Poster Abstracts Session
Thursday, 05/23/2018, 6:00pm-7:30pm

= Poster Number, *Presenter

To conserve space, we list only the institution and the country submitted as 1st organization.

Abstracts Committee:
Chair: Kentaro Ikeda, DDS, MPH
Co-Chair: Bhavik Desai, DMD, PhD

1:00PM
#1:

Prevalence and Distribution of Oral Diseases in Turkish Population

Erdogan Fisekcioglu, Duygu Ilhan, Burcu Nur, Inci Oktay, Dilhan Ilguy
Istanbul Okan University, Turkey

Objectives:

In 2009-10, a national survey of oral diseases status was conducted in Turkey. The study aimed to evaluate the prevalence and severity of oral diseases in Turkish population.

Methods:

This study is a part of an oral health surveillance analysis project, being conducted on 3040 individuals from 2009-2010 within each of seven regions of Turkey, one rural and one urban area or city were selected using a probability proportional to size method. In the selected towns, local officials who were familiar with their communities assisted in recruiting adults to be examined by a calibrated specialist. 3040 people from rural and urban population in groups of all ages were examined. An oral mucosal examination was conducted based on WHO criteria by single specialist. Candida-related, acute conditions, tongue conditions, pigmentation, raised conditions, white lesions, potentially malignant lesions and anatomic variations according to oral and perioral locations were noted. All data were recorded on the European Global Oral Health Indicators Development form. Self-reported data were also collected for age, gender, employment, education, systemic diseases, alcohol use, cigarette smoking.

Results:

A total of 3040 patients (F/M:1442/1598, aged 27.11 ± 19.13) were evaluated. 643 (%21.2) of 3040 patients had oral diseases. In patients with oral diseases linea alba/cheek-lip bite, homogeneous leukoplakia, hairy tongue and geographic tongue were mostly observed lesions with a frequency of %23.5, %13.1, %10.1 and %8.4 respectively. Potentially malignant diseases (homogeneous leukoplakia and erosive-atrophic lichen planus) were observed with a prevalence of %0.8. A statistically significant difference was found between homogeneous leukoplakia and frictional keratosis leukoedema with smoking ($p=0.001$). The oral diseases were frequently observed at buccal mucosa (%48.9), alveolar ridge/gingiva (%21.7) and vermillion border (10.9). Candida-related and acute conditions were observed statistically significant in patients aged 65 and above ($p<0.01$).

Conclusions:

The low prevalence of the potentially malignant lesions and malign diseases may be a result of the less consumption of cigarette and alcohol. Risk assessment of groups and distribution of oral mucosal lesions will both nationally and internationally contribute to the promotion of community health policy.

#2:

Management of Burning Mouth Syndrome with Palatal Stents

*Priyanka Raiyani, Mark Drangsholt, Edmond Truelove
University of Washington, USA

Objectives:

Burning mouth syndrome is characterized by burning sensations in the tongue or other oral mucous membranes in the absence of oral lesions. The pathophysiology is unclear and effective management is often unavailable. One of us (ELT) at the University of Washington Oral Medicine clinics (UWOM) initiated treatment protocols utilizing thin vinyl appliances fit to maxillary teeth and palate, ("palatal stents"), to manage this condition based on the concept that they acted as "sensory tricks" to reduce symptoms. These devices are now routinely used in our clinics for management of primary BMS. We report a series of patients treated with this device, with aim of estimating the efficacy of symptom reduction for primary BMS.

Methods:

Setting is associated tertiary care clinics (UWOM). Inclusion criteria for BMS included an unexplained burning sensation in the mouth along with presence of normal oral mucosal appearance of all intraoral mucosa. Exclusion of secondary causes of oral burning was done by history, exam, and diagnostic tests. We searched for cases treated with stents since 01/01/2018. Stents were fabricated using a vacuform of vinyl material fabricated over a stone cast of the maxillary teeth and palate followed by trimming the vinyl to the mucogingival line on the facial and the vibrating line on the palate. Patients were asked to wear stents for 24 hours, except when eating. Pain intensity on an 11-point Likert scale was used to measure efficacy.

Results:

6 recent cases of BMS met the inclusion criteria and received a palatal stent in the past 36 months. The mean age of patients was 59 (47 to 73), and 83% were female. Of these six, 3 had 50% to 90% pain reduction with the stent, and the other 3 had reductions of at least 50%, but preferred other agents to use primarily.

Conclusions:

Palatal stents resulted in significant reductions in pain complaints without need for pharmacological intervention. The mechanism of action is unclear at this time although several hypotheses are postulated. Further research is needed to determine the overall value and best type of intraoral devices in symptom management of BMS.

#3:

Non-Hodgkin's Lymphoma of the Oral Cavity, Clinical and Histological Features, Retrospective Study of 138 Cases.

Marine Mondoloni, Jean Gabarre, Frederic Charlotte, Vianney Descroix, Patrick Goudot, *Juliette Rochefort

APHP Hôpital Pitié salpêtrière, France

Objectives:

Non-Hodgkin's lymphoma is the third leading cause of cervicofacial malignancy and can be extra-ganglionic in 40% of cases, including 3% in the oral cavity where their presentation is varied and not specific, often leading to a delayed diagnosis.

The main objective of this study was to characterize oral lymphomas and their circumstances of discovery, and to evaluate their delayed diagnosis.

Methods:

We performed a single-center retrospective study of primary lymphoma cases diagnosed at Pitié-Salpétrière Hospital between 1990 and 2017. We have collected the following data: age, sex, clinical presentation, location, histology, evolution.

Results:

138 patients were included, almost 2/3 of men (89 out of 138), average age 56 years. The main reason for consultation was a swelling in 39.2%. The majority of lymphomas were large cell type B lymphomas (BGC NHL) (47.8%), mainly located in the gingiva (60%) and the maxillary bone (30%). The delay in diagnosis was on average 5.1 months.

Conclusions:

Intra-oral lymphomas have various clinical expressions that can mimic other pathologies, which explain the delay in diagnosis. This infrequent pathology (5 cases / year in our series) should not be ignored and the role of specialists in the oral cavity is essential to allow earlier management.

#4

How and Why to Involve the Dental Surgeons in the Fight Against Sexually-Transmitted Infection in Adolescents and Young Adult

Laurent Lassy, Vianney Descroix, Henri Szpirglas, *Juliette Rochefort
APHP Hôpital Pitié salpêtrière, Université Paris Denis Diderot, France

Objectives:

There is an international significant increase of sexually-transmitted infection (STIs) among young people, with a resurgence of syphilis and HSV-1 genital herpes especially among young Men who have sex with Men (MEMs), representing 84% of syphilis cases in France in 2014, a 50% increase over the previous two years. The upsurge of congenital syphilis illustrates the lack of diagnosis at early life stages. HIV + adolescents worldwide have increased by 33% since 2001, although overall incidence has fallen by 20%. Most of these STIs have inaugural oral manifestations. The purpose of this work was to study the reasons for the increase of STIs among adolescents, and to establish the possible modalities of action by Dental Surgeons (DS).

Methods:

We conducted a literature review on the sexual behaviour of adolescents and its recent evolution.

Results:

There is an increase in risk-related attitudes by young people: early sexual intercourse, increased number of partners, lack of protection during oral sex and ignorance of the risks existing during certain types of sexual intercourse. The significant use of Pre-Exposure Prophylaxis (PrEP) does not prevent other STIs and results in an increased frequency of risky sexual behaviour. A study comparing several countries highlights a direct relationship between prevention, access to screening and the incidence of STIs. According to some authors, 75% of young people would agree to be tested and evaluated by DS. Adolescents make regular visits to the DS (for oral check-ups, which is free and mandatory in France at 12 years of age and accessible at 15, 18, 21 and 24 years). Sometimes DS are the only medical contact and, as an oral cavity expert, they can communicate the risks of oral STIs.

Conclusion:

DS can improve prevention by educating youths on the risks of oro-genital sexual practice, with the use of flyers or comics. DS can increase early-detection by encouraging young patients to report lesions immediately after their appearance and by caring for or urgently referring diagnosed patients.

1:30PM
#5:

A Refractory Case of Pemphigus Vulgaris

*Dana Schwartz, Kristen Robbins, Kentaro Ikeda
University of Colorado, USA

Background:

Oral lesions are often the first sign of pemphigus vulgaris (PV), and they are often the most difficult to resolve with therapy. We report a case of refractory PV.

Case Summary:

A 28-year-old, otherwise healthy female presented with 4 weeks history of multiple painful oral erosive lesions with episodic blisters. She had no skin or genital lesion. We performed biopsy that confirmed PV and initiated treatment with prednisone. Two weeks later, she presented with worsened oral lesions and reported new genital lesions. Mycophenolate Mofetil (MMF) was initiated and she started to taper down prednisone simultaneously due to unwarranted side effects. Because of the immunosuppressive treatments, we recommended influenza vaccination, which she received and immediately developed severe bilateral knee pain and muscle weakness that were suggestive of Guillain-Barré syndrome. Initially, she responded well to MMF. However, her oral lesions worsened 3 months after the initiation of MMF. Multiple treatments including tacrolimus and azathioprine were attempted with no success. Six weekly infusions of rituximab improved her oral lesions. However, she continued to have the oral lesions despite monthly intravenous immunoglobulin (IVIG) infusions. The oral lesions were minor enough to manage with topical steroids. Two years later, her oral lesions worsened dramatically and rituximab therapy was re-introduced. At the most recent visit, 2 weeks after the completion of 6 weekly rituximab infusions, her oral lesions were continuously worsening. Because rituximab often requires months to achieve therapeutic benefits, we are hoping to see improvement from now on. Interestingly, she never developed any skin or genital lesion other than the one episode prior to the initiation of MMF. She has continuously taken MMF since initiation, so that may be enough to suppress skin or genital lesions, but evidently not enough to suppress the oral lesions.

Conclusions:

Previous research of rituximab treatment in PV indicated that complete remission rate was very high after 4 infusions of rituximab. However, our case revealed that 6 infusions did not result in complete remission. Due to FDA approval in 2018, we expect to see increasing use of rituximab for PV and may see more refractory cases like this case.

#6:

Clinical Oral Manifestations Of Langerhans Histiocytosis

*Katrina Jessica Myers, Joel Napenas
Carolinas Medical Center, USA

Background:

Langerhans Histiocytosis (LH) is a non-hereditary disorder, caused by a somatic mutation in BRAF, MAP2K1, and MAP3K1 gene, resulting in overproduction of Langerhans Cells. Aggregates of Langerhans Cells form granulomas that predominantly affect skull, long bones, pituitary glands, and thyroid, with 20% of patients developing in the liver and lungs. It is a relatively rare disorder affecting 1:100,000 individuals usually presenting in children in the first four years of life or in adults who smoke tobacco products.

Case Summary:

A 32 year-old female non-smoker presented to our hospital based dental clinic on March 2018 with a chief complaint of painful sores in her oral cavity, which had persisted for 6 months. Patient had been diagnosed with Multifocal Langerhans Histiocytosis in March 2015 and was actively undergoing chemotherapy (Vinblastine). Patient was previously comprehensively treated at our clinic in June 2016 with dental pain and periodontally compromised posterior dentition, which were extracted on September 2016. She was lost to follow-up until she returned for the complaints of oral lesions. Patient reports that she had been told her lesions were due to oral mucositis from chemotherapy. Clinical exam revealed two painful lesions: a large erythematous lesion on the posterior maxillary alveolar ridge and; a >1 cm long white ulcerative lesion with ragged erythematous borders on the posterior alveolar ridge of the left mandible.

