رئیسه دانشکده دندانپزشکی آزاد اسلامی تهران، شورای سیاستگذاری همایش، شورای اجرایی، دبیران و مسوولین کمیته ها در برگزاری این همایش سپاسگزاری نمایم.

خدایا چنان کن سرانجام کار

تو خشنود باشی و ما رستگار

دکتر دنیا صدی

رئیس ششمین همایش آسیب شناسان دهان، فک و صورت ایران



به نام خدا

با استعانت از درگاه ایزد یکتا، همگام با گسترش روز افزون سایر رشته های علوم پزشکی و ارتقاء سطح دانش و مهارت های عملی متخصصین رشته آسیب شناسی دهان، فک و صورت، ششمین همایش سراسری انجمن آسیب شناسان دهان، فک و صورت از تاریخ ۲ تا ۴ شهریور ماه ۱۴۰۱ این بار به میزبانی دانشکده دندانپزشکی دانشگاه آزاد اسلامی تهران برگزار میگردد.

بدون تردید حضور سخنرانان برجسته از رشته های تخصصی دندانپزشکی و برخی از رشته های تخصصی پزشکی و نیز حضور اندیشمندان مطرح بین المللی در بخش بین الملل همایش، فرصتی کم نظیر جهت تبادل نظرات علمی و نتایج پژوهش ها در این گردهمایی فراهم آورده است.

همچنین نکوداشت برخی از چهره های ماندگار و پیش کسوت رشته آسیب شناسی دهان، فک و صورت کشور نیز از جلوه های ویژه این همایش خواهد بود. اطمینان دارم این همایش که به همت همکاران پر تلاش دانشکده دندانپزشکی دانشگاه آزاد اسلامی تهران و همکاری انجمن آسیب شناسان دهان، فک و صورت ایران برگزار میگردد، علاوه بر ارج نهادن به تلاش های ارزشمند علمی متخصصان، موجب افزایش انگیزه و همدلی بیشتر در بین همکاران مختلف گروه های دندانپزشکی و پزشکی بویژه متخصصین آسیب شناسی دهان، فک و صورت خواهد بود.

دکتر سید محمد رضوی

رئیس هیأت مدیره انجمن آسیب شناسان دهان، فک و صورت ایران

شهریور ماه ۱۴۰۱



به دانش گرای و بدو شو بلند

چو خواهی که از بد نیابی گزند

آسیب شناسی دهان و فک و صورت، تخصصی در رشته دندانپزشکی است که پلی ارتباطی بین رشته های مختلف دندانپزشکی و همچنین رشته آسیب شناسی و پزشکی است و به اتیولوژی، پاتوژنز، تشخیص و درمان بیماری های حفره دهان و فک و صورت می پردازد. تنوع بیماری ها در این ناحیه بسیار شگفت انگیز بوده و با پیشرفت و گسترش علم و دانش و علوم بین رشته ای، تحقیقات در این زمینه رشد چشمگیری نشان داده و متخصصین در حال شناسایی و درمان هدفمند بیماریها هستند، از طرفی آموزش و پیشگیری از برخی بیماری ها نیز امیدوارکننده و قابل دستیابی است. امید داریم که سخنرانی های کلیدی از میان اساتید برجسته کشور و تحقیقات برگزیده از میان تعداد زیادی مقاله که به همایش ما ارسال شده، از طریق داوری توسط اعضای محترم کمیته علمی همایش، بتواند گوشه ای از علم روز و تحقیقات در حال انجام در کشور عزیزمان را در این رشته و علوم مرتبط به سمع و نظر شما شرکت کنندگان محترم برساند.

جهت بهره گیری از تازه های علم و دانش و تعامل در سطح جهانی نیز از سخنرانان برجسته و بنام بین المللی در حوزه آسیب شناسی دهان و فک و صورت دعوت شده تا به بحث و گفتگو در مورد ضایعات چالشی پرداخته و از تازه های تکنولوژی در آموزش، تشخیص و درمان ضایعات دهان و فک و صورت بهره مند شویم.

در انتها از دانشگاه علوم پزشکی آزاد اسلامی و انجمن آسیب شناسان دهان و فک و صورت کمال تشکر را دارم که در برگزاری این همایش ما را یاری نموده و بی شک بدون همراهی آن ها اگر غیرممکن نبود این ره بسی مشکلتر می نمود. همچنین، از همراهی ارزشمند و گرم شما دندانپزشکان و متخصصین محترم در همایش استقبال و تشکر نموده و از نقشی که در اعتلای سلامت دهان و دندان در جامعه برعهده دارید قدردانی می نمایم. در ضمن، خلاصه تمامی سخنرانی ها و پوسترها در سایت انجمن به آدرس www.omfpathology.org در دسترس قرار خواهد گرفت و خلاصه سخنرانی های منتخب در مجله پابمد (Dental Research Journal (DRJ) اصفهان چاپ خواهد شد.

دکتر فاطمه شاهسواری

دبیر علمی ششمین همایش آسیب شناسان دهان و فک و صورت



به نام ایزد منان

خدای را سپاس می گویم که با کمک در برگزاری ششمین همایش آسیب شناسان دهان، فک و صورت ایران، ما را در مسیر ترویج علم و دانش قرار داد.

در این همایش حضوری که با دو پانل بین المللی مجازی همراه شده است، جدیدترین دستاوردهای علمی با حضور متخصصین و اساتید بنام داخلی و خارجی در قالب سخنرانی و پوستر مورد بحث قرار خواهند گرفت. همچنین جهت مشارکت هرچه بیشتر دانشجویان و دستیاران تخصصی در این حوزه دو پانل دانشجویی و همچنین مسابقه دانشجویی در نظر گرفته شده است.

به منظور تقدیر از زحمات ارزشمند و چندین ساله اساتید پیشکسوت این رشته، در برنامه افتتاحیه همایش حاضر مجالی برای تجلیل از اساتید ارجمند سرکار خانم دکتر اقدس فروزنده، جناب آقای دکتر محمد اسلامی، جناب آقای دکتر غلامرضا جهانشاهی، و جناب آقای دکتر جهانفر جهانبانی فراهم شد.

در پایان بر خود لازم می دانم که از هیات رئیسه محترم دانشکده دندانپزشکی دانشگاه آزاد اسلامی تهران، و همچنین هیات مدیره محترم انجمن آسیب شناسان دهان، فک و صورت ایران که نهایت مساعدت را در جهت آماده سازی همایش داشتند، قدردانی نمایم. همچنین شایسته است مراتب سپاس خود را از کلیه عوامل اجرایی همایش به ویژه سرکار خانم نیلچیان و دانشجویان عزیزم که در برگزاری این همایش همکاری بسیاری داشته اند، ابراز نمایم.

میزبان قدوم سبز و پرمهر شما اساتید و همکاران گرانقدر هستیم.

با احترام

دکتر مائده قربان پور

دبیر اجرایی ششمین همایش آسیب شناسان دهان، فک و صورت ایران



همایش آسیب شناسان دهان و فک و صورت ایران 6th Congress of Iranian Oral and Maxillofacial Pathologists



در قرن حاضر ارتباطات بین المللی در محیط های آکادمیک و انجمن های علمی از یک انتخاب به یک ضرورت تبدیل شده است. امروزه بدون ارتباط با سایر مراکز علمی دنیا و تنها با نشستن در اتاق، شهر یا کشور خود نمی توان به جریان علمی در جهان که هر ماه و هر هفته و هر روز در حال تغییر و تحول است دسترسی پیدا کرد.

بر همین اساس شورای سیاستگذاری و اجرایی کنگره ششم بر آن شد که با توجه به شرایط حال، بخش بین الملل کنگره را به صورت آنلاین و با مشارکت ۶ سخنران از کشورهای آمریکا، هند، چین، آفریقای جنوبی و ایران در دو پنل ۳ ساعته - جمعاً ۶ ساعت - برگزار نماید.

اینجانب ضمن سپاس از همکاران پرتلاشم در شورای اجرایی کنگره بر خود لازم می دانم از معاونت بین الملل دانشگاه علوم پزشکی تهران (گروه appraise to raise) که در برگزاری بخش بین الملل، همکاری نمودند قدردانی نمایم.

امیدست روابطی که طی سالهای اخیر با فعالان رشته آسیب شناسی دهان و فک و صورت در جهان ایجاد شده است موجب تقویت و گسترش این رشته در کشورمان شود.

دکتر پویان امینی شکیب

دبیر بین الملل کنگره ششم



هیات اجرایی ششمین همایش آسیب شناسان دهان، فک و صورت ایران

رئیس همایش: دکتر دنیا صدی

دبیر علمی: دکتر فاطمه شاهسواری	مسئول کمیته ثبت نام: دکتر نفیسه شاملو محمودی
دبیر اجرایی: دکتر مائده قربان پور	مسئول کمیته تشریفات: دکتر ساره فرهادی
دبیر بین الملل: دکتر پویان امینی شکیب	مسئول کمیته دانشجویی: دکتر مریم جولهر
مسئول امور مالی: دکتر مهدی عاشوری	مسئول کمیته پوستر: دکتر نازنین مهدوی
مسئول نمایشگاه ها: دکتر علی لطفی	مسئول سایت: دکتر حمیرا صائب نوری
مسئول شهرستانها: دکتر مصطفی محمودی	مسئول کمیته انتشارات: دکتر نکیسا ترابی نیا



اعضاء شورای سیاستگذاری ششمین همایش آسیب شناسان دهان، فک و صورت ایران
(به ترتیب الفباء)

دکتر نفیسه شاملو محمودی	دکتر فرید آزموده اردلان
دکتر فاطمه شاهسواری	دکتر محمد اسلامی
دکتر دنیا صدری	دکتر امیر علا آغبالی
دکتر سید حسین طباطبایی	دکتر پویان امینی شکیب
دکتر مهدی عاشوری	دکتر فرشته بقایی نائینی
دکتر نصرت الله عشقیار	دکتر نوشین جلاپر نادری
دکتر ساره فرهادی	دکتر مریم جولهر
دکتر فاطمه مژگان قاضی	دکتر غلامرضا جهانشاهی
دکتر مائده قربان پور	دکتر افشین حراجی
دکتر کامبیز کامیاب حصاری	دکتر علیرضا خوشدل
دکتر نوشین محتشم	دکتر علی دهقانی نازوانی
دکتر فاطمه مشهدی عباس	دکتر سید محمد رضوی
دکتر مرتضی نشان دار	دکتر نصرالله ساغروانیان
دکتر محسن نفر	دکتر مریم سید مجیدی



همایش آسیب شناسان دهان و فک و صورت ایران

6th Congress of Iranian Oral and Maxillofacial Pathologists



اعضاء کمیته علمی (به ترتیب الفباء):

کمیته علمی داوری	کمیته علمی داوری	کمیته علمی پانل اصلی:	کمیته علمی پانل
مقالات:	پوستر:		دانشجویی:
دکتر شهرو اعتماد مقدم	دکتر صدیقه خیراندیش	دکتر محمد اسلامی	دکتر فروز کشانی
دکتر آزاده اندیشه تدبیر	دکتر ساعده عطارباشی مقدم	دکتر امیر علا آغبالی	دکتر ساناز غلامی
دکتر فهیمه بقایی	دکتر منیر مرادزاده خیاوی	دکتر فرشته بقایی نائینی	دکتر سمیرا درخشان
دکتر نکیسا ترابی نیا	دکتر افشین حراجی	دکتر ساعده عطارباشی مقدم	دکتر آزاده زینب تی تی دژ
دکتر نصرالله ساغروانیان	دکتر علی دهقانی ناژوانی	دکتر علی فاتح	
دکتر فاطمه شاهسواری	دکتر نصرالله ساغروانیان	دکتر اقدس فروزنده	
دکتر ساعده عطارباشی مقدم	دکتر نفیسه شاملو محمودی	دکتر فاطمه مژگان قاضی	
دکتر مژگان علاءالدینی	دکتر فاطمه شاهسواری	دکتر کامبیز کامیاب حصاری	
دکتر لیلی عزیزاده	دکتر جهانشاه صالحی نژاد	دکتر محمد مشرف	
دکتر حمیرا مردانی	دکتر دنیا صدری	دکتر مرتضی نشان دار	
دکتر نازنین مهدوی			



همایش آسیب شناسان دهان و فک و صورت ایران
6th Congress of Iranian Oral and Maxillofacial Pathologists



کمیته علمی سخنرانان و پانل بین الملل:

Prof. Rajendra Singh

Prof. Amir Afrogh

Prof. Pouyan Aminishakib

Dr. Arghavan Etebarian

Prof. Tiejun Li

Prof. Brad Neville

Prof. Shokoufeh Shahrabi Farahani

Dr. Pouriya Motahari



همایش آسیب شناسان دهان و فک و صورت ایران

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همکاران کمیته اجرایی:

کارشناسان بین الملل:

مهندس هما دل آرام

مهندس زهره صادقی

ملیحه علاء الدینی

کارشناس اجرایی:

رویا نیلچیان

تیم دانشجویی:

ثنا محمد بیگدلی

مهرنوش مشکاه السادات

فاطمه مهرباب

مهران میرزایی

امیر میر مهدی

صبا نصیری

فاطمه یاراحمدی

احسان دهشیری

فرحان رحمانی

ندا رحیمی راد

محمد صالح روستایی پور

فاطمه سلیمانی شایسته

محمد شاهواری

شایان شیرازیان

ریحانه صدری

امیرحسین عشقی

پانیذ عمیدی راد

فاطمه کربلایی آقا زاده

مریم کشاورز هدایتی

محمد کاظم کیقبادی

امیرحسین آهنگری

موژان احدی

سید علی احمدی نژاد

احسان باروح

امیر حسین باقری

آرین بهمنی دهکردی

فائزه پورتوانا

فاطمه ترک یلماز

زهرا چناری

علی حاتمی نیا

امیر پارسا حقیقی

علیرضا خاکی

کیمیا خوشنام



همایش آسیب شناسان دهان و فک و صورت ایران
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خلاصه مقالات سخنرانی های اساتید



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همایش آسیب شناسان دهان و فک و صورت ایران

6th Congress of Iranian Oral and Maxillofacial Pathologists



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The Forgotten Values of Medical Professional Behaviour (Personal Comments)

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Abstract

"Primum non nocere" is the Latin phrase that means "First do not harm" attributed to Hippocrates is alpha & omega of my brief lecture.

Teaching medical ethics is not considered in medical and dental schools, however may not even be effective, since the power of money is the root of evil.

Medical ethics differs from morality, overview of clinical ethics and concept of legal & ethical & moral will be presented in this lecture.

Particularly some important forgotten values such as informed consent, truth-telling, confidentiality, paying attention to only paraclinical examination instead of clinical evaluation, doing unnecessary procedures, exaggeration of patient problem, too much promises, inappropriate presentation of dentistry to community, and some other topics will be discussed.

Full text is downloadable from address "<http://dentistry.sbm.ac.ir>".



Histological Changes Following the Use of Different Types of Implants and Osteo-conductive/ inductive Stimulants

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Abstract

The increase in the use of implants by dentists and the desire of most patients for this treatment leads to the fact that the histological trends following its use are more important. In addition, the use of different types of implants with different surface and the use of substances that stimulate the differentiation and formation of hard tissue such as stem cells or cell differentiation factors and cell activators that researchers use for the treatment and improvement process have led to the claim of the superiority of some processes in studies. Most of the histological and histomorphometric studies in the field of implants are mostly animal studies and cannot be generalized in human samples due to the small number of patients and the failure of treatment cannot be predicted. Also, in the best conditions, there is a possibility of treatment failure or the creation of a lesion with the implant, which is less evaluated by the clinician from a histological point of view.

Therefore, in this presentation, the aim is to investigate the histological appearance of bone tissue after the implant and the common pathological processes after the use of the implant and breaking the treatment.



The Prognostic Significance of Cancer-associated Fibroblasts (CAFs) in Tongue Squamous Cell Carcinoma

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Abstract

Background: Tongue squamous cell carcinoma (TSCC) is associated with poor prognosis and highest rate of metastasis as compared with other tumor sites in the oral cavity. Tumor stroma plays a vital role in carcinogenesis. Fibroblasts that are incorporated in the tumoral stroma are called as Cancer-Associated Fibroblasts (CAFs). They play a pivotal role in progression and metastasis of the solid carcinomas. These cells can be defined immunohistochemically by the presence of alpha smooth muscle actin (α -SMA). This study aimed to determine the role of CAFs in the recurrence of TSCC and patients' survival rates.

