

Holm-Bonferroni method to account for multiple comparisons showed adjusted p-values of 0.0003 (HG versus CM), 0.0018 (LG versus CM) and 0.0196 (HG versus low LG) among three groups.

Conclusion: p16 expression was statistically-significantly greater in LGD and HGD lesions compared to CM, with a trend of greater expression being associated with higher grade of dysplasia.

DETERMINING THE INFLAMMATORY RESPONSE IN ORAL SQUAMOUS CELL CARCINOMA BY SALIVA ANALYSIS. DR. CATHERINE LALIBERTE, MS. DENISE LOPEZ EYMAEL, DR. GRACE BRADLEY, DR. MARCO MAGALHAES. UNIVERSITY OF TORONTO, FACULTY OF DENTISTRY

Objectives: Oral squamous cell carcinoma (OSCC) often shows a pronounced inflammatory infiltrate and there is accumulating evidence that this inflammatory infiltrate plays an active role in tumor development and progression. Analyses of saliva may provide a non-invasive approach to study the inflammatory response in OSCC. Our aim is to develop a protocol for collection and analysis of saliva in OSCC patients and to use it to characterize both the inflammatory cell profile and cytokine profile in the saliva of patients across all stages of OSCC.

Methods: 42 patients undergoing treatment for OSCC at the Toronto Odette Cancer Centre (stages I to IV), 25 healthy patients, and 9 patients with periodontitis were enrolled. Saliva samples were obtained by rinsing with 3 ml of saline for 30 sec. The samples were kept on ice and stabilized with protease inhibitor until filtration using a 20 μ m membrane filter. Cell pellets were separated by centrifugation and supernatants were analyzed using a BioFlex 30-Plex inflammatory panel (BioRad) and Luminex[®] detection technology. Cell pellets were fixed in 4% PFA and analyzed using multichannel flow cytometry. The fluorescent markers included CD45, CD66b, CD3, CD4, CD8, CD25, CD56, CD68, CD138, Siglec8, PD1 and PDL1.

Findings: Distinctive, reproducible changes were observed in salivary cytokines and inflammatory cell profile of patients with OSCC compared to control and periodontal disease patients. Using our protocol, we were able to describe specific patterns of inflammation for oral cancer, including altered CD4/CD8 ratio and marked increase in IL-1b, IL-6 and TNF-a.

Conclusion: We created a reproducible protocol to collect saliva and perform high-throughput analysis of inflammatory profile of saliva. This technology can be used to develop non-invasive, early detection/prognostic tests for OSCC, new adjunct therapies and new techniques to monitor response to treatment.

CHRONIC ULCERATIVE STOMATITIS: A LICHENOID OR VESICULOBULLOUS DISEASE?. DR. REKHA REDDY, DR. SARAH FITZPATRICK, DR. LIYA DAVIDOVA, DR. INDRANEEL BHATTACHARYYA, DR. DONALD COHEN, DR. MOHAMMED ISLAM. UNIVERSITY OF FLORIDA

Objectives: Chronic ulcerative stomatitis (CUS) is a rare disease of unknown etiology. The histopathologic features are similar to lichen planus, but direct immunofluorescence (DIF) studies show characteristic presence of IgG in basal and parabasal epithelial nuclei. This study will review a case series of

CUS and assess if the entity is more similar to lichen planus or vesiculobullous diseases.

Methods: An IRB-approved retrospective search of CUS was performed within the archives of the UF Oral Pathology Biopsy Service between 2007 and 2017.

Findings: Seventeen cases, all female, were included. The median age was 64 years (range 47-83 years). Eleven patients were Caucasian, one was Asian, and one was African-American. Race was not specified in four cases. Buccal mucosa (8/17) was the most common location, followed by gingiva (7/17), buccal vestibule (1/17), and gingiva/buccal mucosa (1/17). The most common clinical presentations were pain/burning (13/17), erythema (13/17), whiteness (11/17), ulcerations/erosions (5/17), blisters/positive Nikolsky's sign (5/17), sloughing (2/17), striae (2/17), and recession (1/17). The clinical impression was lichen planus in 12 cases. Of these twelve cases, 4 included vesiculobullous disease as a differential. Four cases did not include a clinical impression and one listed erythema multiforme as the clinical impression. All cases were confirmed with DIF testing that showed a characteristic speckled pattern of IgG in basal and parabasal cells. Eleven of these cases were also positive for fibrinogen and two cases were faintly positive for C3. None of the cases were positive for IgA or IgM.