A panoramic radiograph revealed mild erosion of the left mandible. Bacterial swabs for culture revealed Gram + Cocci (Routine oral flora). We performed an incisional biopsy of the mandibular lesion which was diagnosed histologically as Langerhans Histiocytosis. Due to progression of LH, patient was planned for salvage therapy using Cladribine as well as Gabapentin, Oxycodone, and Dilaudid for pain management. Patient was given Magic Mouthwash and Topical Lidocaine to manage symptoms associated with oral lesions.

As of December of 2018 patient is undergoing active chemotherapy for progressive LH, however oral lesions have resolved.

Conclusions:

Langerhans Histiocytosis can rarely present intraorally, as it is very easy for initial oral manifestation to be mistaken for other conditions, leading to delays in diagnosis and treatment, necessitating definitive work up and follow up.

#7:

Relationships between Taste Function Tests using Electrogustometry and Taste Solutions

*Min-Goo Kang, Jee-Hye Choi, Hong-Seop Kho
Seoul National University, Korea, Republic of

Objectives:

The purpose of this study was to investigate relationships between the results of taste function tests using electrogustometry and taste solutions in healthy young adults.

Methods:

Sixty participants (30 men and 30 women, mean age 26.2±4.5 years, 20~38 years) were included. A questionnaire and clinical examination were used to exclude diseases and conditions affecting taste function such as sinusitis, chronic obstructive pulmonary disease, diabetes, psychological disorders, the loss of olfactory sense, and dry mouth. Taste thresholds were measured using electrogustometry at three pairs of sites (tongue tip, lateral of tongue base, and soft palate). Taste thresholds using taste solutions were measured by a whole-mouth way using 24 taste solutions, six concentrations of four tastants (sucrose, NaCl, citric acid, and quinine-HCl).

Results:

There were no significant differences in the thresholds of electrogustometry and threshold scores of taste solution test between genders. In the electrogustometry, significant positive correlations ($r = 0.416$~0.608 in men, 0.615~0.815 in women) were found among the threshold values of three test areas (tongue tip, lateral of tongue base, and soft palate) in both genders. In the taste solution test, a significant positive correlation ($r = 0.508$, $P = 0.004$) was observed between the threshold scores of sweet and sour tastes in men. There were no significant correlations among the threshold scores of taste solutions in women. A significant positive correlation ($r = 0.406$, $P = 0.026$) was found between the threshold values on the tongue tip by the electrogustometry and threshold scores of salty taste in men. No correlations were found between the threshold values of electrogustometry and threshold scores of taste solution test in women.

Conclusions:

There was a significant association between the threshold values on the tongue tip by the electrogustometry and threshold scores of salty taste by the taste solution test in men.

#8:

A Case of Rare Metastasis Misinterpreted as Dental Abscess

*Nancy Lyn Wilson Westmark, Vidya Sankar
Brigham and Women's Hospital/Harvard School of Dental Medicine, USA

Background:

Epithelioid trophoblastic tumor (ETT) is a rare form of gonadotrophic trophoblastic neoplasm characterized by slow, insidious growth and, often, late diagnosis. Most common sites of metastasis are the lungs, vagina, central nervous system, liver, kidney, spleen and GI tract. Here we present a case of metastatic ETT to the jaws, initially thought to be a dental abscess.

Case Summary:

A 53 year old Native American female with medical history of Crohn's disease and metastatic ETT presented to the Brigham and Women's Hospital ED with complaint of progressive lip swelling for 1 week. Laboratory analysis revealed leukocytosis. CT face revealed an "enhancing fluid collection of the left upper lip with underlying bony destruction consistent with dental abscess." Oral Medicine was then consulted for evaluation of suspected dental abscess, and consult examination was significant for a left facial swelling displacing the lip, poor dentition with multiple carious retained roots, and a firm, nontender, ulcerated mass involving the maxillary left facial gingiva. Differential diagnosis included neoplasm, deep fungal infection, and, less likely but given CT findings, dental abscess. The patient was managed with extractions of hopeless teeth 8, 9, 10, and 11 with no purulent drainage. An incisional biopsy was obtained from the ulcerated soft tissue. Histopathology was consistent with metastatic epithelioid trophoblastic tumor, the patient's known primary malignancy.

Conclusions:

Competency in clinical examination, radiologic interpretation, and developing a full differential diagnosis is important for every clinician. Although this patient's case is unusual it represents an interesting exercise in diagnostics, as all data excepting intraoral exam indicated a diagnosis of dental abscess. Specifically, management of this case was confounded by the initial interpretation of the lesion as consistent with dental abscess on CT by Radiology. Even so, the patient received appropriate treatment and management recommendations which were instrumental in guiding her next steps in treatment.

2:00PM
#9:

Mandibular Condylar Osteochondroma: Case Report

*Virginia Judson, Nicole Hinchy, Jennifer Frustino, Maureen Sullivan, Mark Burke
Erie County Medical Center, USA

Objectives:

Osteochondroma is one of the most common benign tumors of bone, accounting for approximately 20-50% of all diagnosed, however, it is a neoplasm that is extremely rare in the head and neck region with a prevalence of 1%. When this tumor exists craniofacially, it is most often discovered on the condyle followed by the coronoid process of the mandible.

Case Summary:

The following case regards a 48-year-old African American female referred to our clinic by the Emergency Department for urgent oral evaluation. She presented with chief complaints of progressive pain and swelling of the right face, severe trismus, difficulty swallowing and numbness of the right lower face to the chin at the midline. Clinical exam revealed right facial swelling, paresthesia along the right CN V3, limited opening with deviation of the mandible to the right, and bulging of the right pharyngeal wall and soft palate. A panoramic radiograph revealed a large well-defined, multilobulated radiopaque mass at the site of the right mandibular condyle. The patient was referred to a head and neck surgeon for further diagnosis and management. CT imaging revealed a multilobulated, exophytic mass of 5.5 cm in diameter associated with the right mandibular condyle extending medially into the parapharyngeal space. The patient underwent surgical intervention, which included radical resection of the condyle, ramus, and coronoid process of the mandible without reconstruction. Final pathology was consistent with osteochondroma. The patient is currently functioning fairly well and able to tolerate a normal diet and lifestyle.

Conclusions:

This case report highlights a rare benign bony tumor with a successful outcome.

#10:

Acute Onset of a Hard Palate Ulcer After Periodontal Surgery

*Chelsia Sim
National Dental Center, Singapore

Background:

Sudden onset of hard palatal swelling and ulceration is uncommon. Common structures in the hard palate include minor salivary glands, neurovascular structures and bone. It is important to recognize the need for timely and appropriate management when dealing with tumors and ulcers in the oral cavity.

Case Summary:

A 36 year female was referred to the Oral Medicine Unit by a periodontitist who had recently harvested palatal grafts from bilateral hard palate at the 1stmolar region.

A week after periodontal surgery, the patient reported of a sudden onset of soft tissue swelling associated with pain on the right posterior hard palate, away from the graft site. During the consult, the patient was not keen on an incisional biopsy as she had recently underwent surgery for the palatal graft. With a working diagnosis of necrotizing sialometaplasia versus salivary gland tumor, we scheduled a one week review, with an incisional biopsy planned if the lesion persists or enlarges. Subsequently the swelling became less painful and a large ulcer developed over the palatal swelling. The ulcer was covered with white pseudomembrane, which gradually fell off, leaving a crater-like ulcer, at the midline, extending to the right side of the posterior hard palate. A pantomograph taken revealed no radiographic abnormality. On the fourth week, the ulcer has healed completely with a slight soft tissue defect in the affected area.

Topical viscous Xylocaine 2% gel and Tramadol were given for pain relief.

Conclusions:

A good clinical history with good understanding of the benign oral disorders can prevent unnecessary treatment for the patient. In this case of necrotizing sialometaplasia, a rare, destructive inflammatory condition of the salivary glands, can resemble a malignancy but also is a self-limiting condition requiring only symptomatic management.

#11

Oral Lichen Planus Pemphigoides: Three Cases of a Rare Entity

*Scarlet Beatriz Charmelo Silva, Mohammed Bindakhil, Thomas P Sollecito, Faizan Alawi, Eric T Stoopler
University of Pennsylvania, USA

Background

Oral lichen planus pemphigoides (LPP) is a rare disease of the pemphigoid family which clinically and histopathologically presents with features of both lichen planus (LP) and bullous pemphigoid (BP) or mucous membrane pemphigoid (MMP). The classic presentation consists of blisters and erosive lesions arising on or around pre-existing lesions of mucocutaneous LP.

Case Summary:

Case 1

A 75-year-old Caucasian female presented with symptomatic gingival lesions of seven months duration. Generalized erythema, edema, and desquamation were observed on the maxillary and mandibular gingiva. Histopathologic analysis revealed lichenoid inflammation on routine staining and linear C3 deposition at the epithelial-connective tissue interface on direct immunofluoresence (DIF). The cumulative findings were consistent with LPP and current management includes dexamethasone 0.5 mg/5 mL rinse twice daily, clobetasol gel 0.05% twice daily and nystatin 100,000 units/mL rinses three times daily.

Case 2

A 71-year-old Caucasian male presented with a one-year history of symptomatic gingival and concurrent cutaneous lesions. Desquamation and severe erythema were observed on the mandibular and maxillary gingiva with positive Nikolsky's sign. Histopathologic analysis demonstrated a lichenoid interface reaction on routine staining with linear IgG, IgA, C3 and fibrinogen deposition at the mucosal-submucosal interface on DIF. The combined findings were consistent with LPP and current management includes dexamethasone 0.5 mg/5 mL rinses twice daily, nystatin 100,000 units/mL rinse three times daily, doxycycline 50mg daily and clobetasol gel 0.05% as needed.

Case 3

A 67-year-old Caucasian female presented with symptomatic oral lesions, dysphagia, unintentional weight loss, and vaginal lesions. Examination revealed extensive erythema and areas of erosion on the buccal mucosa, gingiva, and tongue. Histopathologic analysis revealed lichenoid inflammation on routine staining and linear IgG, C3, and shaggy fibrinogen on DIF. Enzyme-linked immunosorbent assay was positive for BP180 and BP230 antibodies. Clinical, histopathologic and serologic findings were consistent with LPP. The patient is currently managed with dexamethasone 0.5 mg/5 mL oral solution swish and swallow, nystatin 100,000 units/mL rinses three times a day, and doxycycline 50mg daily.

Conclusions:

Diagnosis and management of oral LPP may be challenging due to overlapping clinical and histopathologic findings.

#12:

Oral and Cutaneous Sarcoidosis In An African American Female

*Margi Kapadia, Mahnaz Fatahzadeh
Rutgers School of Dental Medicine, USA

Background:

Sarcoidosis is an acquired granulomatous disease with potential for multiorgan involvement. Mucocutaneous sarcoidosis may be an isolated finding requiring local management or develop prior or concurrent with systemic involvement. Diagnosis of sarcoidosis relies on histologic evidence of noncaseating granulomas in a compatible clinical setting and exclusion of other potential sources of granulomatous inflammation.The etiology is multifactorial and management depends on the extent of disease. Prognosis is worse in African Americans. We report a patient with facial and gingival changes in whom work up confirmed mucocutaneous sarcoidosis.