Materials & Methods: A total of 30 cases of TSCC with at least two years of follow-up were studied retrospectively. Of these, 15 cases had recurred during the follow-up period. Fifteen specimens of normal oral mucosa were selected as the control group. Immunohistochemistry was used to evaluate the expression and distribution pattern of CAFs (by detection of α -SMA expression).

Results: Statistical analysis showed a strong correlation between α -SMA overexpression and recurrence of TSCC (P-Value=0.007). Correlation between increasing α -SMA expression and lower patients' survival rates (disease-free survival (DFS) and overall survival (OS)) was also demonstrated.

Conclusion: Results of our study suggested that CAFs play an important role in creating the permissive environment for TSCC progression, recurrence and occult metastasis. The α -SMA expression may be used as a prognostic or predictive parameter for TSCC recurrence.

Keywords: alpha smooth muscle actin, cancer-associated fibroblasts, tongue squamous cell carcinoma



Comparative Study of Correlation between Angiogenesis Markers (CD31) and Ki67 Marker with Behavior of Aggressive and Nonaggressive Central Giant Cell Granuloma with Immunohistochemistry Technique

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Abstract

Background: The central giant cell granuloma (CGCG) is generally considered a non-neoplastic lesion. However, some cases show aggressive behavior like neoplasms. Based on clinical observations, a number of researchers have classified this lesion into aggressive and non-aggressive types. This study was aimed to investigate the association between clinical behavior and histopathological features using immunohistochemical vascular CD31 and cellular proliferation Ki67 markers.

Materials and methods: In this descriptive-analytical, clinicopathological and immunohistochemical study, 50 CGCGs, including 25 aggressive and 25 non-aggressive types were selected according to Chuong's classification. The samples were then subjected to immunohistochemical staining to analyze positivity for CD31 and Ki67 markers. Numbers of blood vessels and percentage proliferation of underlying fibroendothelial cells were assessed, and the obtained results were analyzed with the t-test and the Mann-Whitney test.

Results: The results showed a significant difference between aggressive and non-aggressive CGCG lesions in the mean incidences of Ki67 ($p=0.044$) and CD31 ($p=0.003$) positivity.

Conclusion: The present evaluation of expression rates for the vascular CD31 and cellular proliferation Ki67 markers showed there might be a positive relation between the clinical features and histopathology of CGCG. Furthermore, clinical behavior may be predicted based on features such as the number of blood vessels and proliferation of fibroendothelial cells.

Keywords: Aggressive central giant cell granuloma, non-aggressive central giant cell granuloma, vascular CD31, Ki 67



Evaluation of p21waf Expression and CDKN1A exon 2 Mutation in Salivary Adenoid Cystic Carcinoma

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Abstract

Objective: The P21waf is a tumor-suppressor protein encoded by CDKN1A gene. In this study, we evaluated P21waf expression and CDKN1A exon 2 mutation and their relationships with clinicopathological parameters and cancer development in salivary adenoid cystic carcinoma (ACC).

Patient and Methods: Forty paraffin blocks from patients with salivary ACC were collected. Immunohistochemical staining was performed using P21 antibody. Genomic DNAs were extracted from the deparaffinized sections of the embedded tissue. Exon 2 of CDKN1A gene was amplified by PCR and the PCR products were sequenced. Spearman's correlation coefficient, Fisher's exact test, and Kruskal-Wallis test were used for data analysis.

Results: A significant inverse correlation was observed between P21 expression and histologic grade ($p=0.033$, $r=-0.338$). The correlation of tumor size with recurrence ($p=0.048$) and tumor stage ($p=0.046$) was also evidenced. No mutation was detected in the exon 2 of CDKN1A gene.

Conclusion: Regarding the association of P21 expression and histologic grade as a major prognostic indicator of ACC, P21 may be a useful prognostic indicator in ACC. On the other hand, CDKN1A exon 2 mutation seems inapplicable as a risk factor for ACC development.



Maxillary Primordial Odontogenic Tumor Arising from a Dentigerous Cyst: A Case Report and Review of the Literature

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Abstract:

Background: Primordial odontogenic tumor (POT) is a novel mixed epithelial and mesenchymal odontogenic neoplasm that first included in the 4th edition of WHO classification in 2017. To date, there are less than 20 cases described in the literature worldwide. Case report: Herein, we describe a case of POT in an 18-year-old female patient with a complaint of painful swelling for the past month. Panoramic radiograph showed a well-defined pericoronal radiolucency around the unerupted right maxillary third molar which was displaced to the inferior border of the orbit. Remarkable internal calcifications were observed at the periphery of the lesion in its cone-beam computed tomography. Incisional microscopic evaluation showed cellular fibromyxoid tissue resembling dental papilla, entirely covered by columnar epithelium similar to inner enamel epithelium of the enamel organ with areas of suprabasal stellate reticulum like structures. Small foci of intraepithelial calcifications in stellate reticulum areas were also evident. The tumor was enucleated as a whole and based on its excisional microscopic evaluation a dentigerous cyst with the cauliflower projections of POT on its surface was diagnosed for this case. The tumor showed no signs of recurrence in the follow up period.

Keywords: Primordial odontogenic tumor, Dentigerous cyst, Calcification, Maxillary bone



Assessment and Comparison of the Presence of Myofibroblasts and Mast Cells in the Connective Stroma in Different Types of Ameloblastoma

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Abstract

Background: Ameloblastoma is the most important odontogenic tumor. Myofibroblasts are the special cells of stroma. Mast cells participate in differentiation regulation and function of myofibroblasts. The aim of this study is to evaluate the role of stromal components like myofibroblast and mast cell in growth and characteristics of different types of ameloblastoma.

Methods and Materials: In this cross-sectional descriptive-analytical study, 7 blocks of solid ameloblastoma, 7 unicystic ameloblastoma and 6 peripheral ameloblastoma blocks from archives of department of pathology, Isfahan dental school were stained with α SMA marker immunohistochemistry and histochemical coloring of toluidine blue. The average number of myofibroblasts and mast cells, the color pattern of myofibroblasts and the severity of inflammation of the lesions were evaluated simultaneously by two oral pathologists. Data was analyzed by SPSS 20 software using Kruskal-Wallis and Chi-square test. (P value <0.05)

Results: Intact mast cells ($p=0.75$), degranulated mast cells ($p=0.65$) and total mast cells ($p=0.51$) colored with toluidine blue were not significantly different in three lesions. The severity of inflammation ($p=0.46$) was not significantly different in types of ameloblastoma. The degree of myofibroblast coloration and the pattern distribution in different types of ameloblastoma was not significantly different ($p=0.29$) ($p=0.37$).

Conclusion: There was no significant difference between the number of mast cells and myofibroblasts between the three types of ameloblastoma.

Key words: Ameloblastoma, Connective tissue, Myofibroblast, Mast cell



Effect of Intraperitoneal Injection of Nigella Sativa Oil on 5-fluorouracil-induced Oral Mucositis in Rats

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Abstract

Background: Although many studies have shown that administration of Nigella sativa oil can decrease inflammation and facilitate tissue regeneration, the efficacy of its systemic administration for treatment of chemotherapy-induced oral mucositis has not been investigated.

Material and Methods: This study evaluated 72 rats who were randomly divided into three groups control, placebo, and treatment (n=24). The rats received intraperitoneal injection of 5-FU on days 1 and 3. The rats' cheek mucosa was then wounded with a linear scratch by an 18-gauge needle on day 3. The placebo and N. sativa oil were administered in groups B and C, respectively during the study period. Histological changes in oral mucosa were assessed on days 4, 6, and 8. Data were statistically analyzed using SPSS via the ANOVA, and the Kruskal-Wallis test, followed by the Mann Whitney multiple comparisons test.

Results: The mucositis score and inflammation score significantly decreased in the treatment group compared with the control and placebo groups ($P < 0.05$). But there was no significant difference between the groups regarding the connective tissue changes ($P > 0.05$). Our findings suggest that N. sativa oil can have a notable efficacy for the improvement of oral mucositis and can decrease the inflammation score in rats undergoing chemotherapy.

Conclusion: Our results suggest that Nigella sativa can be used as a valuable remedial agent and can be a possible candidate for treatment of chemotherapy-induced oral mucositis.

Keywords: Chemotherapy, Inflammation, Mucositis, Nigella sativa, 5-fluorouracil



Evaluation and Comparison of Cytological Changes in the Buccal Mucosa and the Lateral Border of the Tongue in Smokers, Passive Smokers and Nonsmokers Using Four Staining Methods

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Abstract

Background: Today, the effort to identify pre-malignant lesions has doubled. One of these methods is cytology. The purpose of this study was to compare the observed changes in the cytological smears of smokers and passive smokers with non-smokers using four staining methods.

Methods: This descriptive-analytic case-control study was conducted in three groups with 25 subjects. Cytological smears were prepared by sterilized swabs from the buccal mucosa and lateral border of the tongue of smokers, passive smokers and non-smokers. Specimens previously fixed in alcohol were stained in the laboratory using Papanicolaou, Hematoxylin Eosin, Gimsa and Toluidine Blue. Samples were then evaluated for frequency of micro-nucleus, granular nucleus with coarse chromatin, clear nucleus, pleomorphism and binuclear cell and the results were recorded.

Results: There were no significant differences between the two groups in papanicolaou and toluidine blue staining. In the hematoxylin and eosin staining method, the frequency of granular nucleus with rough chromatin ($p = 0.03$) and clear nucleolar frequency ($p = 0.000$) were significantly different in the studied groups. Frequency of binuclear cells in Giemsa staining method was also significantly different in three groups ($p = 0.004$). In the smoker group, the abundance of binuclear cells was significantly higher in papanicolaou staining and with a slight difference after hematoxylin and eosin ($p = 0.003$); also in subjects exposed to cigarette smoke There was a significant difference in the distribution of granular nuclei with coarse chromatin ($p = 0.014$), clear nucleus ($p = 0.013$), and dual nucleation cell ($p = 0.000$), as well as hematoxylin staining in non-smokers. And eosin showed higher frequency for binuclear cells



than other methods ($p = 0.03$). Comparison between different groups, regardless of the staining method, was significantly higher in smokers and nonsmokers than in non-smokers ($p = 0.033$). Data were analyzed by ANOVA, Shapirovilk and Chi-square tests with Fisher's exact test. Significance level was set at $\alpha = 0.05$ and analyzed by SPSS 19 software.

Conclusions: According to the results of the present study, smoking and exposure to cigarette smoke could be a risk factor for malignant cellular changes. Also, if the cytology technique is used with Papanicolaou staining or hematoxylin and eosin, it is effective in early detection of some cytological changes and helps in early detection of dysplasia in the oral cavity.

Keywords: cytology, tongue and buccal mocusa, smoking



Expression of miRNA3651 in Erosive Lichen Planus using qRT-PCR

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Abstract

Background: According to different literatures, erosive oral lichen planus has potential to transform into oral carcinoma. Considering the importance of early diagnosis of malignant lesions, it seems necessary to study the possible biologic markers for early screening. It has been recently known that miRNAs play an important role in detecting early symptoms of cancer, thus present study was conducted to assess the expression levels of miRNA3651 in erosive lichen planus using qRT_PCR.

Materials and Methods: This case-control study was conducted on 20 paraffin blocks of oral erosive lichen planus and 20 irritation fibroma (control) which were collected from the archive of oral and maxillofacial pathology department of faculty of dentistry of Islamic Azad University. Then the expression of miRNA3651 was evaluated using qRT_PCR technique. Eventually the data were imported to SPSS24 and the mean expression level of miRNA3651 in the two groups was compared using Independent t-test. Significance was assigned at $p < 0.05$.

Results: The findings of this study showed a significant difference in expression level of miRNA3651 between two groups ($p < 0.00001$). The amount of expressed miRNA3651 in erosive lichen planus (10.4 ± 0.98) was obviously greater than that of control (2.02 ± 1.3). For examining sensitivity of miRNA3651 in predicting malignant transformation potential of erosive lichen planus, we used ROC curve which showed that this marker was highly sensitive.

Conclusion: The significant difference of miRNA3651 expression between erosive lichen planus and control group and great sensitivity of this marker defines the importance of this miRNA in early detecting of malignant changes.

Keywords: Cancer screening, miRNA 3651, Oral lichen planus, qRT_PCR.



Functional Bone Regeneration in Odontogenic Lesion

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Abstract

Using tissue-engineering techniques for bone repair and regeneration, researchers are attempting to stimulate new bone formation by the application of a synergistic mixture of growth factors and cells in conjunction with a biomaterial scaffold. Functional bone regeneration reflects this regenerative thinking, where a bio-engineered patient-specific implant is placed in the defective area to be gradually degraded and replaced by new bone to restore function and esthetics. In contrast to functional bone replacement or bone contouring, this approach will not leave a synthetic substrate in the body, and parallel to deposition of new bone, the grafted scaffold degenerates. Polycaprolactone (PCL) and hydroxyapatite (HA) are among the most frequently utilized polymers and ceramics, respectively. Like materials, several 3D printing techniques could be used in scaffold production. Fused deposition modeling (FDM), the most common 3D printing used, is consonant with many materials and can produce scaffolds with favorable characteristics. Even though we are at the beginning of the path, reported cases of functional bone regeneration have demonstrated successful long-term outcomes.



Differences and Similarities between RF (Radiofrequency) and Diode Lasers in Oral Soft Tissue Surgeries

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Abstract

Laser and RF are two new tools in the field of dentistry and they have recently attracted the attention of surgeons and the dentists. Advances such as reduced bleeding and no need for sutures and less pain and inflammation have been mentioned for two techniques during intraoral soft tissue surgeries. However, the production mechanism and function and inherent characteristics of these two devices are different and each has its own advantages and disadvantages. In order to work and use the above devices, dentists must be familiar with the characteristics of laser and RF and how these devices work scientifically. The purpose of this lecture is to familiarize with the production method and mechanism. And the use and no-use of the above devices in the field of dentistry and to compare the benefits. And the disadvantages of these two devices.



Ethics in Basic Research and Dentistry

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Abstract

Medical sciences and consequently dentistry gives a broader, more contextual view of scientific knowledge, whereas recognized as experimental sciences. Even the treatments that are definitely accepted need to be evaluated so the clinical efficacy can be re-evaluated over time. Especially with the emerging diseases, factors affecting health, the epidemiology of diseases and the ever-increasing injuries that threatened human body could not structurally withstood them, new questions arise and research is the only way to answer these questions.

The position of the dentist in the "dentist-patient" relationship is different from the "researcher-subject" position. Even if the dentist and the researcher are both the same, the dentist's primary duty include respecting the health and benefit of the patient, but the first duty of the researcher is the production of new science, so there is a potentially conflicting roles. In dealing with the conflicting roles, the role of the dentist has priority over the role of the researcher.

In the design and implementation of research, several ethical issues must be carefully considered. For example, how are subjects recruited? How to obtaining consent from subjects? How to Protect their Privacy? How to receive more Funding for research? How to avoid the potential conflicts between the interests of researchers? In addition to these important questions, the most important issue in any research is the social value. In this article, the social value of research will be discussed.



Study of Extrinsic Apoptotic Pathway in Oral Lichen Planus Using TNFR1 and FasL Immunohistochemical Markers and TUNEL Technique

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Abstract

Background: The exact pathogenesis of lichen planus (LP) is still unknown and there are some controversies concerning role of apoptosis in its creation. The purpose of the present study is to investigate extrinsic apoptotic pathway in oral lichen planus (OLP).

Materials & Methods: In the present cross-sectional study, the presence of apoptosis was investigated on 25 specimens of OLP and 6 specimens of normal oral mucosa using TUNEL technique and also pro apoptotic immunohistochemical (IHC) markers of FasL and TNFR1 in 4 areas of degeneration, basal and parabasal layers, and lymphocytic band. Then staining intensity distribution (SID) index was determined and the results were analyzed by Wilcoxon and Mann-Whitney tests (P -value <0.05).

Results: There was no significant difference between SID of TUNEL in the areas of parabasal and lymphocytic band, but the difference was significant among other areas. There was significant difference between SID of TNFR1 in the areas of degeneration and lymphocytic band, basal and lymphocytic band and also parabasal and lymphocytic band, but there was no significant difference between other areas. There was no significant difference between SID of FasL in the areas of degeneration and basal, degeneration and parabasal, and also basal and parabasal, but there was significant difference in other areas.

Conclusion: Apoptosis probably doesn't play a major role in destruction of basal cells in OLP. Destruction of basal cells in OLP is probably resulting from necrosis of these cells. Because of low level or lack of apoptosis, there is low probability of carcinomatous changes in OLP.

