

Essay Abstracts – Monday, May 23, 2016

#1- 5/23/2016 - 8:00 AM

LOW GRADE SALIVARY DUCT CARCINOMA IN SITU

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Low grade salivary duct carcinoma (LG-SDC) is a salivary tumor which may mimic the histomorphology of several well-described salivary gland tumors, including low-grade cribriform cystadenocarcinoma (LG-CC), mucoepidermoid carcinoma (MEC), acinic cell adenocarcinoma (AciCC), mammary analog secretory carcinoma (MASC) and so-called intraductal carcinoma (IDC). LG-SDC is a rare tumor, with less than 50 cases reported in the English literature since 1996. The 2005 World Health Organization Classification of Head and Neck Tumors has adopted the term low grade cribriform cystadenocarcinoma to describe this entity; however, there has been much recent discussion about the appropriate diagnosis and classification of these tumors, and diagnosis has remained a challenge. Recent advances in immunohistochemistry and molecular pathology and retrospective review of cases have facilitated more accurate diagnosis and the identification of a growing number of translocation-associated salivary gland tumors including MASC, MEC, adenoid cystic carcinoma, mixed tumor/carcinoma ex mixed tumor, and (hyalinizing) clear cell carcinoma. We present a case of LG-SDC in situ in a 68 year old female, describe the diagnostic algorithm utilized, and review immunohistochemical and molecular findings employed in rendering this diagnosis.

#2- 5/23/2016 - 8:12 AM

ACANTHOLYTIC SQUAMOUS CELL CARCINOMA: A SPOTLIGHT ON THE INTRAORAL VARIANT

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Objective: Acantholytic squamous cell carcinoma (ASCC) is characterized by a combination of a typical squamous carcinoma and acantholysis, dyskeratotic cells and gland like structures. The variant was originally described on the skin where its occurrence was associated with sun exposure, but ASCC may appear on mucosal surfaces, where it cannot be associated with sun exposure. In the oral mucosa, ASCC of the lip may be associated with sun exposure, but this does not apply to intraoral sun-protected areas. To date, ASCC of the oral mucosa is described in case reports and limited reviews. The purpose of this study is to present a case of intraoral ASCC and to review the existing literature, to characterize intraoral ASCC. Method: A case report and literature analysis of PubMed, Google scholar, and Sciencedirect. Results: 31 cases of intraoral ASCC were included. The age range of patients with ASCC was 38-92, mean 60.7 years. The M:F ratio 1.6:1. The clinical appearance was exophytic in 18 cases, ulcerated in 14, swelling in 2, erosion and bleeding in one each. Size range was 1.5-6 cm, mean 3.2cm. During presentation, regional nodes were involved in 11/20 cases and invasion to surrounding tissues was described in 5. Different markers were used to immunophenotype the tumor. Treatment consisted of surgery, radio and chemotherapy and combinations. Follow up information was available in 15 cases. Local recurrence was documented in 6 cases, distant metastasis was documented in 2 cases. Survival data was available in 13 cases. Conclusion: Intraoral ASCC should be treated as a distinct entity due to different pathogenesis. Documentation of case reports is lacking information, thus could benefit from standardization.

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#3- 5/23/2016 - 8:24 AM

A NOVEL DIAGNOSTIC TUMOR BIOMARKER IN PERIPHERAL BLOOD OF HEAD AND NECK CANCER PATIENTS: SEMAPHORIN 4D AND ITS IMMUNOSUPPRESSIVE POTENTIAL.

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Background: The search for diagnostic tumor biomarkers in the serum is a current challenge in the field. Immune suppression is one of the hallmarks by which head and neck squamous cell carcinoma (HNSCC) attains growth and progression. Semaphorin 4D (Sema4D), known for its various developmental, physiological and pathological effects, plays a role in regulating the immune system. It is expressed in many epithelial tumors including HNSCC. We recently showed in an in vitro model that HNSCC-associated Sema4D modulates the inflammatory profile to an immune-suppressive, tumor-permissible environment by inducing the expansion of myeloid derived suppressor cells (MDSC). **Objective:** Here we investigated if Sema4D can be detected in the sera of head and neck cancer (HNC) patients, as a diagnostic biomarker of these patients. **Methods:** Direct ELISA assay was used to assess Sema4D levels in serum from HNC patients obtained from the blood bank of University of Maryland, Baltimore. **Results:** Serum from HNC patients contained significantly higher levels of Sema4D compared to healthy control donors ($p = 0.00017$). **Conclusion:** Our preliminary study demonstrates Sema4D as a promising diagnostic tumor biomarker for HNSCC in peripheral blood and as a marker for the immune suppressive status of HNC patients.