Case Summary:

A 51-year-old African American female presented to the oral medicine service with the chief complaint of gingival swelling, redness, bleeding on brushing and sensitivity to acidic foods for the past 3 years. She denied precipitating factors such as foods, oral hygiene products, and dental restorations. PMH was significant for sickle cell disease and seizures. She was taking phenytoin, folic acid and hydromorphone prn. She reported allergy to PCN and Ibuprofen. Extraoral exam revealed confluent skin colored plaques affecting philtrum, left cheek and nose. Intraorally, she was dentate and anterior maxillary gingiva appeared erythematous and hyperplastic with fine granularity. There were no erosions, ulcers or desquamative gingivitis. Teeth 8 and 9 had been restored and imaging was non-contributory. Clinical impression included plasma cell gingivitis, strawberry gingivitis, foreign body reaction, lichenoid mucositis and erythroplakia. Affected gingiva sampled and microscopic evaluation revealed granulomatous inflammation & lichenoid mucositis. Occasional foreign body noted on H&E but GMS, AFB & PAS stains were negative. An earlier biopsy of facial lesions by a dermatologist also revealed non-caseating granulomas suggestive of sarcoidosis. Both review of systems and preliminary work up by internist were negative for systemic involvement. Gingival complaints were managed with high potency topical steroids with improvement in gingival swelling, bleeding, erythema and sensitivity over the next few weeks. Cutaneous lesions were treated with topical tacrolimus by her dermatologist.

Conclusions:

Presentation of sarcoidosis in the oral cavity is uncommon; nevertheless, dentists should include it in differential diagnosis of gingival swelling. Even in the absence of current systemic involvement, follow up is necessary because timely diagnosis is critical to improved medical outcome.

#13:

Interferon-alpha Increased Expression of MHC-I and MHC-II/CD40 Molecules on Keratinocytes: An In-vitro Study

Chencheng Song, Yiwen Deng, *Yufeng Wang, Guoyao Tang
Ninth People's Hospital, Shanghai JiaoTong University School of Medicine, China

Objectives:

Previous studies have found that interferon alpha (IFN-α) is highly expressed in local lesions of lichen planus (LP) and may be associated with the onset of lichen planus. Whether IFN-α has a pro-inflammatory effect on epithelial keratinocytes was not completely clarified in LP. Aims: Present study aimed to investigate changes of antigen-presenting molecules on keratinocyte after treatment of IFN-α in vitro.

Methods:

HaCaT cells and HOK cells were cultured 24 hours before treatment in vitro. Then, 1000 UI/mL of IFN-α, isotype IgG, 1000 IU/mL of interferon gamma (IFN-γ) or an equal volume of PBS solution was added, respectively (n=6 in each group). 24 hours after treatment, the expression of CD40, CD80, CD86, HLA-I and HLA-DR were detected by flow cytometry. Their average of fluorescence intensity (AOI) was calculated and then compared with non-parametric test. Survival ratio of cultured cells was also calculated.

Results:

HLA-I+ populations in 4 groups of HaCaT cells were 99.92%±0.02% (IFN-α), 0.03%±0.01% (isotype), 99.43%±0.487% (IFN-γ) and 91.95%±5.04% (PBS), respectively. There showed no statistical difference among each group ($P>0.05$). While the AOI of HLA-I significantly increased in IFN-γ group (40220±871, $P<0.001$) and IFN-α group (31510±834, $P<0.001$), compared with that of PBS group (18960±2051) or Isotype group (226.8±73.26). Same results were detected in HOK cells. Normal keratinocytes have low expression of HLA-DR molecules. While after IFN-α/IFN-γ treatment, HLA-II+ populations of HaCaT cells in IFN-α group(14.65%±0.38%, $P<0.001$) and IFN-γ group(98.45%±0.75%, $P<0.001$) significantly increased, compare with Isotype group (0.35%±0.09%) or PBS group(10.33%±0.32%). The AOI of 4 groups of HaCaT cells were 1595±28.52 (IFN-α), 665.0±45.96(isotype), 11550±179.3 (IFN-γ) and 1493±56.16 (PBS), respectively. There showed no statistical difference among each group ($P>0.05$). In HOK cells, no significant changes were observed in either group, either HLA-II+ populations or AOI. The results of the CD40 molecule are similar to those of the HLA class II molecule.

Conclusions:

In-vitro, increased IFN-α could significantly up-regulate the expression of HLA-I, HLA-II and CD40 molecules on keratinocytes. The expression of HLA-DR also increased to some extent. It could be a part. IFN may play an initial role in the innate immunity of keratinocytes and T cells.

#14:

Extensive Intra- and Extraoral Pigmentation in a Medically Compromised Patient

Saeed Abdullah Arem, Richard Jordan, Kyle Burke Jones, Piri Veluppillai
University of California San Francisco, School of Dentistry, USA

Background:

Discrete areas of oral pigmentation are common and can be localized or diffuse. Localized lesions include melanotic macules and post-inflammatory hyperpigmentation while diffuse intraoral pigmentation may be associated with systemic conditions such as Peutz-Jeghers syndrome, Laugier-Hunziker syndrome (LHS), Carney Complex, McCune-Albright syndrome, LEOPARD syndrome, and adrenal insufficiency, among others.

Case Summary:

A 70-year-old woman was referred by her physician for evaluation of multiple, asymptomatic pigmented macules on the oral mucosa, hands, and face. The macules first appeared 5 years ago and slowly increased in number. The patient had a complicated medical history and extensive medication list. Family, social, and dental histories were unremarkable. Review of systems revealed recent onset dizziness when seated and seated blood pressure of 130/71mmHg. Extraoral examination showed bilateral brown/black macules on the commissures, lower lip, and longitudinal melanonychia. Intraoral examination showed multiple brown/black macules on the tongue, soft palate, floor of mouth, and buccal mucosa. Given the patient's age and relatively recent onset of pigmentary changes, the differential diagnosis included LHS, adrenal insufficiency, and drug-induced hyperpigmentation. An incisional biopsy from the lower lip revealed a melanotic macule. Referral to an endocrinologist was made; lab values showed abnormally increased levels of ACTH (175ng/L), an equivocal ACTH stimulation test, normal cortisol levels (17ng/dL), hyponatremia (130mmol/L), and borderline hyperkalemia (4.2mmol/L). A diagnosis of primary early adrenal insufficiency was subsequently made.

Conclusions:

Chronic primary adrenal insufficiency can be difficult to diagnose given its slow onset and often non-specific symptoms. Most cases are caused by autoimmune adrenitis and the remainder associated with infection or genetic abnormalities. Given our patient's lack of significant systemic symptoms or use of medications known to cause hyperpigmentation, our initial clinical diagnosis was LHS; however, lab values suggested adrenal insufficiency. This case highlights the importance of ruling out adrenal insufficiency in patients with relatively recent onset diffuse oral hyperpigmentation and the role oral medicine specialists can play in making the diagnosis.

#15:

Clinical and Radiographic Presentation of Malignancies in Temporomandibular joint

*Mozamel Ahmed Malik, Sajitha Kalathingal, Rafik A Abdelsyed, Allison K Buchanan

The Dental College of Georgia at Augusta University, USA

Background:

Metastasis affecting the oral cavity is reported to be 1%-8% of all malignant tumors in the oral cavity. The statistical data suggests that metastatic lesions to the Temporomandibular joint (TMJ) is significantly lower or perhaps underreported. Since malignancy involving TMJ may present with no symptoms or alternatively present with factors mimicking other commonly seen temporomandibular disorders (TMD) with good prognosis a systematic approach is inevitable for proper diagnosis and management of the TMDs. Clinical examination supplemented with additional diagnostic tests including advanced imaging plays a pivotal role in early diagnosis and appropriate management of the diseases affecting the temporomandibular joint space.

Case Summary:

A 45 year-old Caucasian female presented with a painful unilateral facial swelling in the left side and tender temporomandibular region. A CT scan showed a homogenous mass with irregular border in the left mandibular ramus that extended superiorly to the temporomandibular joint. The patient's PMH is significant for breast cancer which was treated with mastectomy, chemotherapy and radiation four years prior to her recent presentation. An open incisional biopsy was performed which revealed neoplastic proliferation consisting of malignant glandular formations, morphologically consistent with metastatic infiltrating ductal carcinoma of the breast. Immunostaining showed positive reaction with CK7 & ER confirming the above mentioned diagnosis. PR and HER2 immunostaining were negative.

Conclusion:

Metastatic lesion to the TMJ is relatively rare and widespread metastasis to other skeletal locations generally precedes TMJ involvement. In a literature review (1954-2008) of 48 cases with TMJ metastases the primary malignancy was highest in breast followed by lungs. In this study 59.3% of the female patients had breast cancer of which 72.97% was adenocarcinoma. Ductal carcinoma was only reported in 2 cases. Commonly reported signs are pain, swelling, paresthesia, limited mouth opening and fracture. For patients with history of malignancy developing pain and swelling of sudden onset in TMJ region CT scan and MRI should be included in the initial work up. PET scan is invaluable in identifying metastatic areas with widespread disease process.

#16:

Diagnosis of Oral Carcinoma in relation to Oral Lichen Planus – The importance of a Sufficient Biopsy

*Yousra Akhlef, Morten Schiødt

Copenhagen University Hospital (Rigshospitalet), Denmark

Background:

A biopsy is an important diagnostic tool for the diagnosis of oral mucosal lesions and using the correct technique is crucial for the pathologist to reach a helpful and meaningful diagnosis.

Case summary:

The aim of this case report is to demonstrate the importance of a good biopsy technique.

A 70-year old woman known with oral and cutaneous lichen planus for more than 6 years had newly gone through a cancer program for a suspicious oral mucosal lesion on her left buccal mucosa. The biopsy taken in the cancer program showed no signs of malignancy, and the patient was therefore declared cancer free. She was hereafter referred to the Department of Oral and Maxlliofacial Surgery at the Copenhagen University hospital, Rigshospitalet for treatment of her oral lichen planus. Examination of the oral mucosa showed a verrucous and erythematous lesion on the left buccal mucosa. On the right buccal mucosa and lower central gingiva Wichams striae was represented. The patient had no appreciable symptoms, but felt that the lesion on the left buccal mucosa was growing and interfering with her bite making it difficult to eat without biting herself on the cheek. The verrucous and erythematous lesion on the left buccal mucosa did not look compatible with an oral lichen planus lesion, and raised clinical suspicion of oral cancer.

We took a new biopsy that now showed squamous cell carcinoma. This biopsy changed the treatment plan and helped the patient undergo a relevant cancer program and hereby become cancer free. The clinical and histologic features will be presented including the insufficient and the sufficient biopsy showing the limitations and challenges of biopsy taking.

Conclusions:

An insufficient biopsy can lead to a wrong treatment plan, and delay the relevant treatment. Therefore, a good biopsy technique is necessary for a reliable diagnosis where malignancy is suspected.