Keywords: Lichen planus, Apoptosis, TUNEL technique, TNFR1, FasL



Evaluation of Dental Students' Clinical Reasoning in Oral Lesions Management Using Electronic Patient Problem Management (EPMP)

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Abstract

Introduction: Evaluation of clinical reasoning is of special importance in medicine. Proper recognition, diagnosis, and management of oral and maxillofacial lesions are known as parts of dental students' duties. The purpose of this study was to evaluate the clinical reasoning ability of the students of Yazd dental College regarding oral lesion management by designing and implementing the EPMP test.

Materials & Methods: This descriptive-analytical study was performed on 40 dental students of Yazd University of Medical Sciences. These students had a diagnostic dentistry course 3 who were familiar with the diagnosis and treatment plans of the benign and malignant oral cavity lesions. At the end of the semester, EMPE test was performed. The obtained data were analyzed using descriptive statistics and Pearson correlation coefficient.

Results: The mean score of clinical reasoning was 13, the mean score of diagnostic dentistry was 16, and the average score of the students was 16, and accordingly, there was no correlation among the clinical reasoning score, lesson score, and the average score. Fifty-five students agreed with this type of test. Among the property of PMP, the highest score was related to "need for more thought and reflection".

Conclusion: Despite the desirable educational status of the students regarding oral lesions, their clinical reasoning and decision making based on the patients' conditions were not satisfactory.

Key words: dental education, clinical reasoning, Patient Problem Management, dental student



Expression of p53 Protein and Ki-67 Antigen in Chronic Periodontitis of Cigarette Smokers: An Immunohistochemical Study

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Abstract

Background: Cigarette smoking has a destructive effect on periodontium. Studies have revealed a direct linear relation between smoking and cancers of oral cavity. The aim was to evaluate the impact of cigarette smoking on apoptosis and proliferation of gingival epithelium in chronic periodontitis.

Materials and Methods: The study was case-control. 32 paraffin embedded samples of chronic periodontitis with periodontal index = 3 in CPITN scaling system from 16 smoker and 16 non-smoker were examined immunohistochemically for p53 and ki-67 expression. The expression of p53 and Ki-67 were evaluated in terms of intensity and count of positive cells. The expression of p53 and Ki-67 were compared between smokers and nonsmokers and then examined in relation to packs × year in smokers.

Results: The mean count of p53 and Ki-67 expression were not significantly different between smokers and nonsmokers ($p=0.74$ and $p=0.93$, respectively). The intensity of p53 and Ki-67 positive-stained cells were not significantly different between smokers and nonsmokers ($p=0.68$ and $p=0.44$, retrospectively). Expression of p53 and Ki-67 were not different between groups of smokers in terms of packs × year ($p=0.71$, $p=0.96$, respectively).

Conclusion: Although the difference between expression of p53 and Ki-67 were not significant between smokers and nonsmokers, expression of P53 and Ki-67 were higher in smokers with chronic periodontitis than nonsmokers. It seems that there is a balance between the rate of cell proliferation and cell death in chronic periodontitis even in smokers.

Keywords: Antigen ki67, Chronic periodontitis, Cigarette, Smoking, Oncoprotein p53



An Overview on Telepathology: Benefits in Diagnostic Pathology

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Abstract

Background: Telepathology is making diagnosis on digital images instead of conventional glass slides. During the past decades, pathology got lots of benefits by developed technology and digitalized images. Getting whole slide image (WSI) by slide scanner, can provide better view. Digital slides in pathology can be useful tool for learning, making diagnosis and consultation. The aim of this study is to review on digital pathology and current status and future perspectives.

Materials and methods: A complete query was carried out on PubMed and Google Scholar databases, and the studies published during 2000-2022 were collected using the keywords “telepathology”, “image processing,” “slide scanning,” and “Diagnostic System “virtual microscopy”, 15 relevant articles focused on telepathology were selected and reviewed.

Results: All 15 published articles of telepathology, in all areas of diagnostic histopathology including intraoperative frozen sections, routine and referral cases. New developments, including internet solutions and virtual microscopy, are described and analyzed.

Conclusion: The review concludes that the necessary technology for telepathology is available. There is strong evidence for advantages of digital images compared with glass slide.

Key word: Telepathology, Image Processing, Slide Scanning, Diagnostic System, Virtual Microscopy



Salivary Micro-RNA as A Biomarker in Oral Squamous Cell Carcinoma and Oral Lichen Planus Patients

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Abstract

Background: Oral squamous cell carcinoma (OSCC) is one of the most common oral injuries that quick determination is greatly advantageous for ordinary treatment. Oral lichen planus (OLP) may be a pre-malignant condition with the change potential to OSCC. As of late, the microRNAs (miRNAs) have been considered as the novel controller biomarkers for quality expression and early conclusion of harmful lesions as well as assessment of the potential for pre-malignant changes within the injuries. So, we evaluated the miR-Let-7a-5p expression within the spit of patients with OSCC, OLP, and control bunches to attain an early demonstrative marker.

Method: This cross-sectional consider was conducted in Mashhad University of Medical Sciences, Mashhad, Iran. Fresh salvia was collected from OLP patients, OSCC patients, and healthy persons. The expression of miR-let-7a-5p was assessed among the three bunches by quantitative polymerase chain response (q-PCR).

Results: In this study, three groups were quantitatively and subjectively assessed for miR-let-7a-5p expression in saliva. The comes about appeared that there was a factually noteworthy relationship within the cruel quantitative and subjective expression of miR-let-7a-5p among the three groups.

Conclusion: The levels of miR-let-7a-5p expression were essentially lower in patients with OSCC and OLP compared to solid controls. The miR-let-7a-5p can be considered as a biomarker in spit that we propose to be potentially reliable within the conclusion and guess of OSCC conjointly OLP transformation.

Keywords: MicroRNA, Oral squamous cell carcinoma, Oral lichen planus, salivary biomarker



The effect of E-learning on dentistry students' enthusiasm towards oral and maxillofacial pathology

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Abstract

Introduction: In the day and age of technology development, people, students in particular, are gravitated to improve the standards of their personal life, including the ways of learning various subjects not only in everyday life but in their education process. Having enhanced the methods of studying, they might be more interested in being taught.

Methods and Materials: This study reviews the effectiveness of e-learning in dental education by searching in several scientific websites, namely pubmed, google scholar, scopus, web of science, Embase up to 2021.

Results: When it comes to E-learning, all people just consider online classes, while different motivational games in a form of an app or web app would be also an effective method of learning. Traditional learning methods are just teacher-based, which transmits knowledge to the student but this lacks collaboration and analytical skills, resulting in a paucity of soft skills that are necessary for every work environment. On the other hand, there are some branches in dental education, such as oral and maxillofacial pathology, that pupils have no enthusiasm to study and learn due to the need for these lessons to be memorized. Furthermore, some believe practical branches of dentistry are worthwhile to read. Game-based learning by describing different situations using clinical, radiographic, and histologic images in oral lesions would decidedly encourage dental student to attain this branch.

Conclusion: To recapitulate, it is an irrefutable fact that there is a need to implement effective and affordable education strategies to provide dental students the incentives to study better, most specifically for oral and maxillofacial pathology. So that they would be a qualified dentist as well as public health conductor in society.

Keywords: E-learning, Game-based learning, dentistry students, oral and maxillofacial pathology



Immunohistochemical Study of MDM2 Expression in Jaw Cysts

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Abstract

Background: Dentigerous cyst and odontogenic keratocyte cyst are two common odontogenic developmental cysts. The different developmental mechanism and biological behaviour of odontogenic keratocyte cyst are due to intrinsic unknown factors in the epithelium or the enzymatic activity of its wall. P53 is involved in regulating the pathways of DNA rapier, apoptosis, angiogenesis, and maintaining genomic integrity, and is negatively regulated against Murine double minute 2. The aim of this study is to examine expression of Murine double minute 2 as an important marker of proliferation and regulation of cell cycle in odontogenic keratocyte cyst and Dentigerous cyst.

Methods and Material: In this descriptive-cross-sectional study, expression of Murine double minute 2 protein was explored in suprabasal and basal regions of epithelium of 15 specimens from each Dentigerous cyst and odontogenic keratocyte cyst via immunohistochemistry technique. Finally, the data were analysed by SPSS 22 and t-test and chi-square test.

Results: Expression of Murine double minute 2 in both suprabasal and basal regions in odontogenic keratocyte cyst was higher than Dentigerous cyst, but no significant relationship was observed (P:0.825) (P:0.551). The expression of this marker was significantly higher in the suprabasal region than basal region in both studied groups (P:0.005) (P:0.004).

Conclusion: Higher expression of Murine double minute 2 in odontogenic keratocyte cyst can suggest the secondary role of this protein in the pathogenesis, growth, and development of this cyst and its different biological behaviour compared to other cysts.

Keywords: Immunohistochemistry, jaw cyst, MDM2



Expression of miRNA 146a in Oral Lichen Planus: A comparative Study for Evaluation of Malignant Transformation

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Abstract

Objective: Given the importance of preventing the malignant transformation of Oral Lichen Planus (OLP), the present study was aimed to compare the expression of miRNA 146a in Oral Squamous Cell Carcinoma (OSCC) and OLP lesions.

Background: Some studies have suggested that OLP could potentially be a precancerous lesion. There are also several reports on the role of miRNA 146a in the transformation of OLP to OSCC.

Materials and Methods: 30 OSCC and 18 OLP samples were evaluated in this study. After RNA extraction, cDNA synthesis was performed. The expression of miRNA 146a was measured using Real-Time PCR. Agarose gel electrophoresis was used for qualitative assessment of the presence of miRNA 146a. Quantitative analysis was performed through spectrophotometry. The Mann-Whitney U test was used to compare the miRNA 146a expression levels in OLP and OSCC lesions.

Results: The miRNA 146a expression was found to be 1.9139 ± 0.96845 times higher in OLP tissues and 4.7730 ± 4.54098 times higher in OSCC tissues than in the control tissue. The difference between the miRNA 146a expression levels of the two lesions was statistically significant ($P=0.011724$).

Conclusion: The study found a significant difference between OLP and OSCC samples in terms of the expression of miRNA 146a. Therefore, it might be possible to use this miRNA as a marker for estimating the malignancy potential of OLP lesions.

Keywords: Oral Lichen Planus, Oral Squamous Cell Carcinoma, miRNA 146a



Evaluation of Anti-Cancer Effect of Hydroalcoholic Extract of *Nasturtium Officinale* on Oral Cancer Cell Line using MTT Assay Method

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Abstract

Background: Given the many side effects of routine cancer treatments, the use of herbs in cancer treatment may help reduce the side effects of treatments and improve patients' lives. Therefore, the present study aimed to evaluate the anticancer effect of *nasturtium officinale* on the oral cancer cell line.

Materials and Methods: In this experimental study, the toxicity effect of the extract on normal and cancer cell lines at different concentrations and times was investigated using the Methylthiazol Tetrazolium assay method. Finally, the data were compared, and random effect one-way ANOVA was applied to evaluate them.

Results: The extract showed anti-cancer effect, which was significant ($P=0.00$) at different times and in concentrations of ≥ 0.5 mg/ml. The IC₅₀ index for cancer cells was 3.52 at 24 hours and 4.36 at 48 hours. This means that with increasing exposure time, higher concentrations of the extract are needed to inhibit the viability of cancer cells. Also, hydroalcoholic extract had a destructive effect on healthy cells in 24 hours at concentrations of 4 and 8 mg/ml ($P \leq 0.05$). Examination of concentrations in the range of 0.5 to 2 showed that the best and most ideal concentration with anti-cancer effect was 2 mg/ml because in this concentration 55.5% of cancer cells and only 0.1% of healthy cells were killed.

Conclusion: The hydroalcoholic extract of the plant had an anti-cancer effect on the oral cancer cell line. An effect that was inversely related to time and directly related to the concentration of the extract.

Keywords: Cell Line, Hydroalcoholic Extract, *Nasturtium Officinale*, Oral Cancer.



The Role of Molecular Pathology in the Diagnosis and Treatment of Oral & Maxillofacial Diseases

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Abstract

Molecular pathology is a new part of the science of pathology, which is based on intracellular mechanisms and genetic and epigenetic changes in the process of diseases, which investigates the course of diseases at the molecular level and changes in intracellular organelles with advanced techniques. The science of genetic changes that lead to the creation of cancers, the formation of metabolic diseases, etc. can be investigated and the genetic products of cells can be used as biomarkers to detect therapeutic and prognostic goals, and even the initial changes of a disease can be detected at the level of changes. Molecular and biological diagnosis before the appearance of clinical symptoms and prevented the progression of the disease with the help of early treatment. Despite the advances in molecular pathology in the last few decades, this field is very new in the field of oral and jaw lesions. In this topic, saliva and serum biomarkers, including mirRNAs, DNA and RNA changes, important genetic and epigenetic processes in the development of head and neck tumors, genetic principles in forensic dentistry and identification common polymorphisms of odontogenic and salivary gland tumors, diagnostic biomarkers and their application in estimating prognosis and treatment purposes It refers to and in the end, it deals with the not-so-distant perspectives of molecular pathology in the field of personal medicine and tissue regeneration using the design of organoids.



Diagnostic Challenges in Oral Pathology by Cases Presentation

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Abstract

Introduction: Oral and maxillofacial pathology is a specialized field in the dentistry and pathology that deals with the etiology, pathogenesis, diagnosis and treatment of lesions of the oral cavity and craniofacial complex. The variety of diseases and disorders that affect this vital area is very complex, and in many cases, clinicians and pathologists will be seriously challenged in the correct diagnosis and proper treatment of these lesions.

Case Reports: This article introduces two interesting and challenging cases of jaw lesions that follow a complex diagnostic process and steps: The first case: an 18-year-old man who complained of painful swelling for several months and limited jaw movements in the right joint area. Clinical features and radiographs showed an invasive lesion. Histopathological examination had interesting results for definitive treatment of the lesion.

The second case involved a 56-year-old man who accidentally had a large radiolucent lesion with ill-defined margins in the anterior region of mandible bone during a panoramic radiographic examination. On histopathological examination, a malignant and rare lesion was diagnosed.

Conclusion: Explaining histopathology and reaching diagnostic pathways of challenging lesions will be discussed in this article.

Key words: Oral, Jaw, lesion, Pathology



IgG4-Related Disease, Head and Neck Presentation of A Systemic Disease

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Abstract

IgG4-related (sclerosing) disease (IgG4-RD) is an insidious fibroinflammatory process that involves diverse organ systems. Its principal histologic features include storiform fibrosis, marked infiltration of IgG4+ plasma cells, and obliterative phlebitis. IgG4-RD may affect the following tissues in the head and neck region: meninges, pituitary gland, orbit, lacrimal gland, sinuses, nasal cavity, maxilla, salivary glands, thyroid, and lymph nodes. Moreover, IgG4-RD causes tissue damage and produces mass-like lesions masquerading as malignancy clinicoradiologically.

As an illustrative case, we had a middle-aged female patient with a cheek mass. Its biopsy showed marked spindle cell proliferation with a misdiagnosis of low-grade myofibroblastic sarcoma. So, she underwent a maxillectomy that showed the typical histologic features of IgG4-RD. She had a past medical history of a breast lesion resection a few months ago with the final diagnosis of IgG4-RD.

Therefore, IgG4-RD should be considered a systemic disease involving various organs at different times. Because of its acceptable response to immunosuppressive therapy, a correct diagnosis of IgG4-RD may preclude unnecessary major surgery.



Contemporary Diagnosis and Management of Oral and Maxillofacial Cancer

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Abstract

The early diagnosis of head and neck cancer remains a crucial factor in determining the final outcome of a patient. The refinement of radiologic imaging with progressively sophisticated diagnostic equipment allows for obtaining the diagnosis of early-stage tumors and to better define their boundaries with the surrounding tissues. Exhaled breath analysis, liquid biopsy, analysis of circulating tumor DNA, intact circulating tumor cells, or exosomes are new non-invasive methods to diagnosis of cancer.

Although many advancements in the treatment of cancer patients have been made, the 5-year survival rate of HNC patients has not been relevantly improved in recent decades. This is the reason why we still need new targets for treatment. Such innovation, has translated into more common uses of both mini-invasive surgical approaches and high-precision radiotherapy. Currently, the rising role of immunotherapy can be observed in cancer. Additionally, pembrolizumab with platinum and fluorouracil have been approved by the FDA for patients with recurrent/metastatic disease and the positive expression of PD-L1 in the tumor. The “omics” approach represents one of the most intriguing fields of research. It could provide a large amount of information that could be used to predict radiation treatment response as well as the toxicity of patients. Finding new diagnostic, prognostic, and predictive biomarkers and promising targets for treatment may improve the prognosis of HNC patients.

Fibular free flaps are the most commonly used free flap for mandible reconstruction. Computer-aided design virtual planning allows pre-planning of mandible resections, fibular neomandible construct dimensions and fibular osteotomies.