#4- 5/23/2016 - 8:36 AM

A PILOT STUDY COMPARING DIGITAL MICROSCOPY TO GLASS SLIDES FOR ROUTINE DIAGNOSES IN ORAL AND MAXILLOFACIAL PATHOLOGY

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Objective: Digital pathology has the potential to transform surgical pathology by improving access to specialty pathology services, decreasing turn-around time, and enhancing quality of care. Presently there are no studies examining the performance of digital slides (DS) for routine oral and maxillofacial pathology. The aim of this pilot study was to compare intraobserver variance between DS and glass slides using College of American Pathologists guidelines. **Methods:** Thirty-three unique diagnoses were randomly selected from the University of Pittsburgh Oral and Maxillofacial Pathology Biopsy Service from 2012-2014 with enrichment for malignancies (20%). DS were synthesized using the Omnyx, LLC slide scanner. Seven board-certified oral and maxillofacial pathologists (OMFP) with diverse experience and training were randomized to receive glass or DS with a two-week washout period between sets. A board-certified OMFP arbitrator was used to compare intra-rater agreement between glass and DS. Additional data collected includes time per case, diagnostic confidence, case quality, and user-reported data. **Results:** OMFP were diverse in their case volume, training institution, and experience with digital pathology. 3/7 OMFP have completed both glass and DS. Overall, diagnoses were highly concordant, including discriminating benign from malignant cases. Time per case was longer using digital slides, and this difference was only significant for benign diagnoses (~30s/case). Confidence was similar between glass and DS. **Conclusion:** The preliminary data demonstrate that OMFP diagnostic abilities are comparable between glass and DS. We portend that digital pathology will continue to evolve and expand to include oral and maxillofacial pathology specimens for routine diagnostic practice.

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#5- 5/23/2016 - 8:48 AM

A RETROSPECTIVE ANALYSIS OF EXCISIONAL BIOPSY MARGIN STATUS OF PREMALIGNANT AND MALIGNANT LESIONS IN THE ORAL CAVITY

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Introduction: Few studies are available evaluating margins on excisional biopsies performed on premalignant and malignant lesions of the oral cavity, especially in correlation with clinical and epidemiologic parameters. A retrospective review was undertaken, analyzing the margin status of excisional biopsies of premalignant and malignant oral lesions submitted to the UF Oral Pathology Biopsy Service from 2009-2014. **Material and Methods:** Excisional biopsies with diagnoses of squamous cell carcinoma (SCC), verrucous carcinoma (VC), carcinoma in situ (CIS), severe epithelial dysplasia (SED), and moderate epithelial dysplasia (MED) were identified from the archives after IRB approval. Location, age, gender, color of lesion, adequacy of margins, orientation status, recent incisional biopsy status, and histopathologic diagnosis were recorded. **Results:** A total of 366 cases were identified (154 SCC, 14 VC, 103 CIS/SED, and 95 MED). Of these, 328 (89.6%) had at least one positive margin. Only 86/366 cases were oriented by the clinician, with 16.3% of these having totally negative margins. In contrast, only 8.6% of the non-oriented cases had completely negative margins, demonstrating a statistically significant difference (chi-square, $p=0.040$). No significant association was found between margin status and age, gender, color, prior incisional biopsy, or histopathologic diagnosis. However, a significant association (chi-square, $p=0.001$) did exist between margin status and location, with gingiva and oropharynx being most associated with at least one positive margin. **Conclusions:** These findings should be used to help guide adequate surgery. Clinicians should understand that gingival and oropharyngeal lesions may be more difficult to fully excise when compared to other oral sites.