#17:

Lichen Planus Masking Dysplastic Lesion

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Background:

Lichen planus (LP) is a relatively common dermatologic disorder that often affect oral mucosa. Malignant or premalignant lesions on patients with LP have been reported, however, the question of malignant potential of LP remains controversial. We present a case of LP uniquely masking a dysplastic lesion.

Case Summary:

A 52-year-old male was referred for an evaluation of leukoplakic lesion on the left ventral tongue. Seventeen months prior, he developed verrucous carcinoma on the left ventral tongue and this was surgically removed with clear margin. Three months later, he developed another lesion that was biopsied and diagnosed as mild dysplasia with lichenoid mucositis. This lesion was excised with clear margin. At the time of the initial evaluation, he complained of pain and irritation to certain foods on his tongue and lower posterior facial gingiva for one month. Examination revealed approximately 30x30mm diffuse thick white lesion on the left ventral tongue and diffuse thick white lesions with multiple ulcerations on lower posterior facial gingiva. Based on the clinical appearance, symptom character and past biopsy suggesting lichenoid mucositis, we clinically diagnosed as LP and initiated the treatment of dexamethasone oral solution. After two weeks use of the dexamethasone, his symptoms greatly improved. Clinically, the white lesions and ulcerations on gingiva resolved. The white lesion on the tongue greatly diminished in size, however, approximately 2x1mm thick white lesion was remained intact. We biopsied the remaining white lesion that was diagnosed as moderate dysplasia. This lesion was later excised with clear margin. Since then, his LP symptoms have been well controlled with occasional use of dexamethasone and he has not developed any leukoplakic lesion on his tongue for twelve months.

Conclusion:

Although malignant potential of lichen planus remains unclear, considering LP, dysplasia, and squamous cell carcinoma (SCC) are not rare, we cannot deny LP and dysplasia or SCC occur simultaneously on some individuals. If we decided to do the biopsy before treating his LP, we could have easily missed the area of dysplasia. Management of oral mucosal diseases such as LP may sometime be crucial to identify underneath dysplastic or cancerous lesions.

#18:

Ectopic Sebaceous Gland: Atypical Presentation

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Background:

Oral sebaceous glands clinically appear as white-yellow macules or papules, and range between 0.2 to 2.0 mm in diameter [1,2,3]. A distinct function of sebaceous glands within the oral cavity remains unclear [1,3]. While common to the vermilion border of the lips and buccal mucosa, other intraoral sebaceous sites are considered to be ectopic presentations [1,2]. This case describes an atypical, ectopic presentation of a sebaceous gland on the alveolar mucosa.

Case Summary:

A 57-year-old Caucasian male presented to clinic with the chief complaint of a pale, painless lesion located on the maxillary right buccal alveolar mucosa. The lesion remained localized between the premolars and close to the vestibule. Patient medical history was significant for Lyme disease that was successfully treated via antibiotic 20 years ago. No current medications or significant social history was reported. Clinical examination was performed and included pulp testing, periodontal evaluation and assessing occlusion. Oral evaluation revealed an orifice within the central aspect of the lesion that permitted tracing with a #25 gutta-percha cone indicating odontogenic origin. Radiographs were obtained to evaluate surrounding teeth and supporting structures, but were inconclusive with no evidence of tooth involvement. Clinical photographs were taken prior to completion of incisional biopsy. Differential diagnoses included: intraoral sinus tract secondary to pulpal necrosis, chemical burn, frictional keratosis, dysplastic leukoplakia and squamous cell carcinoma. Biopsy result confirmed single ectopic sebaceous gland as the definitive diagnosis. No treatment was required for management of the lesion due to being benign and painless. The patient was discharged and recommended follow up during routine maintenance visits.

Conclusions

Intraoral ectopic sebaceous glands may occasionally mimic the appearance of malignant or odontogenic conditions; especially when coinciding with a traceable sinus tract. Prior to administering irreversible or invasive dental treatments, ascertainment of odontogenic origin should be sought through endodontic and periodontal testing in conjunction with examination and radiographs. If odontogenic origin is inconclusive, it is advisable to consider ectopic sebaceous gland as a differential diagnosis. In lesions where clinical and radiographic findings are inconclusive, dysplasia and malignancy should be should be ruled out via biopsy.

#19:

Metal Ions Liberated From The Prosthesis Could Aggravate Oral Lichen Planus

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Objectives:

To investigate the effects of metal ions released from the prosthesis on the patients with oral lichen planus (OLP) adjacent to the old metal prosthesis (MP) in the mouth. Concentration of metal ions in saliva was compared between healthy controls and OLP patients.

Methods:

The subjects were categorized into 3 groups - The OLP with MP group (OLPwMP) was defined as patients who had more than 5 years old MP in the mouth and were diagnosed as OLP (n=12), both clinically and histologically. Second, subjects without MP and oral lesions (OL) in mouth were defined as the healthy control without MP (HCwoMP) group (n = 13). Finally, subjects with at least one old MP, but without OL in the mouth were defined as healthy control with MP (HCwMP) group (n = 15). Unstimulated whole saliva was collected from patients at their first visit. A polypropylene tube was used for 3 minutes to collect saliva. The saliva samples were kept in a -80 °C freezer until analysis. Metal ions—Titanium (Ti), Chromium (Cr), Cobalt (Co), Zirconium (Zr), Palladium (Pd), Sliver (Ag), Platinum (Pt), Gold (Au)—were measured using a laser ablation microprobe inductively coupled plasma mass spectrometer (LAM-ICP-MS). The Kruskal-wallis test was used as a statistical method to compare the mean value of the concentration (PPb) of metal ions in saliva among three groups.

Results:

Among metal ions in saliva of patients in three groups did the statistical difference in Cr ($p=0.003$), Pd ($p=0.000$), Ag ($p=0.019$) and Au ($p=0.004$) exist ($p<0.05$). The study group had the highest average rank for all four kinds of metal ions, although HCwMP group also had MP in mouth.

Conclusion:

The average concentration of Cr, Pd, Ag and Au in saliva of patients with OLP is higher than that of healthy controls. Therefore, it is necessary to monitor the amount of metal ions in the saliva of OLP patients with old MP and remove the related restorations to reducing the amount of them in order to confirm the relief of symptoms.

#20:

Refractory Traumatic Ulcerative Granuloma with Stromal Eosinophilia Treated with Thalidomide: A Case Series

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Background:

Traumatic ulcerative granuloma with stromal eosinophilia (TUGSE) is a painful oral mucosal condition characterized by a histocyte-like mononuclear proliferation and eosinophilic infiltration deep into the skeletal muscle. While most lesions resolve with surgical and/or intensive localized steroid therapy, some TUGSE lesions are refractory. Thalidomide is a potent anti-inflammatory and immunomodulatory agent that is used in the management of complex aphthous stomatitis and has been reported to be effective in the management of various ulcerative/granulomatous diseases; however, its use for management of TUGSE has not been reported. We present three pathology-confirmed cases of TUGSE where lesions progressed on topical (clobetasol gel), systemic (prednisone) and intralesional (triamcinolone injection) steroid therapy and were successfully managed with thalidomide.

Case Summary:

Case 1:

A 60-year-old male with hypertension, type 2 diabetes mellitus and acute myelogenous leukemia (AML) post-allogeneic hematopoietic stem cell transplantation (aHSCT) presented with a one-month history of a deep ulcer on the left ventral tongue that despite therapy progressed to 5×4 cm over 6 months. The lesion resolved after 2.5 months of thalidomide therapy (100mg QD x 1 month, then 50 mg QD x 1.5 months). Side effects included lethargy and constipation and resolved after thalidomide was discontinued.

Case 2:

A 45-year-old male with AML post-aHSCT presented with a three-week history of a painful ulcer on the right soft palate that despite therapy increased in size over one month to 3×4 cm. The lesion resolved after 2 months on thalidomide (100 mg QD) with no side effects reported.

Case 3:

A 61-year old otherwise healthy female presented with a three-week history of a painful 1×0.5 cm ulcer on the left ventral tongue that despite therapy increased in size to 2x1 cm over 2.5 months. There was complete resolution after 2 months on thalidomide therapy. The patient reported weakness and disorientation on 100mg QD which resolved when the dose was reduced to 50mg QD.

Conclusions:

Thalidomide is a relatively safe and effective medication for the management of refractory TUGSE. Patients should be closely monitored for side effects.

#21:

Does Ki67 Expression of Erosive-Atrophic Lichen Planus Lesions Have A Prognostic Value?

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Objectives:

The study aimed to evaluate the clinic response of erosive-atrophic lichen planus (EALP) to corticosteroid treatment and compare its Ki67 expression with normal gingival mucosa and epithelial dysplasia.

Methods:

The study group included biopsy-confirmed 76 EALP patients, 10 patients with epithelial dysplasia (7 oral squamous cell carcinoma (OSCC) and 3 lichenoid dysplasia (LD) patients) as negative control group with Ki67 expression. The control group consisted of 10 biopsy samples from the healthy gingival epithelium. EALP and LD patients had undergone corticosteroid treatment minimum for a month and followed-up from 6 to 36 months. OSCC patients were referred to oncology department for treatment. During recalls, mild erythema, total remission or no remission of lesions were noted.

Results:

34 (%44) EALP patients had total remission in 17.5 ± 13.5 months, 35 (%46) had mild erythema in 9.7 ± 8.7 months and 7 (%9) presented no remission in 10.3 ± 11.3 months with labelling indexes of Ki67 are 2.7 ± 1.2 , 2.8 ± 1.7 , 3 ± 1.5 respectively. Ki67 expression of LD and OSCC were significantly different from control group and EALP patients ($p<0.05$). Ki67 expression of EALP patients were not significantly different than the control group. Highest Ki67 values were observed in OSCC patients 28.4 ± 17.2.

Conclusions:

As oral cancers progress predominantly from existing precancerous lesions, Ki-67 of EALP patients do not have a prognostic value. Clinical examination and experience is therefore of the utmost importance.

#22:

Factitial Injuries Interfering with the Management of Suspected Erythema Multiforme: A Case Report

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UCSF School of Dentistry, USA

Background:

Self-induced or factitial injuries to the mouth, either intentional or non-intentional, may be challenging to diagnose, and may complicate diagnosis and management of another underlying condition

Case Summary:

A 52 y/o Chinese woman presented for evaluation of a 6-week history of very painful oral ulcerations. The visit was assisted by a professional translator as the patient did not speak English. She had recently been prescribed valacyclovir, 1000mg/d by the referring provider. She reported the lesions appeared after consuming a sesame-containing snack, had improved, then recurred when eating the same snack again. Medical history revealed frequent seizures since birth, managed by levetiracetam (Keppra), an anti-epileptic agent, and cognitive impairment. Clinical examination revealed large pseudomembrane-covered ulcerations with intense erythematous borders 1) covering the right hard and soft palate, crossing the midline; and 2) on the lingual aspect of the lower right posterior quadrant. The initial differential diagnosis included erythema multiforme (EM), a late stage recurrent herpes simplex infection, pemphigus vulgaris (PV), and pemphigoid (MMP). A biopsy (including DIF) collected one week after valacyclovir failed to improve the lesions, ruled out PV and MMP. Since patient presented with a bottle containing tissue she had scratched from her palate, we suspected she had EM exacerbated by factitial injuries. However, typical histopathologic features of EM were not seen on the biopsy, and prednisone 60 mg/d for one week provided little improvement. A subsequent course of Augmentin, to manage suspected secondary bacterial colonization of the ulcers, resulted in substantial improvement. However, pain management was challenging given 1) the time required for re-epithelialization of the extremely large initial palatal ulceration; and 2) the patient's perception that "something was stuck under her gingiva", hence her attempts to scratch the area to remove what she perceived was lodged in her gingival tissues. Neurontin, 900 mg/d, prescribed with concurrence from patient's neurologist provided some pain relief as the ulcerations continued to heal.