Cone Beam CT in Assessment of Oral Lesions

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Abstract

Cone Beam CT is an advanced imaging modality that provides excellent visualization of dental hard tissues and osseous structures. CBCT images are displayed as multiplanar reconstructions of the imaged structures in three orthogonal planes. Radiologists & dentists must also be skilled in radiographic diagnosis and interpretation of lesions by CBCT. Interpretation of radiographs takes place in three basic steps: (1) detection, (2) interpretation, and (3) evaluation.

Now this short speech is going to share some cases such as inflammatory disease, cyst, tumor.. on the CBCT images with audiences.

Key words: Radiographic interpretation, lesion, CBCT



Discussion Panel: Case Presentation

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Case presentation

There are various and numerous pathological lesions in the mouth, jaw and face area, which are very important in terms of diagnosis and treatment plan. Some of these lesions do not require special treatment, but they cause concern and confusion for patients and dentists.

Lesions of the mouth, jaw and face are observed in different areas of the soft tissue and hard tissue. Bone lesions have seen with lucent and opaque radiographic appearance, soft tissue lesions are present in the form of ulcers, masses, pigmented lesions, atrophic or hyperplastic appearance. Diagnosis, treatment plan, management and strategy of dealing with these lesions can be challenging in the field of dentistry.

In this Discussion Panel, an attempt is made to discuss some of these lesions from the perspective of various specialized fields such as oral diseases, radiology, surgery and pathology.



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Tools for the New Generation of Pathologists to Enhance Education and Clinical Care

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Abstract

Digital pathology has enabled pathology education and clinical care to continue during the pandemic and actually has allowed pathologists from everywhere to come together to learn and teach pathology as well as share their expertise. You do not have to be sitting on a multi headed scope or in a conference room to learn pathology. Web based platforms and video conferencing have transformed our computers into infinite headed scopes allowing thousands of users to learn at the same time from anywhere in the world. Cases can be shared within a minute with experts sitting across the globe to get a second opinion consult. In this talk we will showcase an online free platform-Path Presenter that has brought the world of pathology together and provides not only the software tools to teach pathology but also to easily share cases with experts.



HPV and Head and Neck Cancer: Updates in Diagnosis and Testing

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Over the past 2 decades, the role of high-risk HPV (HR-HPV) in the development of certain head and neck cancers has become very apparent globally. In particular, in many western countries including the USA, HR-HPV is associated with 80-90% of oropharyngeal carcinomas, and it also appears to play a role in selected cancers of the sinonasal cavity. In contrast, HR-HPV associated cancers are uncommon in the oral cavity, larynx, and salivary glands. Most often, the HPV-associated cancers are squamous cell carcinomas and its variants, but occasionally HR-HPV is associated with adenocarcinomas and neuroendocrine carcinomas. HPV-associated squamous cell carcinomas of the oropharynx have a separate clinical staging system which reflects the improved prognosis among a majority of patients. A key role for the pathologist is the proper testing of oropharyngeal cancers for HR-HPV using immunohistochemistry for p16 and/or in situ hybridization for HR-HPV E6/E7 RNA. Specific guidelines for when and how to test cancers for HR-HPV have been developed by the College of American Pathologists (CAP).



From Oral Epithelial Dysplasia to Oral Squamous Cell Carcinoma: Diagnostic Clues and Classifications

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Abstract

Oral Epithelial Dysplasia (OED) is a potentially malignant lesion with prominent diagnostic challenges. During recent decades, WHO and Binary grading systems- the most common OED grading systems- are introduced and compared regarding intra/ interobserver reliability.

Additionally, Oral Squamous Cell Carcinoma (OSCC) is the most common oral cancer and all pathologists are supposed to clearly and well-descriptive report both incisional biopsy and resection of the tumor to guide the surgeons and clinicians effectively.

Here, I present the most challenging topics in making diagnosis of OED and in reporting incisional and excisional biopsies of OSCC.



Odontogenic Keratocyst - The role of PTCH1 and Hedgehog Signaling in its Pathogenesis

Dr. Tiejun Li¹

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Abstract

Objectives: Mutations in PTCH1 gene, a receptor in the Hedgehog (Hh) signaling, are responsible for Gorlin syndrome (GS) and are related in tumors associated with this syndrome. The aims of this series of studies were to determine the role of PTCH1 mutation and misregulation of the Hh signaling in the pathogenesis of GS-related and sporadic odontogenic keratocysts (OKCs).

Findings: Based on screening 73 sporadic and 30 GS-related OKCs, we identified PTCH1 mutations in 35.6% (somatic, 26/73) of sporadic cases and 83.3% (germ-line, 25/30) of GS-related OKCs. However, a much higher mutation rate (79%, 30/38) in sporadic OKCs was detected by analyzing epithelial samples separated from the fibrous capsules. The previously underestimated mutation rate in sporadic cases might be due to the masking effect of the attached stromal tissues. Mutations in other genes of the Hh signaling such as PTCH2, SUFU, and SMO were rare and their pathologic roles in OKC were uncertain. Using whole-exome sequencing (WES), we further characterized the mutational landscape of 5 OKC samples lacking PTCH1 mutation and revealed 22 novel mutations, among which two significantly altered genes (CDON and MAPK1) were predicted to affect Hh signaling activity in two cases. However no recurrent mutations were identified in the WES samples and validation cohort of 10 OKCs. Functional analysis revealed that PTCH1 mutations activated Hh signaling and resulted in aberrant cell proliferation via both classical and non-canonical Hh pathways.

Conclusions: Our data confirmed the high PTCH1 mutation rate in both GS-related and sporadic OKCs. In PTCH1-negative cases, other genetic alterations were rare, but could also be related to Hh signaling. These results suggested that an inhibitor of the Hh pathway may be effective for the treatment of OKCs.



Ameloblastic Fibro-odontoma: A Developing Odontoma or A Neoplasm?

Dr. Tiejun Li¹

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Abstract

Ameloblastic fibroma and related lesions constitute a group of lesions which range in biologic behavior from true neoplasms to hamartomas and formerly includes ameloblastic fibroma (AF), ameloblastic fibrodentinoma (AFD) and ameloblastic fibro-odontoma (AFO). The new edition of WHO classification has deleted AFD and AFO from this unique group, which has already aroused some concerns regarding their nature and interrelationship. Through literature review together with a summary of our own cases, we hope to shed some light on this issue. Whilst the majority of AFs are true neoplasms, some, especially those occurred during childhood, could represent the primitive stage of a developing odontoma. Although some AFOs and/or AFDs are proven to be hamartomatous in nature, representing a stage preceding the complex odontoma, their overall nature as a developing odontoma is not readily determined merely on histologic grounds. Thus, age of the patients should be an important consideration regarding their diagnosis and management.



Challenging Lesions of the Jaws

Dr. Brad Neville¹

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Abstract

In this lecture, Dr. Neville will discuss current concepts related to several interesting and often challenging areas of jaw pathology. In the first section, several odontogenic cysts will be presented, including the relationship of the lateral periodontal cyst, botryoid odontogenic cyst, and glandular odontogenic cyst. This discussion also will include distinction between the glandular odontogenic cyst and well-differentiated intraosseous mucoepidermoid carcinoma. As a separate entity, the importance of clinical recognition of the buccal bifurcation cyst will be presented.

In the second part of the lecture, Dr. Neville will review the spectrum of cemento-osseous dysplasia, with emphasis on the more recently recognized “expansive” forms of this condition. In the final section, he will present concepts related to giant cell lesions of the jaws, such as central giant cell granuloma, aneurysmal bone cyst, and giant cell lesions associated with odontogenic fibroma.



Lichenoid Changes in Oral Mucosa: A Case-Based Discussion

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Abstract

Lichenoid changes in the oral mucosa are considered as non-specific features both clinically and histopathologically. While lichenoid changes may be representative of lichen planus and mostly are interpreted as this diagnosis, such features can be encountered in a wide range of lesions of varied etiopathogenesis from autoimmune-immune-mediated conditions to localized inflammatory/hypersensitivity reactions and premalignant processes. Precise histopathologic studies including direct immunofluorescence examination along with clinical correlation are necessary to establish the final diagnosis.

This 1-hour course is designed based on the presentation and discussion of some selected cases demonstrating lichenoid changes either histopathologically or clinically, and provides some practical tips needed for signing out such cases.



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Newest Advancements of Artificial Intelligence in Oral Pathology

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Aim and Background: Artificial Intelligence (AI) is a branch of computer sciences with the primary objective of producing intelligent machines capable of performing tasks that usually require human intelligence. In recent years, the impact of AI application in different branches of dentistry, especially oral pathology, is evident. Therefore, the present study aims to make a comprehensive review of various applications of AI in the field of oral pathology.

Methods: A complete query was carried out on PubMed and Google Scholar databases, and the studies published during 2010-2022 were collected using the keywords "Artificial Intelligence," "Dentistry," "Oral Pathology," "Machine Learning," "Deep Learning," and "Diagnostic System." Ultimately, 27 relevant articles focused on artificial intelligence in oral pathology were selected and evaluated.

Result: The most crucial contribution of AI is in detecting oral cancers based on histopathologic features. Moreover, AI has greatly affected current oral pathology, helping clinicians detect oral malignancies as soon as possible and increasing patients' quality of life.

Conclusion: As evidenced by the obtained results, combining AI into oral pathology has yielded several major benefits, including improved data integration and interpretation, enhanced diagnosis and treatment planning, earlier detection of oral lesions, accelerating the processes, and higher patient satisfaction. Therefore, the expanded application of this novel technology can lead to higher success rates and fewer treatment failures in all branches of dentistry.

Keywords: Artificial Intelligence, Dentistry, Oral Pathology, Machine learning, Deep learning, Diagnostic System



Epidemiological Pattern of Lip Premalignant Lesions in an Iranian Population: A 13-Year Evaluation

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Abstract

Objectives: This study investigated the prevalence and pattern of lip premalignant lesions in patients referred to the Cancer Institute of Imam Khomeini and Shohada-E-Tajrish Hospitals between 2004 and 2016.

Methods: This retrospective cross-sectional study was conducted on the pathology reports of patients retrieved from the archives of the Pathology Departments of the Cancer Institute of Imam Khomeini and Shohada-E-Tajrish Hospitals between 2004 and 2016. The gender, age, lesion location (upper lip, lower lip, commissure, lip in general, not stated), pathological type, and clinical diagnosis of the lesions were extracted from patient records. The Fisher's Exact test was used to analyze the data by SPSS version 16.

Results: Of a total of 237,392 patients, 40 (0.02%) cases had lip premalignant lesions. The mean age of the patients was 63.71 ± 14.11 years (range 3 to 92 years). The prevalence of lip premalignant lesions was higher in males, with a male to female ratio of 4:1. The most common location and histopathological type of lesions were the lower lip, and actinic keratosis (60% of the cases), respectively.

Conclusion: Lip premalignant lesions were observed in 0.02% of patients. Although this rate is lower than the global prevalence of precancerous lesions of the lip and oral cavity (4.47%), because of the high malignant transformation rate of lip premalignant lesions, every clinician must take part in early detection of these lesions by clinical examination. To confirm the diagnosis, biopsy may be requested for histopathological diagnosis.



Immunohistochemical Evaluation of Expression of CD133 Premalignant Indicator in Oral Lichenoid Reaction Compared to Oral Lichen Planus

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Abstract

Background: Since past research shows that the possibility of premalignancy is greater in oral mucosa lichenoid lesions compared to that in oral lichen planus, the present study aimed at determining the immunohistochemical evaluation of expression of CD133 premalignant indicator in oral lichenoid reaction and comparing it to oral lichen planus and normal oral mucosa.

Methods & Materials: The present retrospective study was conducted on 26 samples with clinical and pathological diagnosis of oral lichen palnus (n= 13) and oral lichenoid (n= 13) using CD133 biomarker and taking the immunohistochemical method. The data were collected using an optical microscope and analyzed using Chi-square statistical test in SPSS software ($\alpha = .05$).

Results: In 30% of lichenoid samples and 40% of oral lichen planus samples, staining was negative ($p > 0.05$). In 40% of the samples in each group, staining intensity was graded 1+ and, in the rest of the samples, 2+ and 3+ ($p > 0.05$). In terms of marker expression, lichenoid and oral lichen planus samples were observed in basal layers (0% and 10%) and suprabasal layers (70% and 50%), respectively ($p < 0.05$).

Conclusion: The results of the present study show that the possibility of premalignancy is greater in oral mucosa lichenoid lesions compared to that in oral lichen planus. Further investigations with a larger sample size are recommended in this field so as to compare it to squamous-cell cancer and normal oral mucosa. In the present study, it was not possible to simultaneously compare the biomarker under investigation with oral mucosa squamous-cell cancer and normal oral mucosa, which is considered as one of the limitations of the study.

Keywords: CD133; Lichen planus; Lichenoid; Malignancy



The Comparison of mir-214 Expression between Odontogenic Keratocyst and Dentigerous Cyst

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Abstract

Objective: Some of the previous studies suggested that certain types of miRNAs are abnormally expressed in tumors and lesions with aggressive behavior and can lead to genetic alterations and affect several cellular signaling pathways. In previous studies miRNA214 expression was also variable in various cancerous tissues and has been shown to act as a tumor suppressor in these tissues. Due to the clinical and invasive behavior of Odontogenic keratocyst (OKC) compared to other odontogenic cysts and limited studies on miRNA in OKC, the aim of this study was to compare the incidence of mir 214 in OKC and Dentigerous cyst.

Materials and Methods: In this study OKC and Dentigerous cyst samples were provided from Islamic Azad University of Dentistry Oral Pathology archive. In order to extract RNA from the sample, sections prepared from paraffin blocks were ground in mortar and for 15 minutes 12000 rpm at 15 ° C centrifuged. After RNA extraction, its quantity was evaluated by UV spectrophotometry and its quality was evaluated by 1% agarose gel electrophoresis. To determine the concentration of miRNA214 extracted, miRNA light absorption was used using 1 - UV spectrophotometry 280 nm of Nano Drop company (Thermo scientific-Nanodrop 2000). During Real-Time PCR, RNA samples were converted to cDNA so that their expression could be measured.

The BIONEER device plotted a graph for each sample and this graph was shown on the display, and finally the incidence of mir214 was obtained quantitatively in micrograms. Mann-Whitney U test was performed.

Results: The cases included 23 samples of odontogenic keratocysts and 13 samples of dentigerous cysts. The expression ratio of miRNA 214 in odontogenic keratocysts was 10.0978 ± 0.60916 and in dentigerous cysts 12.5091 ± 0.45686 . The difference in expression of miRNA 214 was significant. ($P = 0.000$)($p < 0.001$)

Conclusion: In the present study, a significant difference in the expression of 214 miRNA was found between samples of OKC and Dentigerous cyst. According to the results obtained in this study, it seems that the study of miRNA expression can be used to predict the clinical behavior of these odontogenic cysts, although more studies are needed to confirm this.

Keywords: Odontogenic keratocyst, Dentigerous cyst, miRNA214



The Use of Artificial Intelligence in Diagnosis and Grading of Oral Dysplasia

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Abstract

Background: Precancerous lesions can potentially lead to oral squamous cell carcinoma. Therefore, early diagnosis is vital to prevent further cancerous lesions. Also, prognosis of these lesions depends on dysplasia grading. Dysplasia, the abnormal growth of epithelium cells, is classified through architectural and cellular changes. The best method to diagnose is biopsy and assessing the histopathological slides. The gold standard system of grading the dysplastic epithelium, “world health organization 2017” is based on extension of disturbance and intensity of changes into the epithelium layer. The “binary” system, that labels the lesions to low or high risk of malignant progression, was developed to help the clinicians make clinical decisions. Available former databases with diagnosed labels used as a helpful tool to facilitate the diagnosis and prognosis processes. Dysplasia grading is inherently a challenging problem, remarkable results of previous studies by using deep learning algorithms for classification of head and neck cancer diagnostic images could suggest the performance assessing in this matter as well.

Methods and materials: To produce an integrated and qualified dataset using previous histological slides, 171 images from normal oral mucosa and 490 images from oral dysplasia were graded by the two systems. Then convolutional neural network was developed, trained and tested with this dataset.

Results: The proposed model has reached initial accuracy of 62.4% and 48.1%. The accuracy was increased about 10% by using data augmentation techniques and pretrained models.

Conclusion: It seems that convolutional neural networks can play a major helping role in assessment and classification of oral dysplasia.