#6- 5/23/2016 - 9:00 AM

BIOLOGICAL SIGNIFICANCE OF 5-HYDROXYMETHYLCYTOSINE EXPRESSION IN ORAL MUCOSAL EPITHELIAL DYSPLASIA AND ORAL SQUAMOUS CELL CARCINOMA

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DNA methylation is the most extensively studied epigenetic mechanism in cancer. Our previous work demonstrated loss of DNA hydroxymethylation mark 5-hydroxymethylcytosine (5-hmC), to be an epigenetic hallmark of melanoma. **Objective:** The objective of this study is to determine 5-hmC levels in oral epithelial dysplasia (OED) and oral squamous cell carcinomas (OSCC) and to explore whether DNA hydroxymethylation may serve as a novel biomarker for early diagnosis of OSCC, as well as a prognostic marker for this disease. **Methods:** The study included normal mucosa from uninvolved margins of 9 cases of surgical excision specimens of fibromas; 10 oral lichen planus; 15 moderate-to-severe OED, and 23 OSCC. Cultured human keratinocyte cell lines from benign oral mucosa, OED, and OSCC were also evaluated. In addition, a murine model where OSCC was induced with 4-nitroquinoline-1-oxide was also assessed (normal dorsal tongue mucosa=5 and induced OSCC=5). **Results:** Progressive loss of 5-hmC from benign and reactive/inflammatory oral mucosal lesions to OED and OSCC was documented in patient samples. We also demonstrated that decreased levels in 5-hmC that typify OED and OSCC were also detectable in vitro using human cell lines from normal, dysplastic and carcinomatous sources. Moreover, we characterized similar alterations in 5-hmC in an in vivo animal model of OED/OSCC, establishing it as a potentially informative approach to understanding the role of epigenetic regulation in oral carcinogenesis. **Conclusion:** In this study, 5-hmC distinguishes OED and OSCC from benign and reactive inflammatory lesions with high sensitivity and specificity. We suggest that loss of 5-hmC may be useful for the diagnosis of OED with potential implications for therapy of OSCC.

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#7- 5/23/2016 - 9:12 AM

LATTICE-LIKE BONE: A POSSIBLE NEW DIAGNOSTIC FEATURE OF TRAUMATIC BONE CYSTS

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Objective: Traumatic bone cyst (TBC) is an empty or fluid containing bone cavity which most commonly involves the metaphysis of long bones. Although referred to as a cyst, its lack of a true epithelial lining makes it better described as a pseudocyst. TBCs often arise in the jaws with a marked mandibular predominance and frequently present as unilocular, non expansile radiolucent lesions. Histopathological features include a cystic space surrounded by a thin band of vascular fibrous tissue. Previous reports have described the presence of amorphous, cementum-like matrix material in the walls of TBC. We have identified lattice-like bone in many of TBCs diagnosed at our institution. This lattice-like bone appears as mineralized strands of immature bone or osteoid arranged in a linear, lace-like pattern. The objective of this study was to determine whether the presence of lattice-like bone/osteoid was found consistently enough to be considered as a secondary diagnostic feature for TBC. Methods: All cases (n=89) diagnosed as TBC at Oral Pathology Laboratory, Inc.(NYPQ) between 2011 and 2014 were reviewed to evaluate for the lattice-like bone/osteoid. Results: The presence of the lattice-like bone/osteoid with a linear arrangement was present in 22 of 89 cases (24.72%). None of our cases showed the cementum-like matrix material in the walls. Conclusion: Partially mineralized tissue with a linear arrangement has been described in the wall of aneurysmal bone cysts, but it has yet to be described as a histologic feature of TBC. Given that the biopsy specimens submitted for the diagnosis of TBCs are often small; we believe that the presence of this lattice-like arrangement of immature bone /osteoid could serve as an additional histologic criterion to aid in diagnosis.

#8- 5/23/2016 - 9:24 AM

GLYCOGEN-RICH CLEAR CELL SQUAMOUS CELL CARCINOMA ORIGINATING IN THE ORAL CAVITY

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Clear cell squamous cell carcinoma (CCSCC) is a rare histological subtype that was originally described in the skin. Here, we report a case of a 66 year-old female patient who presented with a fungating ulcerative mass extending to the left buccal mucosa, oropharynx, left lateral tongue, and the anterior floor of the mouth. The patient had a history of SCC of left posterior tongue that was treated with partial glossectomy and adjuvant radiation therapy. Biopsies from each site of the current ulcerative lesion of the oral cavity were taken. The examined biopsies showed various degrees of dysplastic surface epithelium with transition into infiltrating epithelial tumor nests and cords with clear cytoplasm. Atypical mitotic figures, hyperchromatism, pleomorphism and areas of necrosis were noticed. An immunohistochemical panel and a PAS stain for glycogen were performed. Pan Cytokeratin, CK5/6 and p63 were all diffusely positive. S-100, Calponin, and SMA were negative. PAS stain was diffusely positive, diastase labile in the tumor clear cells. Sparse areas of mucicarmine positivity were noticed. Based on these findings a final diagnosis of a Glycogen-rich CCSCC was given. To our knowledge this would be the second reported case in the English literature arising from the surface epithelium of the oral cavity with extension into the oropharynx. A glycogen-rich clear cell histological variant of oral SCC is very rare but of high significance in the histological differential diagnosis of clear cell tumors of the oral cavity.