Conclusion: Since CUS has overlapping clinical, histological, and immunofluorescence features with lichen planus and vesiculobullous diseases, clinicians and pathologists should consider this unusual, but significant, entity whenever oral ulcerative diseases with mixed features are encountered.

IMMUNOHISTOCHEMICAL ANALYSIS OF INFLAMMATORY RESPONSE IN VERRU-COUS CARCINOMA COMPARED TO CONVENTIONAL ORAL SQUAMOUS CELL CARCINOMA.

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Introduction: Studies on inflammatory response to oral squamous cell carcinoma (OSCC) generally do not include verrucous carcinoma (VC), which typically carries a far better prognosis. While high CD8 expression is associated with favorable outcome in head and neck cancers, the role of CD4+ lymphocytes remains controversial. B cell involvement has been suggested to enhance T cell response. The aim of this study is to evaluate differences in inflammatory infiltrate immunohistochemistry (IHC) between OSCC and VC.

Materials and Methods: The archives of the UF College of Dentistry oral pathology biopsy service were retrospectively searched for OSCC and VC. Slides were reviewed and 10 cases of VC, 10 cases of well differentiated SCC (SCC-WD), and 10 cases of poorly differentiated SCC (SCC-PD) were selected for testing. IHC staining for CD4, CD8, and CD20 was performed for 30 selected cases. The results were assessed via Aperio Image Scope positive pixel count assessment and analyzed statistically using ANOVA comparison of means with significance measured at $p < 0.05$.

Results: A total of 90 scanned slides were evaluated. Analysis of the results showed no significant difference in mean scores of CD8 or CD20 across groups; however, there was significant difference in CD4 mean scores, with increasing scores noted

from VC to SCC-WD to SCC-PD ($p=0.002$). The CD8:CD4 ratio was highest in VC followed by SCC-WD then SCC-PD, but the difference was not statistically significant. No significant difference in B: T cell ratio was observed between diagnostic groups.

Conclusions: This study demonstrated a lower level of CD4 positive lymphocytes and a slightly increased CD8:CD4 ratio within the VC infiltrate as compared to SCC. B lymphocyte involvement did not appear to differ between VC and SCC in this sample. Further studies may help elucidate the clinical implications of these differences.

ORAL SYPHILIS: A REPORT OF TWO CASES AND A LITERATURE REVIEW OF THIS RE-EMERGING ENTITY. DR. RICHARD J.

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Objective: Syphilis is a sexually transmitted, infectious disease caused by *Treponema pallidum*. It can manifest clinically in three stages: primary, secondary, and tertiary. While rare, oral syphilis cases are starting to re-emerge. Our objective is to report 2 additional cases of oral syphilis—one case of primary syphilis and 1 case of secondary syphilis—to highlight the need to consider this entity in the histopathologic differential diagnosis of nonspecific mucositis.

Findings: Both cases presented to outside oral surgeons in separate geographic regions. In case 1, a 25-year-old male presented with a six-week history of a 1.0 cm non-healing ulcer of the right lateral tongue. In case 2, a 28-year-old male presented with welt-like, slightly raised, red/white lesions of the lateral tongue, buccal mucosa, and hard and soft palates. The clinician reported no other lesions on the body and a negative STD test. An excisional biopsy was performed for case 1 and an incisional biopsy for case 2. Histopathologically, case 1 showed an ulcer with an underlying lichenoid lymphoplasmacytic infiltrate with perivascular plasma cells. Case 2 showed epithelial spongiosis and prominent neutrophilic microabscesses with an underlying lichenoid lymphoplasmacytic infiltrate. Perivascular and perineural plasma cells were also present. Because of the perivascular plasma cells in both cases, *Treponema* immunohistochemistry was ordered, and it highlighted many spirochetal organisms in the epithelium and superficial lamina propria in both cases. Given their respective clinical presentations, case 1 was diagnosed as a chancre of primary syphilis, while case 2 was diagnosed as a mucous patch of secondary syphilis.