Keywords: convolutional neural network, histopathology diagnosis, oral dysplasia grading



Evaluation of Squamous Cell Carcinoma Antigen 1 Expression in Oral Squamous Cell Carcinoma (Tumor Cells and Peritumoral T-lymphocytes) and Verrucous Carcinoma and Comparison with Normal Oral Mucosa

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Abstract

Background: Squamous cell carcinoma antigen (SCCA) is a prognostic marker for recurrence of SCC. Its high serum levels are correlated to nodal metastasis. It is still unknown if high SCCA in patients with SCCA tissue expression in tumor cells are related to peripheral T-lymphocytes. We did this study to evaluate SCCA expression in SCC and verrucous carcinoma (VC) and to compare it with normal oral mucosa.

Methodology: Immunohistochemistry technique was used to determine SCCA1 expression pattern in 81 specimens divided into 3 groups, including oral SCC, VC and normal oral mucosa. Serum-based and tissue-based antigen levels of 20 oral SCC cases were compared by western blot assay. SCCA expression was compared in both tumor cells and peripheral T-lymphocytes by immunofluorescence-assay.

Results: Our results showed SCCA levels in SCC specimens were significantly lower than in VC and normal oral mucosa specimens. We found no correlation between IHC expression of SCCA and serum levels. SCCA was well expressed in tumor cells and peripheral T-lymphocytes.

Conclusion: Decreasing SCCA in SCC specimens suggested SCC tumor cells may affect more than serum levels of SCCA in patients. Moreover, expression of SCCA in peripheral T-lymphocytes showed tumor cells and T-lymphocytes may cause serum SCCA.

Keywords: Antigen. Lymphocyte. Oral cancer. Squamous cell. Verrucous.



Atypical Lipomatous Tumor/Well-differentiated Liposarcoma in Elderly: Case Report and Literature Analysis

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Abstract

Background: Soft tissue sarcomas appear in 1% of adult cancers. Liposarcoma is the most common soft tissue sarcoma but occurs up to 2% in the oral cavity. Well-differentiated liposarcoma/atypical lipomatous tumor (WDL/ALT) is the most common of four liposarcoma variants in the oral cavity that could be misdiagnosed as a benign lesion. Radiography, ultrasonography, CT and MR imaging can be used for liposarcoma detection. Immunohistochemistry, classical histopathology and molecular biology techniques in some cases can be used to reach the accurate diagnosis. The treatment contains surgical processes and radiotherapy. Although distant metastasis is rare, local recurrence is ordinary. Depending on the histological grade, prognosis differs but is relatively favorable.

Case report: A 56-year-old edentulous female with chief complaint of a swelling in the right side of mandible that prevents denture from sitting well, was referred to the oral surgery department of Farhikhtegan hospital. Radiographic examination (CBCT) showed well-defined radiopaque lesions at the lateral border of ramus. Magnetic resonance imaging (MRI) demonstrated well-defined 30mm radiopaque lesions with radiolucent septas and capsules. The microscopic findings of excisional biopsy presented well circumscribed neoplasm composed of adipocytic cells, admixed haphazardly with dispersed spindle cells, scattered bizarre-looking pleomorphic cells and some floret giant cells in mildly myxoid background. Immunohistochemistry results confirmed the adipose origin of these cells.

Conclusion: It's necessary to be aware of etiopathologic aspects of this rare neoplasm in order to aim for the exact cause.

Keyword: Adipose tissue, Edentulous Mouth, Liposarcoma



Possible Oral Manifestations associated with COVID_19 Infection

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Abstract

Introduction: Covid-19 pandemic is a novel disease. The pathogenic mechanism of SARS-CoV-2 infection is unclear. There have been many reports about oral cavity lesions in patients with COVID-19, it might depend on considering this location is one of the first sites coming into contact with the virus.

Aim: We aim to familiarize practicing head and neck clinicians with the variable clinical spectrum of oral manifestations associated with COVID-19 and appraise the most recent data on the role of SARS- CoV-2 in these lesions.

Method: The article in scientific databases including PubMed/Medline, and Google Scholar published between 2020 and 31 October 2021 were searched by using relevant key words on oral manifestations in patients with PCR-confirmed COVID-19. 291 articles were found, and 65 were included in this review.

Results: The oral manifestations in patients suffering from COVID-19 are various forms of ulcerations, oral mucosal inflammation, etc. A large number of articles reported the occurrence of mucormycosis in oral and rhinocerebral regions of immunocompromised patients involved by COVID-19. The oral signs and symptoms may appear even before the disease. So, dentists must identify such manifestations and diagnose COVID-19 status in the early stage.

Conclusion: In this study, we concluded that oral manifestations in patients with COVID-19 could be secondary lesions resulting from local irritants or dependent on the deterioration of systemic health or could be just coexisting conditions. SARS-CoV-2 have the direct and indirect roles in the development of oral lesions.

Keywords: SARS-CoV-2, COVID-19, Oral manifestations, Oral lesions



Epidemiologic Changes of Squamous Cell Carcinoma in Iran from 1960s to 2020s

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Abstract

The most common cancer in oral cavity is oral squamous cancer (SCC) which is a malignant tumor that may occur anywhere within the mouth. Through the last 50 years, its 5 years permanence hasn't been changed. Early recognition is a key factor to manage and cure this kind of cancer and therefore a study on epidemiologic aspects of oral SCC is crucial. In further study articles related to SCC in Iran has been reviewed.

Methods and Materials: The data collection for this review has been performed using the following online databases: PubMed, Google scholar and SID. All the outcomes have been obtained by entering the following keywords or combination of words: mouth cancer SCC, squamous cell carcinoma, mouth cancer, oral cancer, all combined with Iran.

Results: The earliest articles have shown that prevalence among males and females is equal although latest articles declared females are more susceptible to suffer from SCC. The prevalence has increased among females living in Eastern provinces. Sistan and Bluchestan province has shown to have the highest prevalence. The last epidemiologic change is the age of patients which seems to have significant decrease.

Conclusions: Through the past years females and the youth has been more susceptible to suffer from SCC and therefore practitioners must be more careful while oral examinations and deciding on deferential diagnosis.

Keywords: mouth cancer, SCC, squamous cell carcinoma, Iran



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Biosensors in Dentistry

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Abstract

Background:

Wearable sensors have received enormous attentions over the past decades for the convenience of monitoring human activities in daily life. Recently-developed wearable sensors are also capable of biochemical signal detection. Benefiting from the great technical progress applied on different parts like oral cavities to detect or monitor various physiological parameters in a non-invasive way. It is of great physiological significance to track food intakes, and health problems of oral cavity where is the ideal place significance and ideal place for monitoring. Oral wearable sensors for food intake monitoring are for monitoring healthy diets. Dental wearable sensors might be beneficial in following instances such as Dental caries monitoring, Orthodontic treatment monitoring, Dental implants monitoring, pH monitoring, Metabolic monitoring, and Microorganism monitoring. Some diet sensors have been designed for the management of nutrition and diet while Chemical diet sensors are designed to monitor food ingredients ingestion and food species ingestion, depending on their chemical properties

On the other hand, the application of digital technology in oral pathology is also on the verge of becoming a standard of care, thereby eliminating the need for practicing pathology on a conventional microscope. Automation and digitalization are required to not only increase the efficiency, growth, quality, and capacity but also to standardize the processes. The purpose of this article is to introduce the readers, the incorporation of new ideas and technologies in the lab for a better and faster diagnosis, wearable sensors.

Conclusion:

The truly intelligent dental sensors and digital pathology can be developed to assist dentists and give guidance in clinics and laboratories.



The Solitary Fibrous Tumor of Lower Lip; A Rare Case Report

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Abstract

The Solitary Fibrous Tumor (SFT) is an unusual benign neoplasm that has a special tendency to pleura. However, examples of this tumor were identified in several other anatomic sites including skin, deep soft tissue, urogenital system, gastrointestinal tract, and the head and neck region including oral cavity. SFT of the oral cavity has no sex predilection and can affect any age. We present a case of a Solitary Fibrous Tumor of the lower lip in a 19-year-old male patient and describe its diagnostic procedures. The histopathological findings revealed typical features of SFT and Immunohistochemical findings showed severe expression of CD34 and weekly for ki67.

Keywords: Solitary Fibrous Tumor, lip, Spindle cell tumor



A Case of Congenital Teratoid Cyst with Respiratory Epithelia of Rare Sites: Atypical MRI Finding

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Abstract

A wide range of lesions, such as congenital ranula, teratoma, dermoid cyst, foregut duplication cyst, vascular and lymphatic anomalies, and thyroglossal duct cyst can be detected on the pediatric floor of the mouth. Oropharyngeal teratomas are uncommon. Magnetic resonance imaging (MRI) has a diagnostic role in distinguishing between different head and neck lesions. Here, we reported a rare case of a cystic teratoma on the oral cavity floor with atypical MRI findings.

We present a 4-year-old girl with a congenital mass in the sublingual region. This mass had been drained twice but recurred. The examination revealed an approximately 3×4 cm cystic painless mass derived from the left side of the midline in the sublingual region, pathognomonic of a ranula.

The MRI demonstrated a well-marginated lesion in the oral cavity floor, high signal on T2- and iso signal on T1- weighted with thick wall and wall enhancement. The MRI findings were related to a congenital cyst of the oral cavity with a high proteinaceous material, suggesting an infected ranula. The cyst was surgically removed. On microscopic sections of the excised specimen, a cyst lined by epidermoid stratified squamous epithelium and ciliated respiratory mucosa with skin adnexa (sebaceous glands, hair follicle, and sweat glands) was demonstrated and supported with adipose muscular tissue, compatible with maturing cystic teratoma.

Cystic teratomas, especially for those with respiratory and gastrointestinal epithelium that do not respond well to treatment, differential diagnoses should be considered for rarer lesions

Keywords: Cystic Teratoma, Floor of the mouth, MRI, Pathology



Explaining the Role of Internet and Cyberspace in the Interaction Between Dentist and Patient

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Abstract

Background: By the Internet and cyberspace development, the source of dental information and knowledge in addition to dentists, also includes the Internet and cyberspace, and the relationship between dentists and patients has changed. Therefore, we decided to explain the impact of the Internet on the relationship between the patient and the dentist.

Methods: In this study, a phenomenological approach was used to explore the impact of the Internet and cyberspace on the interaction between dentist and patient. Data were collected through semi-structured interviews with 9 dentists and 9 patients. The interviews were transcribed after recording. Sentences related to the purpose of the study were extracted from the text of the interviews, coded and classified. Data analysis was performed by content analysis method.

Results: The most important of contents were dentists reaction to patients Internet information, positive and negative points of use of the Internet by patients, the effect of the Internet on patients satisfaction, comparison of patients and dentists relationship In the past and present, the impact of this content on patients trust in the dentist as well as patients understanding, reasons why patients do not use the Internet and dental information sources.

Conclusion: The impact of the Internet and cyberspace on the relationship between dentist and patient is relative, and in different situations, as well as different patients and dentists, can have different effects. The undeniable and widespread existence of the Internet is important and it is better to pay special attention to this issue.



Giant Cell Fibroma Clinically Mimicking Malignancy: A Case Report

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Abstract:

Giant Cell Fibroma (GCF) is a benign rare fibrous lesion that predominantly occurs on the mandibular gingiva. Clinically, it is presented as a sessile or pedunculated mass that frequently occurs in the third decade with a slight female predilection. The lesion is usually characterized by stellate and multinucleated fibroblasts located in the lamina propria near the overlying epithelium and radiographically treated as a benign lesion.

A 20-year-old female was referred to the Oral and Maxillofacial Medicine Department of Semnan Dental School, with the chief complaint of tooth displacement and gingivitis. Clinical examination revealed maxillary protrusion, mouth breathing, localized gingivitis in the interdental areas of the papilla of the lateral and canine teeth; also alveolar bone with pus discharge in the right mandibular premolar area. Radiographically, the lesion leads to the bone resorption and linguistic movement of the teeth in the right side of Mandible. There were no root resorption and no bone expansion. Gentle scaling and root planning, biopsy, and second premolar extraction were performed. The presence of the giant fibroblasts in superficial connective tissue confirmed the diagnosis of Giant Cell Fibroma. At the follow-up session, tissue repair was accomplished, and the first premolar was immobile and was no longer loose.

Nevertheless, further studies are required to investigate the precise nature of the mono or multinucleated cells, i.e., atypical fibroblasts that illustrate degenerative and functional changes. Moreover, a high index of suspicion and appropriate analytical examination is required for distinct lesions to achieve a proper diagnosis and suggest an appropriate treatment.

Keywords: Fibroma, Fibroblasts, Oral, Gingiva, Bone resorption



A Comparative Immunohistochemical Analysis of Langerhans Cells in Oral Lichen Planus and Oral Squamous Cell Carcinoma

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Abstract

Background: Oral erosive plan is a disease mediated by mucosal skin immunity. Various studies have supported the presence of immunological mediators in the development of this disease and its pathogenesis appears to be due to cellular immunity. Therefore, the aim of this study was to evaluate the immunohistochemical expression of CD1 in oral lichen planus in comparison with SCC.

Materials and Methods: This retrospective descriptive-analytical study examined 22 samples of oral erosive lichen planus and SCC in the archives of the pathology ward of Al-Zahra Hospital in Isfahan between 2001-2020. All staining slides of hematoxylin and eosin and blocks related to these lesions were separated from the archives of the mentioned section and were re-confirmed by two oral, maxillofacial pathologists. After collecting data using frequency tables, correlation, Mann-Whitney and Chi-square tests were analyzed at the error level of 0.05% with SPSS24 software.

Results: Of the 22 samples studied, 76.9% of LP lesion patients were female and 23.1% male, 44.4% of SCC lesion patients were female and 55.6% were male. 59.1% of patients have LP lesion and 40.9% have SCC. The largest LP lesion was in the right cheek and the largest SCC lesion was in the floor of the mouth. There was a significant difference between the mean expression of cd1 in the epithelium between LP and SCC lesions ($p = 0.009$). There was a significant difference between the mean expression of cd1 in mesenchyme between LP and SCC lesions ($p = 0.011$). Also, a significant difference was observed between the mean expression of cd1 between epithelial and mesenchymal in SCC lesion ($p = 0.038$). There was also a significant difference between the severity of LP and SCC lesions ($p = 0.048$).

Conclusion: CD1 expression in lichen planus epithelium was much higher than SCC and connective tissue.

Keywords: Lichen planus - CD1 – SCC



Oral Pulse Granuloma; A Case Report of Huge Mandibular Edentulous Jaw Lesion

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Abstract

Oral pulse granuloma is a rare lesion of the oral cavity with unclear etiology. Some authors believe this lesion as a foreign body reaction to implanted food particles. In oral cavity, most cases are found in the posterior regions of the mandible. The edentulous mandible was the involved site in 18 cases with oral pulse granuloma. In these cases, the premolar-molar site was the most common region.

Here we present a case of a 70-year-old male with huge unilateral swelling of mandible on the left side. The aim of this paper is to present a case of oral pulse granuloma with wide extension, detailed clinicohistopathologic features with 2 years follow up, and a short review of reported cases.

Keywords: pulse granuloma, hyaline ring granuloma, oral pulse granuloma



Clinical Pitfalls in Diagnosis of Mesenchymal Tumors: A Case Report of Rhabdomyoma Mimicking Reactive Lesion

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Abstract

Extracardiac Rhabdomyoma type very rarely occurs in the head and neck and clinically mimics the reactive lesions. Adult and fetal types of extracardiac adult rhabdomyoma are diagnosed only by histopathological studies. Although very unusual, adult rhabdomyoma should be considered in the differential diagnosis of oral cavity lesions. The histopathologic examination should be helpful for the final diagnosis.

A 34 Y/O male presented in our center with a yellowish sessile lesion in the labial maxillary vestibule, and Clinical differential diagnoses were: Lipoma, rhabdomyoma, leiomyoma, and schwannoma. Excisional biopsy was done and at surgery, there was not much bleeding during the operation. And found a mass of unencapsulated soft tissue beneath the vestibular mucosa.

Microscopic examination shows an encapsulated well-circumscribed benign neoplasm composed of multiple lobules of large polygonal cells with prominent abundant granular eosinophilic cytoplasm which are arranged in the fibrovascular stroma. No cellular atypia was seen. Diagnosis of rhabdomyoma (adult type) was made by collective agreement.

Affected areas of rhabdomyoma in the oral cavity are floor of the mouth, tongue, and soft palate, respectively. In our case, the yellowish color in clinical features has led to lipoma as the first clinical diagnosis. However, rhabdomyoma can be mistaken for other reactive lesions and mimic the appearance of many soft tissue lesions. We tried to review other case reports for comparison of clinical diagnoses of Rhabdomyoma.