Conclusions:

Factitial injuries may become complicated by secondary bacterial colonization. Language barrier and cognitive impairment are additional challenges, and inter-professional collaborations are critical in the management of these complex cases.

#23:

Novel Oral Lichen Planus Symptom Severity Measure For Assessing Patients' Daily Symptom Experience

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Objectives:

There is a need for a patient-reported outcome measure that generates a score representing the daily variation in the symptom severity as experienced and reported by the patients diagnosed with oral lichen planus (OLP). This novel Oral Lichen Planus Symptom Severity Measure (OLPSSM) was developed, according to FDA recommendations, as a clinical outcome assessment of the daily symptom experience of patients with OLP.

Methods:

Qualitative research methods were employed to generate the final 7-item OLPSSM version 1.0 as a well-defined and reliable assessment tool for use in studies that will characterize treatment benefit for patients with OLP. A literature review and expert input were followed by open-ended concept elicitation interviews with 17 adults with OLP in the US and Ireland. Item content was generated, and the interviews continued until input saturation was reached. The final electronic version of the measure was cognitively debriefed in 6 US patients and subsequently translated and linguistically validated in Germany and Denmark.

Results:

Item generation for the OLPSSM was based on input from 11 US and 6 Irish patients with OLP. All concept elicitation interviews were audio recorded, transcribed, and coded with respect to the patients' daily symptom experience. Demonstration of saturation in both the US and Ireland, transcript review, and additional input from clinical experts resulted in a 7-item version 1.0 of the OLPSSM. An electronic clinical outcome assessment daily diary format was adapted from the paper version before final cognitive debriefing interviews were completed in 6 US adult patients with OLP. This cognitive debriefing study demonstrated the validity of the final content and format of the OLPSSM in terms of patient understanding and response. Translation and cognitive debriefing interviews in native Danish and German speakers demonstrated that the content validity of the OLPSSM was maintained in the translated versions.

Conclusions:

Qualitative research methods generated evidence that the 7-item OLPSSM version 1.0 is a well-defined assessment tool to characterize the severity, specificity and variations of symptoms in patients with OLP.

#24:

A Case of Intractable Facial Pain and Tongue Deviation: Illustrating the Vital Role of the Oral Healthcare Professional in Medicine

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Background:

Oral cancer is a disease in which over 51,000 people will be newly diagnosed in 2018. If diagnosed early, oral cancer has a survival rate of 80-90%, however, the five-year survival rate has been reported as low as 43% with delayed diagnosis. Diagnostic delay is often caused by patient-related factors, yet professional factors may be underestimated.

Case Summary:

A 55-year-old male presented to the Oral Medicine clinic as an inpatient at the Hospital of the University of Pennsylvania with a chief complaint of intractable left jaw and tongue pain. The patient was undergoing immunotherapy for lung adenocarcinoma with metastasis to the rib and adrenal gland. The patient stated the jaw pain was constant, burning, and radiated to the left ear, worsening for the past two months. His tongue felt swollen with intermittent numbness. He had been evaluated by many health care providers including local emergency physicians, a neurologist, and an otolaryngologist who diagnosed trigeminal neuralgia; however, none of the treatments for it were successful. He was a current smoker with a 40 pack year history and consumed at least one beer daily. The patient reported losing 12 pounds over the last two months despite a good appetite. On clinical examination there was frank deviation of the tongue to the left, slight swelling, and induration of left posterior tongue region. A neck CT and MRI revealed a mass of left tongue and floor of mouth. Subsequent biopsy confirmed invasive poorly differentiated squamous cell carcinoma with perineural invasion. Human papilloma virus was not detected. The patient underwent palliative radiation for the oral cancer, followed by palliative chemotherapy for the lung cancer, provided there was a poor overall prognosis.

Conclusion:

This case illustrates the importance of a thorough history and physical exam. It also emphasizes the vital role oral healthcare professionals play in medicine, as we can provide accurate diagnoses which may have been overlooked by other medical specialists.

#25:

A Case of Bilateral Squamous Cell Carcinoma

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Background:

Cancers presenting bilaterally are extremely rare, and it is even more uncommon that bilateral cancers are found in the oral cavity. Oral Squamous Cell Carcinomas (SCC) account for 90-95% of all oropharyngeal cancers, yet SCC arising in the gingiva accounts for only 4% of all oral SCC cases (Kumari et al., 2013 and Wallace and Neville, 1996). Of that 4%, 30% arise from the maxillary gingiva and 70% from the mandibular gingiva (Ng P, Clark E, 2015). A bilateral presentation of SCC in the maxillary gingiva is remarkably atypical with only a limited number of cases reported in the literature. The etiology of oral SCC is multifactorial with risk factors including tobacco use, alcohol consumption, and environmental.

Case Summary:

The patient was referred to the oral surgery faculty at ECU School of Dental Medicine with a presentation of synchronous bilateral SCC on the palate adjacent to tooth #3 and #15. The patient reported being a former smoker as well as drinking alcohol occasionally. The patient also has a medical history of renal disease, lung disease, sleep apnea, and arthritis along with a surgical history of aortic valve replacement. The patient's medications include tamsulosin, warfarin, furosemide, metoprolol and amiodarone. The right side presented with a red and white pedunculated lesion (15 mm X 15 mm) with rolled borders. On the left side a red and white sessile lesion (10 mm X 5 mm) with rolled borders was seen adjacent to the maxillary second molar. This case presents an unusual occurrence of bilateral carcinoma that requires a maxillectomy, excision of the right palate as well as bilateral neck dissections upon cardiac clearance.

Conclusions:

Due to the rarity of this phenomenon, it is difficult to know the prognosis as well as the etiology. To our knowledge, this is the first case of bilateral SCC seen in the gingiva. Clinicians should be suspicious of any abnormal presentation of a persistent oral lesion and be aware that oral SCC, though extremely rare, can occur bilaterally. Therefore, it is important to approach lesions with an open mind and remember the saying, "never say never and never say always."

#26:

Multiple Oral Cancer In Patients With Oral Lichen Planus

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Objectives:

This study aims to investigate clinical features of multiple oral squamous cell carcinoma (OSCC) in patients with oral lichen planus (OLP).

Methods:

We retrieved 11 patients, who had multiple OSCC and OLP, from the Oral Cancer Record of Dept of OMFS, Oita University Hospital. Clinical data were obtained from the patient's charts.

Results:

Among 11 patients, 9 were female and 2 were male. The average age of the patients was 60.2 years old (range 40 to 77 years of age). All the patients had metachrnous multiple cancers of the oral cavity: 4 patients had 2 primary tumors, 5 had 3 primary tumors, and 2 had 5 primary tumors. Total 33 primary tumors were observed in 11 patients. Timing of diagnoses of OSCC and OLP was the OLP-preceding pattern in 7 patients, one of which showed simultaneous diagnosis of the first OSCC and OLP. Other 4 patients were the OSCC-preceding pattern. Sites of oral cancers were consistent with those of OLP lesions in 10 out of 33 OSCC (30.3%) . Gingiva was the most prevalent site of occurrence of both OSCC and OLP. In most of patients, OSCC occurred in the same side, even though OLP lesions were distributed in the both sides. As for lifestyle habits, only 1 male patient was a current smoker, and 2 patients (1 male and 1 female) had alcohol drinking habit. Discussion: Most patients with multiple OSCC and OLP were female. This may be attributable to the fact that OLP lesions predominantly arise in female patients. It was noteworthy that most patients had neither smoking nor alcohol drinking habits, suggesting that OLP provides an environment for OSCC development in a part of OLP patients. However, there was a possibility that unknown factors other than OLP were related with multiple occurrence of OSCC, because tumors were distributed in either one side of the oral cavity in some patients.

Conclusions:

OLP may be a risk factor of multiple OSCC in non-smokers and non-alcohol drinkers. Further studies are needed to show the association between multiple OSCC and OLP.

#27:

Herpes Zoster Induced Osteonecrosis and Tooth Exfoliation: A Case Report

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Background:

The varicella zoster virus (VZV) causes two distinct clinical conditions: varicella (chickenpox) and herpes zoster (shingles). Herpes zoster infection (HZI) occurs when a previously dormant VZV is reactivated, manifesting as a painful vesicular rash along the dermatome of the affected sensory nerve. Trigeminal nerve involvement occurs in approximately 18.5 – 22% of HZI cases, which can result in orofacial symptoms. Complications of such an infection vary widely and can be observed long after resolution of acute symptoms. One particularly severe but rare complication is alveolar osteonecrosis with spontaneous tooth exfoliation. It has been theorized that chronic inflammatory changes associated with preexisting pulpal or periodontal disease may be contributing factors, as well as oral surgical procedures performed in the area of a herpes zoster infection.

Case Summary:

This is a case report of a 74 year-old male who presented to our service for prosthetic rehabilitation following severe HZI of the left CN V2. His initial symptoms included pain, tooth mobility, and exposed alveolar bone. Initial treatment was rendered by the patient's physician, a general dentist, and an oral maxillofacial surgeon, and included antibiotics, multiple dental extractions and alveoloplasty of necrotic maxillary bone. HZI complications ultimately resulted in the loss of four maxillary teeth, as well as a significant portion of the left maxilla. The patient presented to our service with a large velopharyngeal insufficiency and maxillary defect extending into the left maxillary sinus. Fabrication of a maxillofacial prosthesis was required to restore function.

Conclusions:

There have been few documented cases of HZI-related osteonecrosis and tooth exfoliation, and the exact mechanisms behind these complications are not well understood. The oral health care professional should be aware of this potential HZI complication and its management.

#28:

Investigating the Prevalence of Treatment-Induced Trismus in Patients with Head and Neck Cancers

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Objectives:

Radiation therapy for head and neck cancers (HNC) can cause trismus. The exact prevalence and severity of radiation-induced trismus is unknown. Dental practitioners often prescribe stretching exercises prior to radiation to prevent trismus, but the most effective method has yet to be determined. The purpose of this study was to analyze the prevalence of radiation- and chemotherapy-induced trismus in patients following treatment for head and neck cancers. We hypothesized that patients with HNC who received radiation and/or chemotherapy would experience a high prevalence of trismus, and those who were prescribed jaw-stretching exercises to be performed during and after radiation therapy would maintain normal range of motion.

Methods:

An retrospective chart review was conducted of 243 patients referred to the Arizona School of Dentistry & Oral Health for dental clearance prior to head and neck radiation. Patient records were evaluated for type of treatment, radiation dose/field, whether stretching exercises were provided, and maximal mouth opening prior to and following treatment. Records from 25 patients included all data. T-Tests and Mann Whitney Exact Tests were used to determine differences within the means for maximal opening as compared to age, sex, type of treatment, radiation dose, and type of cancer.