Conclusion: Due to the resurgence of oral syphilis cases, clinicians should be aware of the histopathologic features and order the appropriate ancillary studies in suspected cases. Proper histopathologic diagnosis is important to prevent the spread and further re-emergence of this treatable infection and avoid misdiagnosis as nonspecific mucositis.

ODONTOGENIC MYXOMA: A 23-YEAR RESPECTIVE SERIES OF 38 CASES. DR.

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Introduction: Odontogenic myxoma (OMX) is an uncommon benign tumor arising in the jaw. Though it has some

histologic overlap with other entities, correct diagnosis is imperative considering the aggressive nature, high recurrence rate, and necessity of radical surgical intervention in large sized lesions.

Materials and Methods: With IRB approval, a retrospective search of the University of Florida College of Dentistry Oral Pathology Biopsy Service archives from 1994-2017 for diagnosis of OMX of the mandible or maxilla was performed. Biopsy reports and original slides for each case were assessed and reviewed along with any accompanying radiographs to confirm the diagnosis. Immunohistochemical (IHC) staining was utilized to exclude entities with histologic overlap such as intraosseous myxoid neurofibroma.

Results: A total of 38 cases were included. The patients' ages ranged between 13 to 82 years, with a mean age of 38.5 years. Females comprised two-thirds of the cases ($n=25$) versus males ($n=13$). The mandible was the most affected at 56% ($n=21$), followed by maxilla 34% ($n=13$) with 10% ($n=4$) not specified. Posterior jaw involvement was higher than anterior in both the mandible ($n=17$ versus $n=1$) and the maxilla ($n=8$ versus $n=4$). The right side was more commonly affected than the left side in both arches. Most lesions presented clinically as expansile masses with variable radiographic appearance, and the submitting providers' clinical impressions included gelatinous masses, reactive gingival lesions, abscess, odontogenic lesions, fibro-osseous lesions, and soft tissue or bone neoplasms. In 30 cases (79%) the histologic diagnosis was compatible with OMX, while in 8 cases (21%) a more fibrous stroma was identified with diagnoses of fibromyxoma.

Conclusion: OMX may exhibit varied demographic and clinical profile and wide spectrum of histologic presentation. Oral and maxillofacial pathologists and surgical pathologists should be sentient of this variability of presentation for accurate diagnosis and management.

IMMUNOHISTOCHEMICAL EXPRESSION OF EZH2 IN ATYPICAL PAPILLARY EPITHELIAL PROLIFERATIONS OF THE ORAL CAVITY: A POTENTIAL MARKER FOR MALIGNANT TRANSFORMATION. DR. FARAJ ALOTAIBY^A, DR.

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Background: Enhancer of zeste homolog-2 (EZH2) is a member of the polycomb group PcG of proteins; the genes that are involved in transcriptional repression. Cell cycle regulation and cell proliferation is associated with EZH2 expression and EZH2 overexpression stimulates cell proliferation and invasiveness. Conversely, inhibition of EZH2 precludes cancer cell invasiveness through inhibition of cell proliferation. Atypical papillary epithelial proliferation (AEP) is a histologic diagnosis rendered for oral lesions with confounding microscopic features, neither overtly benign nor unequivocally malignant.

Aim: To evaluate EZH2 antibody expression through immunohistochemical testing to delineate the potential of malignant transformation in AEP by comparing and contrasting with unequivocally benign papillary lesions represented by inflammatory papillary hyperplasia (IPH) and malignant papillary lesions represented by papillary well differentiated squamous cell carcinoma (PSCC).