Keywords: Mesenchymal tumors, Maxillary vestibule, Neoplasm, Oral cavity, Rhabdomyoma



Serum and Salivary Molecular Biomarkers for Early Diagnosis in Odontogenic Tumors

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Abstract

Odontogenic tumors comprise of complex heterogeneous lesions that originate from ectomesenchymal and/or epithelial odontogenic tissues and manifest following normal tooth development. They are diverse from hamartomas to malignant tumors with different behavior, histology and even different geographical distribution. Markers are molecules, genes or molecular features in pathogenesis of disease play a critical role in diagnosis and management of patients, especially in tumorigenic cases. In this study, we describe immunohistochemical and molecular markers in diagnosis of odontogenic tumors and investigate recent studies based on “omics” that provide more information about prognosis and therapeutic approach of these tumors in addition to diagnosis. Non-coding RNAs like micro-RNAs, long noncoding RNA (lncRNA) and small non-coding RNA (snoRNA) play regulatory role and impact odontogenesis. Molecular marker proposes their potential role in etiopathogenesis of odontogenic tumors and suitable candidate in diagnostic, prognostic and therapeutic approaches in addition to patient management. For future evaluations, organoid represents in vitro tumor model-study for tumor behavior, metastasis and invasion, drug screening, immunotherapy, clinical trial, hallmarks association with prognosis and evolution of personalized anti-cancer therapy. Whole genome sequencing and transcriptomics in ghost cell odontogenic carcinoma manifested involving of NOTCH and SHH pathways including increased copy number of SHH, GLI1, JAG1, DTX3, and HEY1 that result in overexpression of them.

Keywords: Odontogenic tumor, molecular biomarker, non-coding RNA, micro-RNA, prognostic



Comparison of Clinico-histopathologic Features of Oral Squamous Cell Carcinoma in Male and Female Patients

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Abstract

Background: Based on global data, the risk of Oral Squamous Cell Carcinoma (OSCC) is higher in males especially in older ages, with the male-to-female ratio in approximately 2.5: 1. The clinico-histopathologic features of OSCC in relation to gender are controversial in different reports. The aim was to compare the clinico-histopathologic features of OSCC between males and females.

Materials and Methods: The study was retrospective and was completed in Iran National Tumor Bank, Cancer Institute, Tehran, Iran. Medical and histopathologic records of cases with OSCC were retrieved from archive. Age, location, histopathologic differentiation and tumor size were recorded and compared between both genders. The frequency of clinico-histopathologic features was calculated and the distribution reported.

Results: Of 580 cases with OSCC, 347(59.8%) of patients were males and 233(40.2%) were females with a mean age of 38.5 ± 31.4 and 25.8 ± 23.4 years, respectively. 84(24.2%) of males and 66 (28.3%) of females were in seventh and eighth decades of life, respectively. In both genders, the most prevalent location was tongue (Males: n=124, 35.7% and Females: n=100, 42.9%). Moderately differentiated OSCC were more prevalent in males (n=156, 44.95%). The most prevalent pathologic differentiation of OSCC in females were well (n=120, 51.5%). 151 (43.5%) of cases in males and 114 (48.9 %) in females were 0-2 cm which was the greatest diameter of OSCC.

Conclusion: OSCC had more malignant differentiation in males compare to females. The findings showed, males developed OSCC at a younger age than females. The OSCC had higher malignant features in males in compare to females.

Key words: Carcinomas, Gender, squamous cell



Conservative Surgical Treatment of Mandibular Odontogenic Myxoma and Review of the Literature

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Abstract

Odontogenic myxomas are benign odontogenic tumor with locally aggressive behavior and non-metastasizing neoplasm of the jaw bones. It derives from the dental mesenchyme or periodontal ligament. Despite the benign nature of these lesions, there is a high rate of local recurrence after curettage alone and, in some instances, requires adequate resection. This paper describes a case of a sizeable odontogenic myxoma in the mandible of 44 y/o female, emphasizing a discussion on the differential diagnosis related to radiological findings and the surgical treatment. Extraoral photograph, showing swelling in the left-side mandibular body. Panoramic radiograph showed a large well defined, sclerotic margined, multilocular radiolucent lesion with “soap bubble” appearance on left side mandible. Marginal resection of the left side mandible was performed under general anesthesia and No recurrence was seen after 3 years periodical clinical and radiographic follow up. Since this is considered as a conservative treatment for myxoma, therefore, in this study, we have discussed the need for radical or conservative treatment through the review of articles.

Keywords: odontogenic myxoma, odontogenic tumors, mandible.



Purpose-based Self-evaluation of the Diagnosis of Oral Pathologic Lesions in Birjand Dental School Students in 2019

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Abstract

Background: The aim of this study was to determine purpose-based self-evaluation for the diagnosis of oral pathologic lesions among birjand dental school students in different educational levels (10th and 12th semester) so that the short comings and advantages of theoretical courses on the subject could be evaluated from the beginning to the end of the course.

Methods: In this cross-sectional, descriptive-analytical study a self-evaluation questionnaire in birjand Dental School. A total of 47 dental students in, 10th and 12th semesters were included in the study using census sampling technique. The students answered the questions. Data were analyzed with SPSS 16 using two-way ANOVA and Kruskal-Wallis, Mann-Whitney and post hoc Tukey tests ($\alpha=0.05$).

Results: A total of 47 dental students from semesters, 10 (13 =27.7%) and 12 (34 =72.3) were evaluated. The mean scores of self-assessment in students in the 10th compared to 12th semesters was not significant (p value = 0.43). Two-way ANOVA showed that the effects of sex on the mean self-evaluation score were significant (p value = 0.043).

Conclusions: Self-evaluation scores of students to diagnose oral pathologic lesions were not significantly different in 10th compared to 12th semester. The mean overall diagnosis score was (1.75 ± 0.45). The highest score was for dental wear (2.85 ± 0.47) and the lowest score was for pleomorphic adenoma (0.93 ± 0.68). These scores had a significant relationship with gender. In this context, female students exhibited higher scores compared to males.

Keywords: Diagnosis, Oral pathology, Purpose-based self-assessment



The Concordance between Clinical and Histopathologic Diagnosis in Patients Undergoing Oral Biopsies in Zanjan (Iran) from 2017 to 2021

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Abstract

Background: The most effective way to achieve a diagnosis and ultimately the correct treatment of oral lesions is to prepare a biopsy and its pathological examination. This study was performed to evaluate the compatibility of the clinical diagnosis of oral lesions with the pathology report.

Materials and Methods: In this cross-sectional descriptive-analytical study, the frequency of biopsy oral lesions between 2016 and 2020 was examined. The effect of demographic characteristics of patients (age and sex), type of lesion, location of the lesion, involved tissue, and type of specialist on the degree of concordance was determined. Statistical analyzes were performed at a 95% confidence level by SPSS software version 22.

Results: In this study, 175 lesions were examined, of which 34.9% were related to the gingiva and 33.7% were related to jaw bones. Two-thirds of the lesions were related to the soft tissue and half of the lesions were mesenchymal. The highest frequency of biopsy lesions was related to epulis fissuratum, pyogenic granuloma, and radicular cysts (9.7% each). The concordance between the first clinical diagnosis and pathology reports was 53.7%. The rate of diagnostic compliance was higher in soft tissue ($P < 0.05$) but age, gender, and type of lesion had no effect on diagnostic concordance ($P > 0.05$).

Conclusions: The low concordance between clinical and histological diagnoses in this study shows that specialists cannot rely only on clinical diagnosis in their management decisions.

Keywords: Clinical diagnosis, pathology findings, biopsy



The Prevalence of Oral and Maxillofacial Pathologic Lesions in Pathology Centers of Zanjan Over A 5-Years Period (2014-2020)

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Abstract

Background: The oral and maxillofacial region is exposed to many harmful agents and can be affected by a wide range of reactive, infectious, cystic, precancerous, and neoplastic lesions. This study aimed to determine the prevalence of oral and maxillofacial pathological lesions in Zanjan.

Method: This retrospective descriptive study was conducted in the period 2014 -2020 by referring to the hospitals and laboratories with pathologists in Zanjan. We studied in terms of age, gender, location and histopathological type of lesion. Finally, the collected data were entered into SPSS software version 22 and statistically analyzed ($P < 0.05$).

Results: A total of 176 histopathological lesions were investigated. Of them, 120 cases (58%) were female and 74 (42%) were male. The mean age of the patients was 39.4 years. The most prevalent lesion was periapical cyst (14.8%). In terms of tissue involved, the most lesions were related to soft tissue (67%) and in terms of anatomical location, the most lesions were gingival mucosal lesions (35.2%).

Conclusion: The prevalence of pathological lesions was higher in females than in males. Soft tissue lesions were more than hard tissue lesions. Gingival mucosal lesions were the most prevalent and lesions of the floor of the mouth and nasal vestibule lesions were the least prevalent ones. Given the histopathologic nature of lesions, periapical cyst was the most prevalent lesion.

Key words: oral and maxillofacial pathological lesions, Oral lesions, Biopsy, Prevalence



Correlation of Expression of Ki-67 in Samples of Head and Neck Squamous Cell Carcinoma with Histological and Clinical Features

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Abstract

Background: Squamous cell carcinoma (SCC) is one of the most common malignancies in the head and neck. The prediction of the biological behavior of this tumor plays an important role in choosing the appropriate treatment plan. The ki-67 antigen is one of the most well-known proteins associated with the cycle cell, widely used in studies to examine cell proliferation. Few studies have investigated the association between ki-67 expression and biological, clinical and pathological behaviors in head and neck SCC. Therefore, the aim of this study was to determine the relationship between ki-67 expression and clinical and histological characteristics in head and neck SCC in Birjand city.

Methods: For this descriptive study, we used formalin fixed and paraffin embedded tissue of 67 head and neck SCC diagnosed from Imam Reza Hospital and Vali-e-Asr Hospital in Birjand. Slides were stained with ki-67 antibody using immunohistochemical technique. Then, the relationship between expression of ki-67 and grade of histopathologic and other parameters in this study, was analyzed by SPSS-22 software and statistical tests.

Results: From 67 samples, 40 cases of laryngeal involvement, 7 cases of tongue involvement, 10 cases of lip involvement, and 10 cases of involvement in other areas were observed. The results of statistical analysis showed that there was a significant relationship between expression of Ki-67 and location of involvement ($P = 0.001$). From the examined the larynx and tongue ($P = 0.011$) and lip ($0.003 = P$) had a significant relationship with the expression of the marker. It was also found that there was no significant relationship with the appearance of the ki-67 marker and grade of histopathologic, tumor size, age and sex.

Conclusions: The expression of ki-67 in the larynx was higher than other sites in the SCC of the head and neck, which may be due to delay of it's diagnosis in these areas and lead to progression of disease. There was also a significant relationship between the expression of this marker in the tongue and the lips which indicates the high risk of these areas and the high rate of SCC proliferation in these areas.

Keywords: squamous cell carcinoma, ki-67, immunohistochemistry



Comparison of EGFR (Epithelial Growth Factor Receptor) Expression As A Protein Marker in Oral Erosive & Reticular Lichen Planus

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Abstract

Background: Lichen planus is a relatively common mucocutaneous disease. The progression of oral lichen planus lesions to malignancy varies from 0.4 to 5.6%. Epithelial Growth Factor Receptor would be highly expressed in those premalignant lesions that progress to malignancy.

Methods & Materials: In this cross-sectional descriptive-analytical study 20 samples of erosive oral lichen planus, 20 samples of oral reticular lichen planus and 10 samples of Inflammatory Fibrous Hyperplasia (control group) were selected. Immunohistochemical staining with EGFR antibody kit was performed on the slides taken from the paraffin-embedded samples. Mean percentage of stained cells with EGFR, pattern of staining, intensity of staining and stained cells areas in each sample was investigated by two oral and maxillofacial pathologists simultaneously (Pvalue<0.05).

Results: The result of this study showed that the mean percentage of EGFR-colored cells differed between erosive lichen planus, reticular lichen planus and inflammatory fibrous hyperplasia. The proportion of stained cells in erosive lichen planus was higher than inflammatory fibrous hyperplasia (control group) that is statistically significant (Pvalue=0.035); However, there was no difference between three lesions in terms of staining pattern, staining intensity and location of stained cells (Pvalue>0.05)

Conclusion: as proportion of stained cells with EGFR was seen statistically higher in erosive lichen planus compared to inflammatory fibrous hyperplasia (control group), it seems that this lesion would be highly likely to progress to malignant lesions and depict dysplastic changes.

Keyword: keratinocyte Growth Factor Receptor (EGFR), Oral Lichen Planus, Oral Reticular Lichen Planus



Comparative Study of E-cadherin Expression in Reticular, Erosive Oral Lichen Planus and Lichenoid Lesions

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Abstract

Background: Accurate and early diagnosis of oral lesions is the best way for successful treatment. The aim of this study was to investigate the expression of E-cadherin as a calcium ion-dependent cell membrane adhesive protein involved in tissue structure and differentiation in oral reticular, erosive lichen planus and lichenoid lesions.

Materials and Methods: This descriptive cross-sectional study was performed on 65 oral samples (reticular lichen planus: 20, erosive lichen planus: 20, lichenoid lesions: 20, and healthy mucosa: 5), to evaluate the expression of E-cadherin by immunohistochemical method. Data analysis was carried out by SPSS (version 25) software using descriptive statistics, Chi-square test and fisher's exact test (P value <0.05).

Results: Most patients were female (72.3%) in the sixth and seventh decades of life (49.2%). There was a significant difference between the studied groups and the status of staining ($p = 0.038$) in which erosive lichen planus had the highest frequency of E-cadherin expression alteration (45%). The significant difference was seen between the status of staining and lesion's location ($p=0.004$). The highest frequency of E-cadherin expression changes was related to buccal mucosal samples (30%).

Conclusion: E-cadherin expression in erosive lichen planus is significantly lower than healthy tissue as well as reticular lichen planus and lichenoid lesions. Due to the similar reduction in squamous cell carcinoma samples, evaluation of E-cadherin may be helpful to recognize malignant changes earlier.

Keywords: Lichen planus, Cadherins, Immunohistochemistry, Oral Mucosa



Evaluation of Compliance between Clinical Diagnoses and Histopathological Reports in Biopsy Specimens of Alborz Dental School

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Abstract

Background: Proper diagnosis of oral lesions is the key to a successful treatment. Oral lesions have specific and characteristics clinical features and a history. The aim of this study was to more accurately investigate the compliance of clinical diagnoses and histopathology of existing cases.

Methods: This descriptive cross-sectional study was performed on patients' records and demographic information including age, gender, type of biopsy, the location of the lesion, therapist speciality, clinical differential diagnosis, histopathology diagnosis, prevalence of lesions in soft tissue, hard tissue, salivary glands and etc. Finally, Data were analyzed using SPSS version 20 and Chi-Square statistical tests and analysis of variance.

Result: 132 cases were studied in this survey, 65 (49.24%) of the cases were male and 67 (50.75%) were female patients. Of the 67 registered clinical diagnoses, 47 (70.1%) were completely consistent with histopathological diagnoses. The highest compliance between clinical diagnosis and histopathology was in irritation lesions.

Conclusion: In this study, nearly half of cases were without clinical diagnosis. In about 30% of cases, the clinical diagnosis did not match the histopathological diagnosis. These results indicate insufficient knowledge of clinicians about the importance of clinical and radiographic findings, and since these findings and histopathological results are complementary, there must be effective cooperation among surgeons, radiologists, and pathologists.



Central Mucoepidermoid Carcinoma with Non-Hodgkin Lymphoma: A Case Report

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Abstract

Introduction: Central mucoepidermoid carcinoma (CMEC) is a rare primary intraosseous bony lesion which tend to occur more in the mandible than the maxilla. CMEC is often misdiagnosed radiographically and clinically as a benign odontogenic tumor or cyst.

Case Presentation: We present a rare case with a secondary malignant neoplasm. A male patient was initially diagnosed with B-cell non-Hodgkin lymphoma. Three months after his initial diagnosis, he presented with a large painless mass in the anterior region of his mandible. Histopathological examination revealed low-grade CMEC.

Conclusion: We reported a very rare case of CMEC in a patient treated for non-Hodgkin lymphoma without radiotherapy. Previous cases of secondary CMEC have shown an increased risk in patients with leukemia/lymphoma after radiotherapy.



Salivary Factors Related to Caries in Pregnancy: A Systematic Review and Meta-analysis

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Abstract

Background: This meta-analysis aimed to assess saliva-related caries risk factors including calcium and phosphate, pH, buffering capacity, streptococcus mutans and lactobacillus count, flow rate, and also DMFT in each trimester and during pregnancy.