Results:

Of the 24 patients who were prescribed jaw-stretching exercises, 13 patients experienced trismus over an average period of 3.98 months. An average reduction of 2.1667 mm in maximal opening was found in this sample. Female gender and type of treatment (radiation with/ without chemotherapy) had a significant impact on maximal opening following treatment ($p=0.021$ and 0.041, respectively).

Conclusions:

These findings suggest that when jaw-stretching exercises are prescribed, trismus is a relatively mild side effect of oral cancer treatment. There is a need for dentists to prescribe jaw-stretching exercises to prevent trismus. Future studies should focus on patient compliance with jaw-stretching exercises and long-term follow-up.

#30:

Oropharyngeal Cancer in Hematological Cancer Patients: Florida Experience

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Objectives:

Hematological cancers have been reportedly associated with secondary solid tumors including oral pharyngeal cancers. The purpose of this study is to determine the degree of association between these two malignancies in a hospital-based population in Florida.

Methods:

We used the i2b2 platform to obtain data from the University of Florida Integrated Data Repository for patients seen at UF Health hospitals between June 2011 - September 2018. Demographic data including age, race, smoking habits and types of hematological and oropharyngeal cancer cases were recorded.

Results:

The total of 1,110,545 patients were included in the study. Fifty-three percent men and 47% women. Fifty percent were white, 11% African – American and 39% other races. Nineteen percent were past or present smokers. Oropharyngeal cancer was diagnosed in 3839 patients (0.3%), 68.5% of them were males and 31.5 % females. 78% were white, 7% African – American and 15% other races. 61% of these subjects were current or past smokers. There were 11407 total hematological cancer patients. Among these patients, 54% were males and 46% females. 64% white, 11 % African – American and 25% other races. Over one-third (36%) were current or past smokers ($p<Value = 0.0001$, OR = 7.5881). 54.2 % had lymphoma, 35.7% had leukemia and 19.7% had multiple myeloma. Oral cancer was diagnosed in 274 (2.4%) of patients with hematological cancer. 70% were men, 82% were white, 8% African-American and 10% others. 63% of subjects were smokers (past or current). Patients with lymphoma had the highest prevalence of oropharyngeal cancer (3.2%) compared to patients with multiple myeloma and leukemia (2.4%).

Conclusions:

Oropharyngeal cancer among in all categories was more prevalent among white males with a history of smoking. Oropharyngeal cancers were more prevalent in the hematological cancer group, especially lymphoma, compared to other hospital-based patients. Although this study does not point to the direction of the association or determine causality, it may be plausible that immunosuppression associated with therapy for hematological malignancies may increase the risk for the development of oropharyngeal cancer in some patients.

#31:

Using Low Dose Doxycycline to Treat Oral Lichen Planus

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Background:

Erosive oral lichen planus (OLP) is a chronic inflammatory mucosal disease of unknown etiology that is usually treated with topical corticosteroids.

Case Summary:

An 85-year-old female with a chief compliant of "bleeding gums" presented with erosive OLP that was recalcitrant to treatment with clobetasol ointment and dexamethasone rinses but patient reported some relief with chlorhexidine mouthwashes. Treatment with systemic prednisone yielded some improvement in the OLP mucositis, however, the patient could not tolerate the side effects. A biopsy of one of the erosive lesions showed detached fragments of epithelium, an ulcer bed and a thick pseudomembrane with granulation tissue infiltrated by neutrophils and lymphocytes. The biopsy was negative for IgG IgA, IgM and fibrinogen thus confirming the clinical diagnosis of erosive OLP. Coincidentally, at a later date, the patient was diagnosed with a spinal abscess which resulted in a three-week hospitalization, several surgeries, and six-weeks of intravenous antibiotic treatment (rocephin). She was asked to continue to use chlorhexidine as the pathogen was an oral flora microbe. Interestingly, she reports that after this incident her gingiva has not bled, and on examination there was a visible reduction in the severity of the erosive OLP. A few months after this incident the erosive lesions re-appeared even though the patient was still being treated with topical corticosteroids and chlorhexidine. We suspected that the remission of the erosive OLP that occurred during the hospitalization was from systemic antibiotic treatment. Hence she was given a trial of systemic doxycycline 100 mg PO. This treatment successfully reduced the severity of here erosive lesions. After four months the doxycycline dose was reduced to 20mg qd, and the patient has not reported any flare ups since.

Conclusions:

Doxycycline has both antibiotic and anti-inflammatory effects and there are only a handful of reports on its use as a treatment for OLP. However, it is not obvious which type of effect caused the visible reduction of the erosive OLP lesions. This report highlights the need to study the efficacy of antibiotic therapy in general and doxycycline in particular in the treatment of erosive OLP and other OLP subtypes.

#32:

Ultrasound Assisted Biopsy of a Tongue Squamous Cells Carcinoma

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Background:

Intraoral ultrasound (US) is a useful tool for the pre- and intraoperative assessment of oral tongue squamous cell carcinoma (OSCC). The US has been seen to be particularly useful in resolving the interface between tongue tumors and the surrounding myo-architecture at the deep margin. Multiple reports have shown that tumor thickness on the US correlates well with thickness measures on final histopathology.

Case Summary:

A 61-year-old woman with a previous histological diagnosis of oral lichen planus, referred to Oral Pathology Division of Multidisciplinary Department of Medical-Surgical and Dental Specialties of the University of Campania “Luigi Vanvitelli”. The patient showed an ulcerated lesion in the left margin of the tongue, not bleeding, with irregular margins; the dimensions were about 2 cm x 2 cm. On palpation, it was firm in consistency. The ultrasonography analysis carried out positioning the probe according to the transversal axis of the lesion showed like a hypoechogenic area with undefined margins 2.026 cm of length and 5.056 mm of depth. The ultrasound depth of invasion (uDOI) was of 4.002 mm. Excisional biopsy was performed and the specimen was analyzed. The report confirmed the diagnosis of oral cancer in stage G2, with an extension of 2x1,7 cm and DOI 4 mm; the margins of excisions appeared unharmed.

Conclusions:

The aim of this work is to obtain an ultrasound characterization of a OSCC with a high-frequency probe (8- 18 MHz) as feasibility and experimental model of this non-invasive technique in the oral mucosa compared with its histo-pathological section.

#33:

Aggressive Gingival Swellings As Manifestations Of Relapsed Acute Myeloid Leukemia

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Background:

Approximately 5% of patients with acute myeloid leukemia (AML) present with gingival swelling due to extramedullary leukemic cell infiltration. This is known to be more common in AML subtypes morphologically classified as M4 and M5 (monocytic and myelomonocytic) according to the French-American-British (FAB) system. In contrast, the 2016 WHO classification describes AML based on a combination of morphology, immunophenotype, genetics, and clinical features. Here, we describe a case of atypical gingival lesions as the first sign of disease relapse of AML initially subtyped as M4/5, but recurring as a minimally differentiated M0 leukemia.

Case Summary:

A 37-year-old female presented to the oral medicine clinic with gingival swelling over a one-month period. The patient reported the lesion was mostly painless, however, rapidly increasing in size with tenderness to touch. She was in remission for AML, with a history of allogenic stem cell transplant and skin graft-versus-host disease. Her AML subtype was M4/5 when initially diagnosed one year ago. An unfavorable cytogenetic abnormality (translocation between chromosomes 9 and 11) had been found by later investigation. Examination revealed focal erythematous swelling in the area of the interdental papillae between the lower right anterior incisors. One week later when she returned for the biopsy, marked new growth was detected in multiple sites in both the maxilla and mandible. The biopsy revealed a diffuse infiltrate of small cells with pleomorphic, hyperchromatic nuclei, sparse cytoplasm, and numerous mitoses. The cells were strongly reactive with CD45 but negative for myeloperoxidase; only rare cells were reactive with granzyme B and muramidase. These findings revealed an atypical cellular infiltrate consistent with a poorly-differentiated myeloid leukemic infiltrate. The final diagnosis of AML relapse was confirmed by the bone marrow biopsy, which showed negative for CD34, confirming a morphologic phenotype of AML with minimal differentiation. Subsequently, the oncology team initiated infusions of Vidaza and Venetoclax for the patient.

Conclusion:

In our case, aggressive gingival lesions noted as the first sign of AML relapse showed different morphology from the initial diagnosis. Further collaborative investigation with oncology for the characteristics of extramedullary involvement of AML in the gingiva may be necessary.

#34:

Central Schwannoma of Mandible: A Report of 3 Cases

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Background:

Schwannomas are benign peripheral nerve sheath neoplasms that originate from Schwann cells. Rarely, they arise centrally within bone. Herein, we present three cases of central schwannomas in the posterior mandible. Two of the patients were female and one patient was male. The ages ranged from 17 to 46-years old. All of the patients were asymptomatic and all lesions were detected incidentally on routine radiography. We also present a review of the literature and include the clinical, radiographic, histologic, and immunohistochemical (IHC) profile of central schwannomas. These lesions have varied presentation and may mimic other entities both histomorphologically and radiographically. IHC staining for neural crest markers, such as S100 and SOX10, can help diagnose these lesions.

Case Summary:

Case 1: A 19-year-old female presented with a corticated, unilocular, radiolucent lesion extending from #19-22. The lesion scalloped between the roots of the involved teeth. Cone beam computed tomography revealed thinning of the buccal and lingual cortices. Microscopic examination of the specimen demonstrated a neoplastic proliferation of neural Schwann cells and aggregates of spindle shaped cells arranged in a palisaded manner. An IHC stain for S100 was positive.

Case 2: A 46-year-old female presented with a unilocular radiolucency distal to #32. The lesion was well-defined and corticated. Microscopic examination of the specimen revealed features very similar to those described above, with cells arranged in a streaming and storiform pattern in some areas. IHC stains for S100 and SOX10 were diffusely positive.

Case 3: A 17-year-old male presented with a radiolucent lesion apical to #30. Radiographic imaging was not provided. Microscopic examination revealed features very similar to those described in case 1, with the specimen appearing significantly cellular with varying degrees of nuclear and cellular pleomorphism. An IHC stain for S100 was strongly reactive for the tumor cells.

Conclusion:

Central schwannomas have varied histomorphology and can appear similar to other spindle cell neoplasms, including benign smooth muscle tumors and histiocytic lesions. IHC staining helps in distinguishing these lesions from their histologic mimickers. Although rare, central schwannomas should be considered for any unilocular, well-defined, corticated, and radiolucent lesion in the posterior mandible.

#35:

Efficacy Of Rikko-san Gargling Treatment For Patients With Burning Mouth Syndrome

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Objectives:

Burning mouth syndrome (BMS) is defined as an intraoral burning sensation without any obvious systemic or local cause. Although the pathophysiology of BMS is not fully understood, its associations with the neuropathic pain, nociceptive pain and psychogenic pain have been suggested. In Japan, there are difficulties in treating BMS because the typically prescribed medications are not covered by health insurance. In recent years, a traditional Chinese medicine treatment (kampo), rikko-san (TJ-110) gargling has been reported as a useful treatment for BMS. Rikko-san consists of five crude herbs (Asiasarum root (saishin), Cimicifuga rhizome (shoma), Saposhnikovia root (boufu), Glycyrrhiza (kanzou) and Japanese Gentian (ryutan)) and is indicated for toothache and gingival pain after tooth extraction with insurance coverage. The purpose of this study is to evaluate the effectiveness of rikko-san gargling in patients with BMS.