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#9- 5/23/2016 - 9:36 AM

DIFFUSION REFLECTION, A NOVEL METHOD FOR DISCRIMINATING ORAL CANCER AND POTENTIAL MALIGNANT DISORDERS FROM BENIGN LESIONS

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Objective: Early identification of oral squamous cell carcinoma (OSCC) and potential malignant disorders (OPMD) will improve the prognosis of the patients. Gold nanorods (GNRs) conjugated to epidermal growth factor receptors (EGFR) (GNRs-EGFR) are used to detect cancer cells as the expression of EGFR increases once the tissue becomes cancerous. Optical techniques used for identification of the GNRs-EGFR in tumor are based on the unique scattering and absorption properties of the GNRs. The aim of the study was to evaluate the detection sensitivity of the diffusion reflection (DR) method of GNRs-EGFR in discriminating malignant from premalignant and benign oral lesions with histopathology as a gold standard. **Methods:** We used hyper spectral spectroscopy and DR measurements of GNRs bio conjugated to slide-specimens of OSCC and OPMDs. The cases were divided according to histopathology into 4 groups: epithelial hyperplasia and mild dysplasia, moderate dysplasia, severe dysplasia, and invasive OSCC. In each paraffin-embedded tissue slide, an area of interest was marked and submitted for the hyper-spectral imaging, and DR experiments. **Results:** 20 cases were selected for the study, 5 cases in each group. DR measurements, at 780 nm and 650 nm show a significant increase in the intensity with the increase in the histological severity being the highest in OSCC (average 248 IU, 216 IU for severe dysplasia, 132 IU for moderate dysplasia and 71 for mild dysplasia). In 5 benign lesions a mean of 9.4 IU were detected. **Conclusions:** The results demonstrate a great potential of the direct DR scanning as a new and simple tool for discriminating malignant and potentially malignant lesions from benign oral lesions and may serve to detect residual disease.

#10- 5/23/2016 - 9:48 AM

INSIGHTS AND PITFALLS OF A SELECTIVE P16INK4A IMMUNOHISTOCHEMICAL TESTING STRATEGY FOR ORAL SQUAMOUS CELL CARCINOMA AND EPITHELIAL DYSPLASIA: A STUDY OF CLINICAL AND HISTOLOGIC FEATURES ASSOCIATED WITH P16INK4A OVEREXPRESSION

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Previous studies have characterized clinical and histologic features associated with p16INK4a immunohistochemical (IHC) overexpression in oral epithelial neoplasia, but few have examined a pathologist's ability to predict overexpression. With IRB approval, this study retrospectively examined p16INK4a IHC studies to find clinical and histologic features in oral epithelial dysplasia (OED) and oral squamous cell carcinoma (OSCC) to predict overexpression. From 2010-2014, three oral pathologists (OP) diagnosed 789 cases of OSCC and 435 OED and ordered p16INK4a IHC studies on 7.0% (55/789) and 3.9% (17/435) cases respectively. In 2009, before p16INK4a availability, 33 consecutive cases of OSSC and 17 consecutive cases of OED were identified and p16INK4a IHC studies were ordered as a comparison group (CG). Age, gender, location, and IHC studies were assessed for all identified lesions. Verrucoid architecture and koilocytic changes were scored in OED cases. Non-keratinization, necrosis, papillary architecture, basaloid features, and lobular pattern of invasion were scored for OSSC cases. The OP correlated a higher percentage of p16INK4a+ cases in OED 64.7% (11/17) and OSCC 20% (11/55) than the CG, 23.5% (4/17) and 9.1% (3/33) respectively. Of the tested parameters, koilocytic changes in OED ($p=0.025$) and basaloid features ($p=0.042$) in OSCC were statistically significant by logistic regression. No combination of tested parameters, i.e. possible selective testing strategies, predicted all confirmed p16INK4a+ cases. Using the CG and prior studies to estimate the potential total number of p16INK4a+ OED and OSCC cases from 2010-2014, selective testing likely failed to diagnose a large number of p16INK4a+ cases despite having higher p16INK4a+ correlation percentages than the CG.