Material and methods: Electronic databases were searched up to July 1st, 2019. Eligible observational studies were included. Quality of included studies were assessed by using JBI scale. To estimate the effects of pregnancy, standardized mean differences (SMD) with 95% confidence intervals were pooled using the random-effects model. Subgroup analysis and meta-regression were used to explore heterogeneity. Publication bias was assessed using Egger's test.

Results: Twenty-nine studies were included in the meta-analysis, representing 1230 pregnant women in the case groups and 715 in the control groups. The results showed that salivary calcium concentration decreased in 3rd trimester, salivary phosphate decreased in 2nd and 3rd trimesters, saliva pH decreased in 1st and 3rd trimesters, stimulated saliva flow rate increased in 3rd trimester and salivary Streptococcus mutans count increased in 2nd and 3rd trimesters.

Conclusions and Practical Implications: In the third trimester of pregnancy, most salivary factors related to caries change and can increase the risk of dental caries in the future. Use of neutralizing saliva pH by mouthwashes in the third trimester would be tested in future.

Key Words: Pregnant Women, Saliva, Dental Caries, Calcium, Streptococcus mutans, Hydrogen- Ion Concentration, Phosphates, Buffering capacity, Flow rate, DMFT, Meta-analysis



Evaluation of Knowledge and Practice of General Dentists and Dental Interns of Isfahan City about Dental Management of Pregnant Patients

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Abstract

Background: As much as public health affects the health of people in a community, oral health of a pregnant women can affect the health of mother and child. Dental treatment during this period should be done in such a way that had no side effects on the fetus. The goal of this study was to determine the knowledge and practice of general dentists and dental interns in Isfahan about dental measures in pregnancy period.

Method of implementation: This study is performed on 232 general dentists and dental interns in Isfahan with a self-made questionnaire that contains 26 questions (20 knowledge questions and 6 performance questions) about the necessary measures during pregnancy and then its validity and reliability were calculated. Then the data were statistically analyzed using SPSS software version 22, T-Test and ANOVA test (significant level for all calculations was considered 0.05).

Results: According to the result of this study the total knowledge score is 13.2 ± 3.5 . the question "about prescribing the required drugs" has a significant connection with the university of study ($p=0.047$) and the type of employment ($p=0.047$). The question "if the pregnant woman had pyogenic granuloma (pregnancy tumor) what will you do?" Had a significant connection to gender ($p=0.042$).

Conclusion: The overall score of dentist's knowledges of the necessary measures during pregnancy was 13.2 ± 3.5 with is somehow acceptable, however, to prevent the possible risks and dental treatment of these patients by dentists more information is necessary.

Keywords: Dental management, knowledge, practice, pregnancy



Oral Manifestation of Sweet Syndrome: Review of the Literature

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Abstract

Sweet syndrome, also called acute febrile neutrophilic dermatosis, is divided into four subtypes: idiopathic (most common), parainflammatory, and paraneoplastic, and pregnancy-associated. Symptoms include tender plaques and nodules, fever, arthralgia, ophthalmic manifestations, headache, and oral and genital lesions. Oral involvement is sometimes the first sign of the syndrome. Oral lesions of this syndrome are most often seen on the lips, buccal mucosa, tongue and hard palate. Oral symptoms of this syndrome include aphthous ulcers, pustules, papules, nodules, nonspecific ulcers, recurrent ulcers, extensive swelling of the tongue, necrotizing ulcerative periodontal manifestation, and alveolitis. Usually, a little inflammatory haloing is seen around the oral lesions. Sweet syndrome can also present as an odontogenic infection. In the histopathological feature of oral lesions, diffuse inflammatory cells infiltration, most neutrophils are found in the papillary connective tissue below the mucosal epithelium with edema, but no signs of vasculitis are seen. Oral lesions are usually treated with oral prednisolone 50 mg/d and cyclosporine 200 mg/d for one month. Given the possibility of head and neck involvement and the potential of the underlying paraneoplastic process, it is important for dentists to be familiar with the diagnosis of this syndrome.

Keywords: Sweet Syndrome, Acute Febrile Neutrophilic Dermatitis, Oral Manifestations, Stomatitis, Aphthous



Immunohistochemical and Genetic Findings in Geographic Tongue

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Abstract

Geographical tongue, also known as benign migratory glossitis, is a chronic benign inflammatory condition of the tongue. This lesion is characterized by atrophy of parts of the filiform papilla that form a map-like appearance on the dorsal and lateral surfaces of the tongue. These lesions change in size and shape over time and leave no scar. The exact cause is not known, although it has been related to psoriasis, Reiter syndrome, allergies, diabetes, nutritional deficiencies, hormonal changes, medications and genetic defects. In this study, we try to review the research conducted on genetic and immunohistochemistry evaluation of geographic tongue. The presence of HLA-B13, HLA-B15, HLA-B51, HLA-CW6, HLA-DQ2, HLA-DQ8, HLA-DR5, HLA-DR6, HLA-DRW6 and IL36RN mutation and gene polymorphism +3954 IL-1B have been observed in geographic tongue. Immunohistochemical staining showed the expression of interleukin 6, interleukin 17 and interleukin 23 markers in these lesions. Increased salivary levels of TNF- α and interleukin-6 and immunoglobulin E have been reported in the geographic tongue.

Keywords: Glossitis, Benign migratory, Immunohistochemistry, Genetic research



Evaluation of the Effect of Topical Doxycycline Treatment on Replanted Anterior Teeth in Rat

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Abstract

Introduction: Dental replantation treatment is one of the major problems in trauma due to PDL damage and root resorption. Various substances and drugs, including antibiotics, have been used to control the consequences of replantation, including doxycycline.

Objective: To evaluate the effect of topical doxycycline on periodontium after replantation.

Methods: 58 upper right incisors of male rat were placed in experimental groups: A) 55 minutes dry environment, B) 30 minutes dry environment, pulp treatment, 15 minutes doxycycline, C) 30 minutes milk, pulp treatment, 15 minutes doxycycline, D) 30 minutes Hanks solution, pulp treatment, 15 minutes doxycycline. And dental papilla were isolated to control growth, then the teeth were replanted and after 8 weeks the rats were killed and the maxilla was separated and 4 μ sections were prepared from the middle 1/3 of the root. The data were evaluated by Kruskal Wallis statistical test with a significance level of 5%.

Results: There was no significant difference between any of the variables of inflammatory resorption and superficial resorption and combined resorption analysis and ankyloses and the rate of inflammation and osteoclasts. The variables of ankylosis ($P = 0.070$), inflammation ($P = 0.052$) and combination analysis ($P = 0.060$) inflammatory analysis ($p = 0.85$) were close to significant levels.

Conclusion: In the present study, the use of doxycycline with dry storage or storage in Hanks or milk solution did not make a significant difference in terms of root resorption.

Keywords: Avulsion, Root analysis, Placement, Doxycycline, Rat.



The Most Common Pediatric Oral Ulcers, Diagnosis and Treatment

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Abstract

Oral ulcers are a common clinical problem in the pediatric population which 9% of all children are affected. Also the most common pathologic alterations seen by dentists are oral mucosal ulcerations, particularly those related to the herpes simplex virus and those produced by the autoimmune phenomenon known as recurrent aphthous stomatitis. The most common single ulcers are traumatic ulcer and recurrent aphthous ulcer. Deep fungal infection and cancer ulcers could rarely happen. Multiple ulcers have infectious etiology include herpes simplex virus, herpangina and...

Because the general frequency and clinical similarity of these conditions often make it difficult to distinguish one from the other, therapeutic intervention may be inappropriate.

Causes of recurrent oral ulceration are numerous and there may be an association with underlying systemic disease. Recurrent aphthous stomatitis (RAS) is the most common underlying diagnosis in children. The discomfort of oral ulcers can impact negatively on quality of life of a child, interfering with eating, speaking and may result in missed school days.

Many different specialists see and treat children with ulcers, which might be the reason that no uniform clinical guidelines exist.

Pediatricians should be able to distinguish the normal clinical appearance of the intraoral tissues in children from gingivitis, periodontal abnormalities, and oral lesions.

Although oral ulcers are common in childhood, there is only sparse literature published describing the diagnostic approach. Our aim is to introduce a narrative review and create a diagnostic vision for oral ulcers among children, supporting clinicians in the diagnostic pathway

Keywords: Ulcer, Aphthous Stomatitis, Herpes simplex



Oral Human Papilloma Virus Infections in Children: Symptoms, Causes and Treatment

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Abstract

Human papilloma virus is a large group of viruses with double- stranded DNA that tends to penetrate and multiply in squamous cells of the skin and mucosa.

Most epithelial lesions in children are caused by these viruses. More than 130 types of human papilloma viruses have been identified. Based on their protein content, they can cause benign, pre-cancerous or malignant epithelial lesions. Of course, most infected people never have obvious clinical signs.

Ways of transmitting the virus include sexual and asexual contact between people or contact with infected objects, salivary transmission, auto inoculation, breast feeding, perinatal and probably prenatal transmission.

The lesions that these viruses cause are squamous papilloma, verruca vulgaris, condyloma acuminatum, focal epithelial hyperplasia.

Although oropharyngeal cancers have been linked to human papilloma virus in adults, these lesions are benign in children and are often caused by low risk variants and even if left untreated, they are not at risk for future malignancies.

The main treatment of such lesions in children is surgery and it is done in order to eliminate unpleasant lesions, reduce the possibility of autoinoculation and prevent the spread of infection.

Recently, new vaccines have been introduced to provide immunity against high- risk and low-risk types of human papilloma virus in children, which can be administered to males and females between the ages of 11 and 12 in order to reduce the incidence of these lesions in the future.

Key words: Children- Human papilloma virus- Squamous cell



Leukemia-induced Gingival Overgrowth as an Early Manifestation in Pregnancy: A Case Report

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Abstract

Leukemia is a neoplastic disease with early oral and periodontal manifestations such as ulceration, infection, bleeding and gingival hyperplasia. This paper describes a 39-year-old pregnant woman with a diagnosis of acute myelomonocytic leukemia (AML), with gingival enlargement in the upper and lower jaws. A gingival biopsy was performed, followed by a complete blood count and peripheral blood smear. From a histopathological view, infiltration of the neoplastic (myelomonocytoblastic) cells was observed and many immature lymphoid cells were revealed by the hematologic tests. The interesting clinical finding about this case was the absence of spontaneous bleeding and profuse bleeding on probing. This case is reported to emphasize the leukemia-induced gingival enlargement in pregnancy and the early diagnosis of AML by dentists, which results in immediate treatment and management of the patient.

Keywords: Gingival overgrowth, Leukemia, Oral manifestation



همایش آسیب شناسان دهان و فک و صورت ایران
6th Congress of Iranian Oral and Maxillofacial Pathologists



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Performance of Artificial Intelligence Technology in Maxillofacial Pathology

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Abstract

Background: Artificial intelligent systems are machines able to imitate intelligent human behavior to perform complex tasks of problem-solving and learning. In recent years these systems have been applied in a broad range of industries. The aim of this study was to investigate the application and diagnostic performance of artificial intelligence (AI) in maxillofacial pathology specially in the field of oral cancer (OC) diagnosis.

Methods & Materials: Reported studies from the last 5 years on the application of AI in maxillofacial pathology were identified from electronic databases such as PubMed and Scopus. After reviewing and analyzing them, the relevant studies were selected for this review article.

Results: The results of studies indicate that the application of AI in analyzing dataset of images such as fluorescent, CT images and cytology has led to precise OC diagnostic results. In addition, artificial intelligence systems can accurately predict the occurrence of OC by analyzing predisposing factors. Interestingly, AI-based diagnoses are more accurately estimated than existing clinical strategies.

Conclusion: Artificial intelligence systems have appeared more accurate in oral cancer diagnosis and prediction of its occurrence compared to conventional methods. However, the application of AI system is still under development; so, its future aspects appear even more promising.

Keywords: artificial intelligence; maxillofacial pathology; oral cancer diagnosis



A Rare Case of Mural Unicystic Ameloblastoma in Anterior Region of A 62- year-old Female's Mandible

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Abstract

Ameloblastoma is a benign but locally invasive epithelial odontogenic tumor with radiographic features of jaw cysts. ameloblastoma usually presents in the posterior mandibular ramus region, while it is rare and atypical in the anterior mandibular region. The histological data has been divided to 5 different types: unicystic Ameloblastoma (UA), extraosseous/peripheral Ameloblastoma, conventional ameloblastoma, Adenoid ameloblastoma and Metastasizing ameloblastoma. The unicystic type is about 5-15% of all cases and mostly occurs in the younger population, in the second decade of their life, but it is quite rare in the elderly. We present a case of mandibular unicystic ameloblastoma in the anterior area of a 62-year-old Iranian female with intraoral swelling of the gingiva in the premolar region. There was a radiolucent lesion from the mesial side of the 4th right mandibular tooth until the mental foramen in panoramic view. The lesion had caused expansion in the buccal side of the cortical jaw bone and root absorption in anterior teeth. An excisional biopsy was prepared and based on histological features the lesion was diagnosed as mural UA. The patient was treated by surgical enucleation and no recurrence has been noticed after a 25-month ongoing follow-up yet.

Key words: Ameloblastoma-Enucleation-luminal- mandible- unicystic ameloblasto



Original Article: Prevalence and Characteristic of Tongue Lesions in the Oral & Maxillofacial Pathology Department of Dental Faculty of Hamadan University of Medical Sciences from 2004 to 2022

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Abstract

Background: Tongue is affected by non-neoplastic and neoplastic lesions. Non-neoplastic lesions can be due to disease and trauma or may be linked to hereditary and developmental factors. The aim of this study was to analyze data on the characteristics of tongue lesions.

Materials and Methods: Demographic data and histopathologic diagnoses were collected from the Archive of Oral & Maxillofacial Pathology Department of Dental Faculty of Hamadan University of Medical Sciences during 2004 to 2022. Site of lesions was classified as dorsal, lateral, and ventral surfaces and tip of the tongue. Then, lesions were classified as reactive/inflammatory, infectious, autoimmune, benign, premalignant, malignant categories.

Results: Of the 1900 cases, 65 cases (3.42%) were diagnosed from the tongue. The age of the patients ranged from 9 to 82 years with the mean = 42 years. The female-to-male ratio was 1.09:1. The majority of the tongue lesions were encountered at the lateral border of the tongue 43(66.1%). Most of the tongue lesions [27(41.53%)] fell into the reactive/inflammatory category. Squamous Cell Carcinoma (SCC) was the most prevalent lesion [15 (23.07%)], followed by leukoplakia [8(12.3%)], and pyogenic granuloma [7 (10.7%)], respectively.

Conclusion: Findings of the current study indicate that tongue lesions can vary from a reactive/inflammatory lesion to a premalignant and even a malignant lesion. Besides, lateral border of the tongue is the commonest site affected.



Head and Neck Lymphoma in a Cancer Institute

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Abstract

Introduction: This study is aimed to assess the prevalence and characteristics of head and neck lymphoma in a defined group of an Iranian population.

Materials and Methods: In this retrospective study, 126,450 biopsy reports from two referral Pathology Departments, (Tehran, the capital of Iran) were evaluated. In cases with head and neck lymphoma, other variables such as age, sex, specific location of lesions, and histopathological findings were recorded. Descriptive statistics were used to measure the prevalence and characteristics of head and neck lymphoma by means of SPSS software, version 18.

Results: In total, 513 (0.4%) cases had head and neck lymphoma (46.9% male, 27.1% female) with a mean age of 46 ± 6.2 . Of the total lesions, 200 (0.15%) were Hodgkin lymphoma and 313 (0.25%) were non-Hodgkin lymphoma. Nodular sclerosis was the most common (62.5%) histopathological subtype among Hodgkin lymphoma. In non-Hodgkin lymphoma, diffuse large B-cell lymphoma (62.3%) had the highest frequency. In Hodgkin disease, classic Hodgkin lymphocytic rich, mixed cellularity, and lymphocyte depletion were only seen in the neck compartment. Bone involvement was only found in Hodgkin nodular lymphocytic predominant variation. In non-Hodgkin lymphoma, the tongue, palate, and vestibular mucosa were affected only by diffuse large B-cell lymphoma. Jaw bones were only involved with diffuse large B-cell lymphoma compared to other bony structures. T-cell lymphoma and mucosal associated lymphoid tissue lymphoma were also found.

Conclusion: Diffuse large B-cell lymphoma is the most common subtype of non-Hodgkin lymphoma especially in the tongue, palate, vestibular mucosa, and jaw bones.

Keywords: Hodgkin Disease, Iran, Lymphoma, Non-Hodgkin's Lymphoma.