Methods:

The present retrospective study examined 221 patients who were diagnosed with glossodynia and taken rikko-san gargling treatment from 2012 to 2018. 131 patients were excluded because they received short-term treatment or due to lack of medical records. Finally, 90 patients (7 men, 83 women: mean age, 67 years) who were administered rikko-san dissolved in water for more than one month with no other medications were included. Tongue pain was assessed using a visual analog scale (VAS). Based on the changes in VAS score, patients were divided into an improvement group and a no-improvement group. Improvement was defined as a case showing at least 50% reductions in VAS score compared to the initial score. Associations between the efficacy of rikko-san gargling and medical condition (age, disease duration, the painful area, psychiatric disorders) were evaluated.

Results:

Improvement was seen in 60% of patients (54/90) within 5 months of treatment on average. There was no significant correlation between medical conditions and the efficacy of rikko-san gargling. Treatment in 41 patients was completed with rikko-san gargling alone, whereas 25 patients needed additional agents such as another kampo medicine or ethyl loflazepate. No side effect occurred in 90 patients, although stomatitis was seen in one excluded case.

Conclusions:

Rikko-san gargling is an effective and safe treatment for BMS.

#36:

The use of Botulinum Toxin type A in Painful Traumatic Trigeminal Neuropathy

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Background:

Painful Traumatic Trigeminal Neuropathy (PTTN) is an orofacial pain condition mainly managed with pharmacotherapy options that tend to have poor effects on the pain with a high profile of side effects. In turn, this has a significant impact on the patient's quality of life. Recently, the widespread use of Botulinum Toxin type-A (BTX-A) includes its use in trigeminal neuropathies. The reported analgesic mechanism of action of BTX-A is its ability to block the release of allogenic neurotransmitters such as Substance P and glutamate.

Case Summary:

A 75-year old female was seen at the Oral Medicine Clinic, University of Alberta in April 2018. Her chief complaint was a throbbing-deep ache / burning pain in the right posterior maxilla, with an intensity of 8/10 for the past 8 months. The onset of her symptoms is associated with surgical intervention consisting of a bone graft and insertion of implants in the 13-16 area, and the insertion of a flipper a month later. A series of consultations with medical and dental specialists were completed and her current medications included gabapentin and amitriptyline with a limited effect on her pain. Laughing or chewing aggravated the pain. Clinical examination and several imaging tests confirmed the absence of evident pathology that could explain her symptoms. Allodynia and hyperalgesia were present in the affected areas. A diagnostic block of the right posterior and middle superior alveolar nerves provided a significant relief (8/10 to 2/10). Our diagnosis was PTTN. BTX-A therapy was initiated in May 2018, resulting in a complete resolution of pain for periods up to 8 weeks. As a result of the temporary pain relief, she decreased the dosages of her systemic medications on her own. This led to a spike of her pain. We stressed the importance of compliance with our pharmacotherapy regime. To date, she has had four rounds of BTX-A with a gradual and consistent improvement of her symptoms.

Conclusions:

BTX–A may be a good coadjuvant in the management of PTTN making it an alternative to the use of systemic pain medications due to the lower side effect profile.

#37:

Chronic Generalized Variant of Spongiotic Gingival Hyperplasia: An Atypical Case

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Background:

Localized juvenile spongiotic gingival hyperplasia (LJSGH) is an asymptomatic inflammatory gingival lesion of unclear etiology characterized by intense focal erythema, hyperplasia and subtle surface changes. Most cases have been reported in youth with a predilection for females. LJSGH resembles pubertal gingivitis, often affects anterior maxilla and is refractory to improved oral hygiene. Natural history supports spontaneous resolution although progressive and persistent lesions have been described. Gingival involvement in the esthetic zone is a particular concern for patients and a management challenge for clinicians because no universally efficacious treatment is available. We describe an atypical case of spongiotic gingival hyperplasia which started as focal lesions seven years ago, progressed to involve all 4 quadrants and persisted to date.

Case Summary:

A 28-year-old female presented for evaluation of long-standing gingival erythema in both dental arches. She denied gingival bleeding, desquamation, or sensitivity but complained of poor esthetics. The condition had started as a focal erythema post puberty and gradually spread to involve multiple teeth. She had tested positive for amalgam sensitivity but replacement of her only dental restoration failed to resolve gingival changes. Prior therapy with chlorhexidine rinse, antifungal ointment and weak topical steroid had proven ineffective. Her PMH was non-contributory. Extraoral exam was WNL. She was dentate with excellent oral hygiene. Notable was intense gingival erythema with subtle granularity on facial aspect of teeth 4-13 in maxilla and 22-27 in mandible. There was no evidence of desquamation or bleeding. Differential diagnosis included plasma cell gingivitis, foreign body gingivitis, strawberry gingivitis, and spongiotic gingival hyperplasia. Affected tissue sampled and histopathology revealed spongiosis, leucocytic exocytosis, engorged blood vessels and diffuse mixed inflammatory infiltrate. PAS was negative. Patient's gender, clinical features of the lesion and microscopic findings were consistent with chronic and multifocal variant of spongiotic gingival hyperplasia. Complete resolution of gingival changes achieved with high potency topical steroids within three weeks significantly improving cosmetic appearance.

Conclusions:

Dental providers should be familiar with atypical variant of this clinicopathological entity and include it in differential diagnosis of chronic and generalized gingival erythema with micropapillary texture. Documenting cases with successful outcome help provide therapeutic guidance when intervention is indicated.

#38:

The Changing Face of Medication Related Osteonecrosis of the Jaw (MRONJ): The Sheba Medical Center Experience of the Past Fifteen Years

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Objectives:

Medication related osteonecrosis of the jaw (MRONJ) is affecting a dynamic population of patients, who received medication for osteoporosis and oncology treatment, the demographics are changing due to fluidity in treatment protocols. A change that the relevant health care givers need to be constantly up to date with. The aim of this study was to track the development of the epidemiological characteristics in the various patient populations diagnosed with MRONJ at the Sheba Medical Center.

Methods:

The files of patients diagnosed with MRONJ from 2003-2017 were retrieved. MRONJ was diagnosed according to AAOMS diagnostic criteria. Data on demographics, medical background, type and duration of drug use and triggering events at presentation was collected.

Results:

The study included 448 patients, 336 females (75%) and 112 males (25%). Overall 64% of patients were in the 60-79-year age bracket. Osteoporosis patients made up a total of 33% of all cases of MRONJ presenting to our clinic, the remaining 67% were oncology patients. An increased proportion of osteoporosis patients compared with oncology patients was observed over time ($p<0.01$). A decrease in the proportion of multiple myeloma patients ($p<0.01$) and an increase in proportion of patients with bone metastases of solid tumors ($p<0.01$), was observed in the past few years. There were 264 (62%) cases occurring in the mandible, 121 (29%) in the maxilla and 38 (9%) in both jaws. The prevalence of patients diagnosed with MRONJ at advanced stages (AAOMS 2 or 3) decreased with time ($p<0.01$).

Conclusions:

As a result of adjustments in drug and treatment protocols there has been a change in the demographics and presentation of MRONJ. In addition, we are witnessing an aging population, whose cumulative dosage for osteoporosis treatment is increasing with time thus presenting us with a rising number of MRONJ cases in this group. Together with the AAOMS position paper (2014) and the resulting increased awareness among oncology care givers and General Dental Practitioners we have observed patients presenting at an earlier stage of MRONJ. These observations highlight the importance of constantly updating the demographics of the disease in order to identify high risk groups.

#39:

A case of Morquio Syndrome with Dental Manifestations

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Background:

Morquio syndrome is part of a group of diseases called mucopolysaccharidosis. It is a rare genetic disease that is estimated to occur in one of every 200,000 births. A severe form becomes apparent between the ages of one and three, but a slowly progressing form may not become apparent until adolescence. Manifestations of Morquio syndrome may include growth retardation, hearing loss, characteristic facial appearance, cloudy corneas of the eyes, liver and spleen enlargement, and enamel hypoplasia.

Case Summary:

An 18-year-old female presented for comprehensive dental examination. Chief complaint was sensitivity on lower molars. Upon examination, most interproximal contacts were open with mild interproximal gingival inflammation. All her teeth were caries or restoration free. Panoramic radiograph showed thin enamel on all her teeth that was suggestive of enamel hypoplasia. Due to the sensitivity with no caries or restoration, 1.1% sodium fluoride toothpaste was prescribed for daily use. 10 months after using the fluoride toothpaste, she reported improvement of the sensitivity. Due to her generalized gingival inflammation, she received dental prophylaxis regularly over several years. Although oral hygiene has been recorded good in most of these dental appointments, currently at age 23, generalized moderate gingival inflammation and recessions of lower anterior facial gingiva were noted at the most recent appointment.

Conclusions:

Dental manifestations in Morquio syndrome may not be uncommon. However, due to the rarity of this syndrome, very few cases of Morquio syndrome with dental anomalies have been reported. Although most reported cases included enamel hypoplasia, we could not identify any case describing periodontal issues related to Morquio syndrome. In our case, the patient consistently has the gingival inflammation despite good oral hygiene, low caries rate, and frequent professional dental cleanings. Whether this is due to anatomical changes from enamel hypoplasia with open interproximal contacts or Morguio syndrome affecting soft tissue is unclear. Nonetheless, awareness of the dental manifestations is critical to identify and diagnose Morquio syndrome early and manage dental health of the affected patients.

#40:

Oral Chronic Graft-Versus-Host Disease In A Patient With Dyskeratosis Congenita.

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Background:

Dyskeratosis Congenita (DC) is an inherited bone marrow failure (BMF) syndrome characterized by dystrophic nails, skin hyperpigmentation, and oral leukoplakia. Allogeneic hematopoietic stem cell transplantation (Allo-HSCT) is the only curative treatment for DC patients with BMF. Patients with DC are at increased risk of developing malignancies, including oral squamous cell carcinoma (OSCC).

Case summary:

A 14-year-old female patient with DC presented for evaluation of widespread symptomatic oral lesions which developed shortly after receiving an allogeneic BM transplant at one year of age. Previous biopsy of a lip lesion revealed fibrovascular and granulation tissue with severe acute and chronic inflammation, ulceration and exudate. Past medical history included esophageal strictures, for which she received multiple esophageal biopsies and balloon dilatations, chronic graft vs host disease (cGVHD), ovarian dysfunction, chronic middle ear effusion, osteoporosis, obstructive lung disease, colitis, and enteropathy. Medications included conjugated estrogen, lansoprazole and topical fluorouracil, imiquimod, and mupirocin. The patient had no known drug allergies but reported an allergy to egg whites and milk. Family history included death of a sibling diagnosed with severe combined immunodeficiency. Extra-oral examination revealed generalized reticulate pigmentation of the skin and nail dystrophy consistent with the DC phenotype. Intra-oral examination revealed generalized Wickham's striae and erythema of the bilateral buccal mucosa with a linear pseudomembranous ulcer on the right buccal mucosa. In addition, generalized maxillary and mandibular erythema and edema was observed. Differential diagnosis included oral cGVHD versus DC-associated oral lesions. Multiple biopsies were performed on the buccal mucosa, maxillary and mandible gingivae under general anesthesia. Histopathologic analysis of all biopsied lesions revealed lichenoid mucositis without evidence of dysplasia. Clinical and histopathologic findings were consistent with oral cGVHD. The patient was prescribed Dexamethasone 0.5mg/5ml solution, 10ml swish and spit twice daily and Nystatin rinse 100K U, 5ml swish and spit three times daily. She was subsequently lost to follow-up.