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#11- 5/23/2016 - 10:00 AM

MDM2 AND CDK4 IMMUNOHISTOCHEMISTRY IN THE EVALUATION OF ADIPOCYTIC TUMORS OF THE ORAL CAVITY

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OBJECTIVE: Adipocytic tumors of the oral cavity can be diagnostically challenging and traumatized lipomas may demonstrate histopathologic features that mimic atypical lipomatous tumor (ALT); the histiocytes of fat necrosis pose a pitfall and can be MDM2-positive. Our aim is to evaluate MDM2 and CDK4 immunohistochemical expression in adipocytic tumors in conjunction with the histiocytic marker PU.1. **METHODS:** Cases originally diagnosed as ALT from July 2014 to January 2016 were retrieved from the archives of Harvard School of Dental Medicine and immunohistochemical studies for MDM2, CDK4 and PU.1 were performed. **RESULTS:** Ten cases were identified and there were 5 females and 5 males with a mean age of 60.1 years (range 41-79). Eight cases occurred on the tongue. All cases showed variation in adipocyte size, uni- or multivacuolated cells with indented nuclei, and a variable spindle cell proliferation within a fibrous stroma. Three cases (30%) showed nuclear positivity for MDM2 and CDK4 within stromal cells with mild atypia, consistent with ALT. The remaining 7 cases were negative for CDK4 and 5 of these cases showed MDM2 positivity within histiocytes; these were reclassified as lipoma with reactive atypia and fat necrosis. All 10 cases contained histiocytes as highlighted by PU.1. Histopathologic features alone could not distinguish between MDM2/CDK4-positive and negative tumors. **CONCLUSION:** ALT cannot be reliably distinguished from lipoma with extensive reactive atypia and fat necrosis on morphology alone and requires MDM2/CDK4 immunohistochemistry. This differential diagnosis arises most commonly in adipocytic tumors of the tongue but applies to any site subject to repeated trauma. MDM2 positivity may also be seen in macrophages and should be interpreted with caution.

#12- 5/23/2016 - 10:12 AM

NECROTIZING ULCERATIVE STOMATITIS AS INITIAL PRESENTATION OF ACUTE HIV INFECTION

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Objective Necrotizing ulcerative stomatitis (NUS) in patients with human immunodeficiency virus (HIV) is quite rare due to the advent of highly active antiretroviral therapy (HAART), but is known to be one of the earliest oral manifestations of HIV infection. The purpose of this study was to describe the clinical, histopathologic, and radiologic aspects of a case of NUS in a 20-year-old male with unknown acute HIV infection. **Clinical Presentation** The patient was referred by his nurse practitioner to our clinic after complaining of pain and burning at the roof of his mouth with an associated white patch, having sensitivity to cold foods and liquids, and loss of sleep for over a week. Clinically, there was a necrotic, ulcerative lesion of the anterior palate. **Intervention and Outcome** A biopsy was performed, nystatin and chlorhexadine were prescribed, and lab work was sent for a complete blood count, basic metabolic panel, and HIV immunoassay. The results of the HIV test were positive. The patient returned to his nurse practitioner for definitive treatment. He returned to the dental clinic two months later for debridement and it was determined that the entire anterior maxilla was mobile. The patient underwent enucleation and curettage of his maxilla with placement of an obturator. **Conclusion** This essay describes the clinical, radiologic, and pathologic features of NUS in a patient with HIV. Awareness of this initial presentation of HIV is important to provide adequate care and alert the clinician of the possibility of an underlying immunocompromised state.