Unusual Manifestation of Oral Squamous Cell Carcinoma of the Buccal and Labial Mucosa: A Case Report

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Abstract

Introduction: Squamous cell carcinoma has a varied collection of clinical presentations and it is generally a tumor with irregular surface which is mainly located in lateral and ventral surfaces of the tongue. Squamous cell carcinoma is usually found in older adults and is the most common malignant tumor of the oral cavity. Based on the clinical features and the pathogenesis of Squamous cell carcinoma, being located in the buccal and labial mucosa is not usual for this lesion.

Case presentation: An 86-year-old woman with a pedunculated exophytic lesion with hyperkeratotic surface and tenderness in palpation which was located in the left buccal and labial mucosa.

Materials and methods: The first choice for differential diagnosis was considered as Peripheral giant-cell granuloma; however, a biopsy sample was taken for histopathological evaluation.

Results: The histopathological examination revealed squamous cell carcinoma.

Conclusion: In this paper, we report an unusual clinical presentation of oral squamous cell carcinoma which can be a valuable diagnostic mark for dentists and other medical practitioners.

Keywords: Carcinoma – Lesion - Pathology – Squamous cell



Central Odontogenic Fibroma Accompanied by a Central Giant Cell Granuloma-Like Lesion: Report of a Case and Review of Literature

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Abstract:

Central giant cell granuloma (CGCG) is a benign non-neoplastic intraosseous lesion mainly found in the anterior mandible. It is characterized by multinucleated giant cells, representing osteoclasts or macrophages. Central odontogenic fibroma (COF) is an uncommon benign lesion of the jaws. It originates from the odontogenic ectomesenchyme. In rare cases, COF may accompany a CGCG. To date, 49 cases of COF accompanied by CGCG-like lesions have been reported in the literature. In this paper, we present another case of COF-CGCG in a 46-year-old female. The lesion was located in the posterior mandible. Excisional biopsy was carried out, and histopathological analysis revealed multinucleated giant cells with numerous strands of odontogenic epithelium. A literature review of previously reported cases was also performed.

Keywords: Fibroma; Giant Cell; Granuloma; Odontogenic Tumors



Peripheral Ameloblastoma: The Case Report and Histological Discussion

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Abstract

Peripheral ameloblastoma is a rare (1%-4% of all ameloblastoma cases) odontogenic tumor, which is derived from the rest of the dental lamina or epithelial basal cells. In clinical examinations, these lesions mostly can be seen on middle-aged (with an average of 52 years) persons' posterior gingival and alveolar mucosa and are considered a fibroma or pyogenic granuloma. In this article, we report a case of peripheral ameloblastoma involving a 69 years old male located on posterior maxillary gingiva and the histological findings are discussed.

Keywords: Case report, Ameloblastoma, Peripheral ameloblastoma, Oral lesion, Histological discussion



Histochemical Evaluation of Mast Cell Degeranulation in Oral Lichen Planus and Oral Lichenoid Reaction

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Abstract

Introduction: Lichen planus and oral lichenoid lesions are two common lesions of mucous membrane with a similar pathology and clinical appearance, but they have different medical treatment. Some studies have identified mast cells to differentiate these two lesions, but there is no clear indication of the number of mast cells to differentiate these two lesions. Also, in studies that have been done so far, there is no uniformity in variables such as age, sex and type of lesion. Therefore, due to the controversial results about the role of quantitative and qualitative mast cells in lichenoid lesions and oral lichen planus, the aim of this study was to evaluate the mast cells in these two groups according to age, sex and clinical type of lesion.

Materials & Methods: This cross-sectional study was carried out on 42 samples with clinical and histopathologic diagnosis of oral lichen planus and/or oral lichenoid lesions (21 from each group). To evaluate the mast cell, Toluidine blue was used. The cells with 400 magnifications in five microscopic fields without overlapping were counted with optical microscopy. The data were recorded and analyzed in the SPSS20 version with independent t-test ($\alpha = 0.05$)

Results: Independent t-test showed that the mean total number of mast cell ($P = 0.24$), the number of de- granulated mast cell ($P = 0.38$) and the percentage of de-granulated mast cell ($P = 0.86$) were not significantly different between two groups.

Conclusion: Contrary to the results of some previous studies, mast cell, despite the prevalence of pathogenesis of lichenoid lesions and oral lichen planus, cannot be a suitable measure for the diagnosis and differentiation of these two lesions from each other. Further research in this area is recommended.

Keywords: Lichen planus, Oral lichenoid lesions, Mast cell, Toluidine blue



Diagnostic Algorithm of Ulcerated Lesions of the Oral Mucosa: A Review Article

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Abstract

A large number of disorders may affect the oral cavity. Ulcerations of the oral mucosa are common and can occur at any age. These lesions may be signs of various diseases of the oral cavity with a wide range of etiologic factors including trauma, infection, immune disorders, and neoplasms. Due to the overlap of clinical and histopathologic characteristics between different types of ulcerated lesions, Clinicians have encountered challenges in their diagnosis.

This review describes the prevalence, etiologic factors, and diagnostic criteria of the most frequently ulcerated lesions found in the oral cavity including traumatic oral ulcer, aphthous stomatitis, herpetic gingivostomatitis, oral lichen planus, oral erythema multiforme, oral vesiculobullous lesions, oral lymphoma, oral squamous cell carcinoma. Recognition of these lesions is critical to ensure optimal care and management at the earliest stage. Therefore, detailed clinical and medical patient history and clinical evaluation are crucial for the diagnosis and management of ulcerative oral lesions. Duration and frequency of occurrence, growth pattern and present or absence of pain are important criteria that should have been considered. For a definitive diagnosis of some ulcerated lesions, biopsy and/or adjunctive tests may be required especially when they are accompanied by systemic symptoms or they are not clinically identifiable. This review may help dentists to diagnose different ulcerated oral lesions of the oral mucosa, to understand the etiology, and to provide a treatment plan.

Keywords: Oral Diagnosis, Oral lesions, Oral squamous cell carcinoma, Oral ulcer



Oral Mucosal Adverse Reactions in Association with Antidiabetic Medications

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Abstract

Introduction: Diabetes mellitus (DM) is a serious debilitating chronic disease. There are two main subtypes of diabetes: type I (insulin-dependent) and type II (non-insulin-dependent). Type 2 diabetes mellitus (TD2M) has a prevalence of 90% in patients diagnosed with diabetes. Insulin is the only medication for type I diabetes. But in TD2M according to British National Formulary (BNF), metformin is the first-line treatment followed by Gliptins, pioglitazone, Sulfonylureas, glucagon-like peptide 1 receptor agonists, Meglitinides and Sodium-glucose co-transporter 2 inhibitors. In this review, the aim was to evaluate oral mucosal lesions or alterations associated with antidiabetic medications.

Materials and Methods: A search was performed for oral side effects of antidiabetic medications based on the United Kingdom National Health Service (NHS) and BNF.

Results: Unpleasant metallic taste in the mouth is a common side effect of Metformin whilst mouth ulcers, sore and red tongue are rare and serious complications of this medication. For Gliptins and pioglitazone, no oral mucosal alteration was reported. In the Sulfonylureas group of medication, Glibenclamide can cause a metallic taste in the mouth. In Glucagon-like peptide 1 receptor agonists, Semaglutide and Exenatide uncommonly cause taste alterations whilst Liraglutide commonly causes dry mouth, toothache, and taste alterations. Among sodium-glucose co-transporter 2 inhibitors, Dapagliflozin uncommonly is associated with dry mouth.

Conclusion: Metformin, as the first-line medication for diabetes has the most oral side effects. Dentists must be aware of the oral side effects of these commonly used medications.

Keywords: antidiabetic agents, Diabetes mellitus, mouth mucosa



Oral Biopsy Methods in Diagnosis of Oral Lesions

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Abstract

In this poster different methods of oral biopsy are explained. Biopsy is the process of removing tissue from a living organism for microscopic examination and diagnosis. For most of the oral biopsy techniques injection of local anesthesia is the first approach but some methods such as oral brush cytology doesn't require local anesthesia injection. Oral biopsy is either excisional or incisional. Incisional biopsy provides a representative sample of tissue for diagnostic purposes while excisional biopsy is the complete removal of a lesion for functional and aesthetic purposes. Tissue biopsy is used for diagnosing different oral lesions which could be performed by different techniques such as surgical biopsy, punch biopsy, needle aspiration, sentinel lymph node biopsy and brush biopsy. Nowadays performing oral biopsy could be done by using diode laser and the potassium titanyl phosphate (KTP) which can provide faster healing a good hemostasis and a less bleeding area but still there is a negative point that electro surgery and laser techniques produce thermal artifacts that may hamper histologic interpretation. Another method of biopsy which is less invasive than the other techniques is liquid biopsy and is more used for diagnosing oral cancers and tumors by analyzing certain biomarkers, circulating tumor cells, exosomes and circulating tumor DNA which circulate through body fluids such as blood, saliva, urine and surgical drain fluid. But beside all of the liquid biopsy advantages still tissue biopsy is more reliable because it provides the histopathological view for the practitioners so liquid biopsy could be used as a complementary diagnostic method.



Pathologic and Demographic Characteristics of 35 Odontogenic Keratocyst in patients Referred to Oral Pathology Department of Khorasgan Azad Dental School during 2010-2020

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Abstract

Introduction: Odontogenic cysts constitute a large part of maxillofacial lesions. These cysts are divided into two categories: developmental and inflammatory. Among odontogenic cysts, odontogenic keratocyst is very important due to its high prevalence and recurrence and its association with impacted teeth. There are limited Researches about characteristics of okc in Iranian population. The aim of this study was to investigate the characteristics of 35 okc lesions.

Materials and Methods: In this retrospective cross-sectional study, 35 cases were examined and the lesions were examined by checklist based on age, sex, histopathology, site of involvement, clinical features. After completing the checklist, the data were expressed using descriptive and analytical statistics using SPSS 24 software.

Results: 35 patients in the age range of 11 to 64 years with a mean age of 32.66 ± 15.37 years were present. The prevalence of okc was 60% (n = 21) in men and 40% (n = 14) in women. This lesion was mostly seen in the posterior part of the mandible (88.6%). Among patients, 2 patients (5.7%) had pain, 4 patients (11.4%) had swelling and 6 patients (17.1%) had recurrence. In most patients (88.6%) the epithelium was parakratinized squamous. The most pathological features of this lesion included palisaded basal cell in 74.3%, inflammatory infiltration in 71.4% and hyperchromatic basal cell in 54.3%.

Conclusion: The prevalence of odontogenic keratocysts was higher in men than women and in the posterior mandibular region. This lesion was most common in the third and fourth decades. The rate of recurrence, swelling and pain in odontogenic keratocyst patients was less than 17% of cases and the most common type of epithelium in odontogenic keratocyst patients was the parakratinized squamous. Also, the highest prevalence of pathological features in patients was related to palisaded basal cell and inflammatory infiltration. Because inflammatory infiltration has been present in most odontogenic keratocysts. Special attention must be paid to inflammatory type of okc.

Keywords: Odontogenic keratocyst, Parakratinized, Recurrence, Developmental cyst



Temporomandibular Joint Pathology: Symptoms and Signs

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Abstract

Temporomandibular disorders (TMDs) are musculoskeletal conditions with degenerative deformities. A vast majority of the populations are affected by disease of the (TMJ) although this is not considered as a public health problem yet. The aim of this study was to bring attention to symptoms and signs of TMDs.

Methods: A search was performed in google scholar and pubmed from 2019 to 2022. Articles reporting symptoms and signs of TMDs were selected and studied.

Result: According to studied articles Symptoms and signs of TMDs were mostly seen in females and in ages between 20-50 years .Although in some areas symptoms and signs were not related to gender .Joint sounds (crepitus) were collectively reported as the most prevalent sign followed by restricted opening and opening deviation .Among reported symptoms headache was the most frequent symptom , followed by pain during chewing and TMJ noises .Lip and /or cheek biting was the most common parafunctional habit , followed by nail biting, bruxism and thumb sucking.

Discussion & Conclusion: It can be concluded that Joint sounds was reported as the most prevalent sign. Headache was the most common TMD symptoms.

Key Words: pathologic conditions, signs and symptoms, Temporomandibular Joint Disorders



Noninvasive Intraoperative Inspection of Tumor-free Margins by Optical Imaging in Patients with Oral Squamous Cell Carcinoma

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Abstract

Oral squamous cell carcinoma is the sixth most common malignant tumor globally. The gold-standard treatment of OSCC consists of surgical resection followed by adjuvant therapy in the presence of multiple factors that have been shown to reduce the survival rate, including positive resection margins.

Failure to achieve safe surgical margins increases the local recurrence risk. Recurrence locally is one of the leading causes of death among patients suffering from oral squamous cell carcinoma (OSCC). Surgical resection continues to be the primary treatment for most solid tumors. Negative margins instant achievement requires intraoperatively margin status feedback. This study evaluated noninvasive surveillant methods intraoperatively to provide tumor-free margins. The techniques such as the Frozen section as the gold standard method for marginal observation of the resection area. But this study is mainly focused on the optical techniques which has been introduced recently. The optical methods Raman spectroscopy (RM), diffuse reflectance spectroscopy (DRS), hyperspectral imaging (HSI), optical coherence tomography (OCT), and narrow band imaging that are primarily researched for intra-operative margin evaluation in oral squamous cell cancer include (NBI).

The search query was run on MEDLINE, PubMed, Scopus, and google scholar. The outcome included 29 studies. The review of available knowledge followed by critical assessments for the inclusion and exclusion criteria were performed. Finally 26 studies were surveyed.

Many noninvasive intraoperative techniques exist, which may reduce the time, cost, and bias, on the other hand, enhance the accuracy in intraoperative detection of the result of clear margins provided by resection surgery.



Oral Manifestations and Related Factors in Patients Undergoing Head and Neck Cancer Radiotherapy in Imam Khomeini Hospital

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Abstract

Radiotherapy is an important part of multimodality treatment of cancer, especially head and neck malignancies. It is – however– associated with various adverse effects. The aim of this study was to evaluate the oral side effects of radiotherapy in patients who were being treated for different malignancies of head and neck. Fifty patients were selected from the patients who were being treated at Imam Khomeini Hospital for different malignancies of head and neck. Total radiation dose was 60-70 Gy in 1.8-2Gy daily fractions, 5 days a week. The patients were evaluated on a weekly basis from one week before till one week after completion of the radiotherapy. The prevalence of adverse effects in participants and their correlation with various parameters was assessed using chi squared and Fisher's exact tests. Almost all patients undergoing radiotherapy to head and neck suffered from its complications to various extents, with xerostomia being the most common complication. Changes of taste were related to the amount of radiation exposure and receiving chemotherapy. Chemotherapy was also related to developing candidial infections. Female patients and the ones with stage 3 or 4 disease reported more pain and burning sensation during radiotherapy. Application of preventive measure in order to reduce the rate of above mentioned complications seems necessary.

Key words: head and neck, radiotherapy, complications



Prevalence of Oral White and Red and Exophytic Lesions in Patient who Referred to Oral Medicine Department of Dental Islamic Azad University

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Abstract

Objective: Oral Mucosal Lesions directly affect in quality of life by pain and burning (vesiculobullous lesions), nodular growth of the oral mucosa (exophytica lesions) interfering with eating, chewing, swallowing and occasionally incorrect diagnosis. The aim of this study was to determine the prevalence of oral mucosal red, white and exophytic lesions and associated factors in patients referred to Oral Medicine Department of Islamic Azad University.

Material and Methods: In this cross sectional study 1200 patients (age 15-75) referred to Department of Oral Medicine in Islamic Azad University were examined and evaluated. The study was done by examining and interviewing the patients and completing the questionnaire. associated factors included: age, sex, cigarette smoking, medication, denture wearing and dental condition were evaluated. Data were analyzed by chi-square and $P < 0.05$ was significant.

Results: The prevalence of red, white and exophytic lesions were 44% (Red and White lesions 42.1%, exophytic lesions 3%), 14 patients had both of them. The most common lesions were: Lina alba (17.6%), Cheek chewing (7.6%), Hairy tongue (4.4 %), Parolis (3.2%), Denture stomatitis (2.8 %). The most affected area was buccal mucosa. There was significant association between red, white, exophytic lesions and age, sex, cigarette smoking, medication, prosthetic and denture wearing and dental condition.

Conclusion: The prevalence of red & white lesions were relatively common and exophytic lesions were a few. We found significant association between red, white, exophytic lesions and



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age, sex, cigarette smoking, medication, prosthetic denture wearing and dental condition. This result showed the necessity to periodically examine for persons.

Key words: Red and White Lesions, Exophytic Lesions, Prevalence, Associated factors