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#13- 5/23/2016 - 10:24 AM

OSTEOSARCOMAS AND CHONDROSARCOMAS OF THE JAWS: CLINICAL, RADIOGRAPHIC AND HISTOLOGIC FEATURES IN A RETROSPECTIVE SERIES OF CASES Y ALHAZMI, U FLORIDA, S FITZPATRICK, U FLORIDA D COHEN, U FLORIDA M ISLAM, U FLORIDA I BHATTACHARYYA, U FLORIDA

Introduction: Osteosarcoma (OS) and chondrosarcoma (CS) of the jaws both are rare neoplasms with varied of clinical, radiographic, and histologic features. This study reviews malignant bone and cartilage tumors of the jaws within a large biopsy service. Materials and methods: With IRB approval, the oral pathology biopsy service at University of Florida was searched for the histopathologic diagnoses of OS and CS between 1994 and 2015. The clinical, radiographic, and histopathologic records of pertinent cases were reviewed. Demographic, clinical, and radiographic data was collected, and the original slides were reviewed. Results: A total of 15 cases were included in the case series. The mean age of presentation of OS and CS was 44 years (range of 17-68 years). There was a slight female predominance with a greater frequency affecting the mandible (8 cases) than the maxilla (7 cases). The most common presenting features were ulcerated mass and facial expansion. Altered sensation and paresthesia was evident in 2 cases. Radiographic presentation typically showed ill-defined radiolucent or mixed radiolucent/radiopaque lesions which were often destructive in nature, and in some cases widened periodontal ligament space was appreciated. The clinical impressions ranged from reactive gingival lesions, central bone lesions, odontogenic tumors, and inflammatory disease in addition to malignancy. Histologically the tumors were chondroblastic osteosarcoma (53 %) followed by osteoblastic osteosarcoma (33 %) and chondrosarcoma (13 %). Conclusion: Clinicians and pathologists should be cognizant of the wide possible variation of the clinical, radiographic, and histologic features with which these lesions may present.

#14- 5/23/2016 - 10:36 AM

PROGRESSION OF ORAL MUCOSAL MELANOMA: A REPORT OF TWO CASES AND REVIEW OF THE LITERATURE

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Melanoma is a malignant neoplasm of melanocytic origin, which can affect cutaneous, mucosal, and uveal tissues. Cutaneous melanomas account for the vast majority of all melanomas, while mucosal melanomas represent only 1.3 % of reported cases. Primary oral mucosal melanoma (OMM) accounts for 0.05% of all malignancies affecting the oral cavity. The most common locations for OMM are the palate, followed by the maxillary gingiva. Although its a rare malignancy in the oral cavity, OMM is an extremely aggressive disease with a poor prognosis, showing a 5-year survival of 15%. A pigmented precursor lesion has been described in approximately a third of OMM cases retrospectively. There have been only three cases in the literature that provided histological evidence of progression from a benign-appearing melanocytic lesion that underwent malignant transformation to OMM. Due to the few number of cases in the literature that had good clinical and histological documentation of proven progression, our understanding of OMM in the premalignant stage is limited. Our objective is to present two cases, which upon initial biopsy were diagnosed as melanotic macule and oral melanoacanthoma, respectively. The patient with the oral melanotic macule underwent multiple biopsies over the span of 13 years with eventual progression to OMM. The patient with the oral melanoacanthoma showed a more aggressive transformation time frame of 11 months. By analyzing these two cases along with a review of previous cases, we hope to shed some light on certain clinical and histopathological features that may indicate future progression to OMM, and assist in early diagnosis of this aggressive oral malignancy.

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#15- 5/23/2016 - 10:48 AM

PROLIFERATIVE ERYTHRO-LEUKOPLAKIA: A VARIANT OF PROLIFERATIVE VERRUCOUS LEUKOPLAKIA?

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Objective: Oral proliferative verrucous leukoplakia (PVL) is a rare form of progressive multifocal leukoplakia with a high rate of malignant transformation (MT). However, not all PVLs are entirely white/keratotic or fissured. This study aims to characterize PVL from a clinical and histopathologic standpoint. **Methods:** Records of patients seen at 2 U.S. centers with a clinical diagnosis of PVL were reviewed for clinical and histopathologic features, and MT.

Results: There were 26 patients (median age: 66 years [range: 36-88]; 22 females). Three patients (11.5%) were current smokers and 42.3% patients consumed a median of 8 drinks/month. A family history of cancer was present in 43.7% of patients. The most common clinical features were demarcation (28.0%), followed by keratotic/verrucous (22.7%), keratotic/fissured appearance (19.1%), and erythema (16.1%). Five cases (19.2%) had at least six sites with prominent erythema (erythroleukoplakia) and the most common sites were the maxillary gingiva (31%) and buccal mucosa (19.0%). The most common histopathologic diagnosis was hyperkeratosis with epithelial hyperplasia (45.5%), followed by mild (40.9%), moderate (9.1%) and severe dysplasia (4.5%). MT occurred in 76.9% patients after a median of 48 months [range: 4-210] from their initial visit (erythroleukoplakia cases MT: 100%; other PVLs MT: 71.4%). **Conclusion:** The more generic term proliferative leukoplakia (PL) may be more appropriate than PVL because approximately 19% are fissured and 16% erythematous, and these have counterparts in localized leukoplakia. We propose the term proliferative erythroleukoplakia to more accurately describe PL with prominent erythema, which has the highest MT rate.

#16- 5/23/2016 - 11:00 AM

THE SPECTRUM OF CLINICAL AND HISTOPATHOLOGIC FEATURES OF FIBROUS DYSPLASIA: ANALYSIS OF A SERIES OF 40 CASES

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Introduction. Fibrous dysplasia (FD) is a rare condition which commonly involves the jaws. While FD can exhibit a typical clinical and histological presentation, considerable variation is noted. In addition, overlap of features with other disorders is also seen. This study was undertaken to characterize the demographics, clinical, histologic and radiographic features of a large case series of FD of the jaws. **Materials and Methods.** With IRB approval, the University of Florida Oral Pathology Biopsy Service archive was retrospectively searched from 1994 to 2015 for cases signed out as FD. Epidemiological data, location, duration, clinical and radiographic appearance, clinical impression and exact microscopic diagnosis were recorded. **Results.** The average age was 37.3 years (range 7-87 years) with majority of cases in females (67.5%). The most common ethnicity was Caucasian followed by African-American. Maxillary location was predominant, n=23 (59%), followed by mandible n=15 (38%) and multiple locations n=1 (3%), and 1 with no location noted. Expansion was reported in 78% of cases. An overwhelming majority, 18 of 24 (75%) of cases were present for over 1 year. Most of the cases exhibited ground glass opacity on radiographs, with few presenting with a mottled or mixed radiopaque/radiolucent appearance. The histologic features showed wide variation in terms of stromal cellularity, presence of osteoblastic rimming, and presence of calcified material mimicking cemento-osseous dysplasia. **Conclusions.** Clinicians and pathologists should be cognizant of variability of clinical, histopathologic, and radiographic presentation of FD which may pose a diagnostic challenge.

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#17- 5/23/2016 - 11:12 AM

SALIVARY DUCT CARCINOMA: AN INSTITUTIONAL EXPERIENCE

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Objective: Institutional review of Salivary Duct Carcinoma, an aggressive form of salivary gland tumor, with histologic variability but a unique propensity to exhibit diffuse androgen receptor positivity (AR). Methods: Retrospective review of SDC resected between 2013 and 2015, at one institution. Results: 15 cases of SDC were resected at Emory U between 2013-2015. The majority occurred within the parotid gland (n=13), of older male adults (average age 74, n=10 male) Perineural and lymphovascular invasion were common. Nearly all patients (85%) underwent neck dissection at the time of resection, with 77% of patients exhibiting regional metastatic disease. Thirteen of fifteen (87%) of cases were diffusely AR positive, with only 2 cases, both female patients, negative for AR. 47% of resection cases demonstrate associated pleomorphic adenoma. Conclusion: These additional cases help to further refine the histologic spectrum of SDC and underscore association with PA.

#18- 5/23/2016 - 11:24 AM

SOLITARY PEDIATRIC MYOFIBROMA OF THE JAWS: CONSERVATIVE TREATMENT FOR A LOCALLY AGGRESSIVE TUMOR.

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In the spectrum of reactive, benign and malignant myofibroblastic tumors, the accurate diagnosis of childhood myofibromas is especially significant to avoid overdiagnosis of an otherwise benign tumor characterized by locally aggressive behavior. Pediatric head and neck myofibromas present as solitary or multicentric lesions, representing distinct and separate entities. The solitary variant of myofibroma of the jaws is considered rare. Despite presenting with initial rapid growth, recurrence is rare, even following incomplete surgical excision. We describe 8 patients (age range 5-15 years; with equal sex distribution) with solitary myofibromas of the jaws, 3 involving the maxilla, one the anterior mandible and the remaining 4 the posterior mandible (including 1 each the ramus and condyle). All tumors showed well-defined borders. Smooth muscle actin was positive in all tumors while h-Caldesmon was negative, confirming the myofibroblastic origin. Ki-67 proliferative index ranged from 2-20%. All cases were treated by conservative surgery, and despite the locally destructive nature of these tumors, none metastasized or recurred, after a follow up of 2-20 years. One case in our series was congenital; showing spontaneous progressive regression and complete resolution by age 6. Our data support adoption of a conservative approach to the management of solitary pediatric myofibromas of the jaws.

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#19- 5/23/2016 - 11:36 AM

THE SPECTRUM OF GRANULOMATOUS LESIONS OF ORAL MUCOSA AND JAWS.

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Introduction: Granulomatous inflammation present focal aggregates of lymphocytes and histiocytes, multinucleated giant cells or necrosis. Various bacteria, fungi and foreign antigens can initiate granulomatous reaction. Objective: To characterize granulomatous lesions of oral mucosa and jaws. Methods: Retrospective analysis, 1996-2015. Results: The study included 49 cases, 30 F, 19 M, age 9-88 years, (mean 48). 95.8% of lesions were non-necrotizing. Specific diagnoses included foreign body granuloma (56%), non-necrotizing granuloma (NOS)(20%), granulomatous cheilitis (8%), sarcoidosis (8%), orofacial granulomatosis (2%), Chron's disease (2%) and necrotizing granulomatous lesion (NOS) 4%. Soft tissues (including lymph nodes and salivary glands) were involved in 57% and jawbones in 42% (including maxillary sinus). However, foreign body granulomas occurred more frequently within the jawbones (71%) than soft tissues (29%). Foreign body reaction occurred following trauma, surgical intervention, dental implants, dermatologic filler, root canal treatment, but in most cases etiology was unknown. Stains for micro-organisms were negative in all cases, with no cases of tuberculosis or deep fungal infections identified. Specific disease entities could be identified from the biopsy in 75.5% of cases, the remaining were referred for further investigation. Only one case had a granulomatous disease recognized prior to the oral biopsy. Conclusions: Oral granulomatous lesions are quite rare (0.02% of oral biopsies). Foreign body granuloma were the most common local conditions, Sarcoidosis and Crohn's disease the most frequent systemic diseases. The disease was first diagnosed via oral biopsy in most cases.

#20- 5/23/2016 - 11:48 AM

ASSESSMENT OF THE IMMUNOHISTOCHEMICAL PROFILE OF SALIVARY GLAND PLEOMORPHIC ADENOMA, PLEOMORPHIC ADENOMA WITH PLASMACYTOID PREDOMINANCE AND SO-CALLED PLASMACYTOID MYOEPITHELIOMA; ANALYSIS OF 10 CASES.

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Background: Arguments exist against the myoepithelial nature of plasmacytoid cells (PLCs) in salivary gland neoplasms (SGNs). This is supported by the failure of PLCs to demonstrate, immunohistochemically and ultrastructurally, myogenous differentiation. Currently, an increasing number of IHC stains are utilized as myoepithelial markers in the diagnosis of SGNs. Objective and Methods: To investigate the immunoprofile of PLCs in 7 FFPE specimens of pleomorphic adenoma (4 of so-called plasmacytoid type) and 3 cases of plasmacytoid myoepithelioma, and compare it with other participating neoplastic cell types, i.e. spindle and ductal cells, using antibodies against CK7, a-SMA, S100, calponin, p63, WT-1, D2-40 and DOG1. Results: PLCs showed strong and scattered to diffuse positivity for CK7 and S100, weak and diffuse for calponin, and variable for p63 and WT-1. PLCs were consistently a-SMA, while D2-40+ cells were seen primarily at the periphery of the tumor nests close to the stroma. In contrast, neoplastic spindle cells exhibited strong and diffuse expression of a-SMA, S100, calponin, p63, WT-1 and D2-40, but loss of CK7. The lumen of ducts in PAs was decorated by CK7 and S100, whereas the abluminal cell layer stained + for a-SMA, S100, calponin, p63, WT-1 (rare/scattered) and D2-40. All cellular types exhibited strong and diffuse DOG1 positivity. Conclusion: PLCs fail to demonstrate uniform expression of IHC markers presumed to label myoepithelial cells. Cell/matrix interactions and/or epithelial/mesenchymal transition appear to affect expression of certain markers in PLCs. Moreover, strong positivity for DOG1 suggests intercalated duct differentiation. Thus, the use of the term myoepithelioma for pure plasmacytoid SGNs needs to be revisited.

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