Conclusions:

Oral lesions in patients with DC may present as a diagnostic and therapeutic challenge. Patients with oral cGVHD or DC must undergo continuous surveillance due to the increased risk of OSCC development associated with both conditions.

#41:

Burning Mouth Syndrome: is it overdiagnosed?

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Objectives:

The definition of the Burning Mouth Syndrome (BMS) is inconsistent and lacks unanimity and validation. The definition by the American Academy of Orofacial Pain defines BMS as a burning sensation in the oral mucosa despite the absence of clinical findings and abnormalities in laboratory testing or imaging. Burning oral sensation may also be a side effect of medications such as psychotropic and antihypertensive drugs, or a manifestation of systemic illnesses such as diabetes and local conditions such as hyposalivation. The inconsistency in BMS definition might cause overdiagnosis of this syndrome.

Methods:

English language literature was reviewed, using PubMed search engine, for adequately documented clinical trials in BMS patients between 2008 and 2018. A total of 44 trials were analyzed.

Results:

Only 19 (43%) trials have followed the definition by the American Academy of Orofacial Pain. Twenty-five (57%) trials have not excluded participants according to that definition, i.e diabetic patients (included in 25% of these trials), patients using psychotropic (23%) or antihypertensive drugs (11%), patients who suffer hyposalivation (9%) and patients who didn't experience burning sensation (16%).

Conclusions:

Considering these findings, we suggest the inconsistency in BMS definition causes overdiagnosis of the syndrome. Patients who suffer oral burning sensation due to a systemic illness or as a side effect of medical treatments may be treated as BMS patients, and consequently receive wrong or non-optimal treatment for their symptoms and illnesses. Current literature attributes BMS to a range between 0.7 and 7 percent of the population; the actual dimensions of the syndrome might be significantly more modest.

#42:

Hereditary Benign Intraepithelial Dyskeratosis (HBID) in a 59-Year-Old Male with Native American Ancestry

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Background:

Hereditary benign intraepithelial dyskeratosis (HBID) is an autosomal dominant disorder with onset usually at birth. It manifests in the oral mucosa and bulbar conjunctiva. HBID was first described in individuals descending from Haliwa-Saponi Native Americans. Associated oral lesions usually manifest as white, asymptomatic plaques and papules. This is a case of a patient with oral lesions initially thought of as leukoplakia associated with tobacco use, which were subsequently diagnosed as HBID lesions upon incisional biopsy.

Case Summary:

A 59-year old Caucasian male presented to the oral medicine service at the Dental College of Georgia with a painless, white tongue lesion of unknown duration. Past medical history was significant for hypertension and transient ischemic attack. Current medications included clopidogrel, pravastatin and metoprolol. He reported a 30-pack-year history of smoking and consumption of approximately 12 alcoholic drinks every week. Intraoral examination revealed white plaques on the ventro-lateral surfaces of the tongue without ulceration, induration or tenderness. A provisional diagnosis of leukoplakia was made and an incisional biopsy of the left lateral border was performed to rule out dysplasia or carcinoma. Histopathological evaluation revealed marked hyperparakeratosis, acanthosis and dyskeratosis of the stratified squamous epithelium with minimal expansion of the basal layer and frequent mitotic figures. The underlying fibrovascular connective tissue contained diffuse infiltrates of chronic inflammatory cells. Histopathologic findings were consistent with HBID. At a follow-up examination, a history of possible Native American ancestry was shared by the patient. Ocular examination revealed a conjunctival erythematous plaque of the left eye along with a white plaque.

Conclusions:

HBID is a rare finding in a dental setting with oral lesions being largely asymptomatic. Malignant transformation of oral and ocular lesions has not been documented. Further genetic testing may be warranted to confirm the diagnosis. HBID has been linked to abnormality in a duplication of chromosome 4q35. Differential diagnosis of white oral mucosal plaques in patients with Native American ancestry originating in the American Southeast may include HBID.

#43:

Gingival Mass As A First Sign Of Multiple Myeloma In Kidney Transplant Recipient: A Case Report

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Background:

Kidney transplantation brings a near three-fold increase of developing cancer with immunosuppression as the likely causal agent. History of end-stage renal disease in combination with kidney transplantation may lead to increased risk of certain cancers like multiple myeloma (MM). MM is a plasma cell neoplasm affecting the bone marrow of multiple bones, including the jaws. Frequently, MM presents as bony disease with lytic lesions causing localized pain, hematologic alterations, nephropathy, and skeletal related events like pathologic fracture. Over 30% of MM patients will have osteolytic lesions of the maxillofacial skeleton; though, oral soft tissue lesions from MM rarely occur as the primary manifestation of disease.

Case Summary:

The following case report focuses on a 75-year-old Asian male on immunosuppression with history of Type II Diabetes, ESRD, and kidney transplant, who presented with bilateral gingival swelling in the posterior mandible after undergoing dental extractions two months before. Clinical examination revealed moderately soft, non-fixed, non-fluctuant, and non-ulcerated masses on the bilateral edentulous mandible that were tender to palpation. A panoramic radiograph was essentially normal and did not reveal the classic signs of “punched-out” lytic lesions of bone. Biopsy of bilateral gingival masses revealed plasma cell neoplasm. Further work-up with a hematologic screening and PET/CT confirmed the diagnosis of MM. The patient is currently receiving a chemotherapy regimen of CyBorD, with plans for a bone marrow transplant in the future.

Conclusions:

This case demonstrates intra-oral presentation of multiple myeloma in a kidney transplant patient. There have been few documented cases of gingival masses as the initial presentation of MM without osteolytic lesions of the underlying hard tissues. Awareness of the potential oral manifestations of multiple myeloma is important for early stage diagnosis.

#44:

Osteoradionecrosis Rate in Patients Undergoing Radiotherapy for Head and Neck Cancer Treatment: a Six Months Follow-up of a Perspective Clinical Study

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Objectives:

High-dose radiotherapy (RT) for head and neck cancer has significant adverse effects on maxillofacial tissues, among which osteoradionecrosis (ORN) is the most severe and potentially life-threatening. Although tooth extractions seem to be the main risk factor, few perspective studies evaluated protocols to minimize the ORN risk due to extractions. The aim of this study is to evaluate incidence and risk factors of ORN in a cohort of patients receiving tooth extractions before RT and evaluate an algorithm about extraction decision.

Methods:

One-hundred ten patients were consecutively recruited in this study: impacted third molars with radiographic sign of pericoronitis, teeth with periapical lesions, unrestorable teeth, periodontally compromised teeth (pocket probing depth >5 mm, clinical attachment loss > 8 mm, grade 2 tooth mobility, II grade furcation involvement) were extracted under antibiotic prophylaxis. A 15-days interval between the last tooth extraction and the beginning of RT was recommended. Patients were visited at 15 days, 1, 3 and 6 months after the beginning of RT. Data of patients with a minimum of 6 months follow-up are presented in this report. ORN was defined as irradiated exposed necrotic bone, without healing for 3 months, in absence of cancer recurrence. The protocol was approved by the Ethic Committee of Catholic University - Fondazione Policlinico Gemelli (Prot. OHHN-1, ID-2132).

Results:

Out of 110 patients, 42 had a 6 months follow-up after tooth extraction, for a total of 158 teeth. Nineteen days was the mean time interval before the beginning of RT. Three sites in 3 different patients (7,14% of patients) developed ORN, all in the posterior mandible and two of them also received chemotherapy.

Conclusions:

Tooth extraction has been recognized as a risk factor for the development of ORN, especially in the posterior mandible. In the preliminary results of our study, 3 ORN happened and the major risk factor was the anatomical site. These results are consistent with the current literature, suggesting that the proposed protocol can be a valid support in the decision-making process. Since ORN can be a late onset complication of RT, a longer follow-up must be performed to draw definitive conclusions.

#45:

Oral Appliance As An Alternative Treatment Modality For Patients With Severe Obstructive Sleep Apnea And CPAP Intolerance

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Background:

Obstructive sleep apnea (OSA) is a sleep- disordered breathing that affects over 12 % of the adult American population. Common patient complaints include gasping for air and snoring while asleep, daytime sleepiness and lack of energy. OSA is characterized by repetitive partial or complete obstruction of the upper airways while asleep. It has been reported that severe untreated OSA has deleterious effects on the cardiovascular system. OSA has also been linked to impairment of mental processing and memory. The 1st treatment of choice for OSA is continuous positive air pressure (CPAP), however, compliance may be challenging. Oral appliance therapy (OAT) is an alternative to CPAP with much higher compliance and similar effectiveness. Other treatment options include lifestyle modifications and surgery.

Case Summary:

A 63 year old female was referred by her physician to the Oral Medicine Clinic, University of Alberta. Her chief complaints included gasping for air with fragmented sleep pattern even with upright/seated sleeping position. In addition, she reported lack of energy, snoring and daytime sleepiness which has been worse over the last 6 months. A level 3 sleep study was completed on August 15, 2017 which showed severe non-positional obstructive sleep apnea (AHI= 57 and RDI = 76). A trial of CPAP was attempted but she could not tolerate it. A second consultation with a pulmonologist along with a second trial of CPAP therapy were completed. However, again, she could not tolerate it and therefore, the pulmonologist agreed with OAT. OAT (SomnoMed©) was initiated in May 2018 and myofunctional exercises with lifestyle modifications were also discussed. At 1- month follow up, she reported uninterrupted sleep for 5 hours. At 5-months follow up, she reported significant decrease in daytime sleepiness “no more dozing at work”, she is more energetic, and she reported her interest in exercising and enrolling in a weight loss program. A follow up Sleep Study level 3 performed on December 3, 2018 showed moderate OSA with a significant decrease in AHI from 57 to 15.2.

Conclusions:

OAT may be an effective alternative treatment modality for patients with CPAP intolerance and severe OSA.

#46:

A Study Of How Vital Signs Are Taught And Implemented In Five New York State Dental Schools

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Objectives:

To determine educational parameters that five New York State (NYS) Dental Schools use in order to educate pre-doctoral students in vital sign (VS) assessments.

Methods:

We developed a survey consisting of 15 questions which asked how pre-doctoral dental students are taught VS assessments at five NYS dental schools (Columbia, New York University, Buffalo, Stony Brook, and Touro). The survey was addressed to one faculty member at each school who was familiar with their school's educational policies concerning vital sign assessment and implementation in school clinics. Examples of survey questions included which departments teach VS assessment, when in the curriculum are VS are taught, grading parameters for students, and how vital sign assessments are used within each of the schools' clinics. Other questions queried benefits and barriers towards VS assessments. VS included blood pressure (BP), pulse (P), respiratory rate (RR), temperature (T), pain level (PL), height (H), weight (WT) and capillary blood sugar levels (CBS).

Results:

The survey response was 100%. All five schools include BP, P, RR, T, and CBS as components of VS assessment within the first 2 years of their curriculum. VS were taught by Oral and Maxillofacial Surgery (OMS) departments at all 5 schools, and by other departments at three of the schools. All five schools graded students on their ability to assess VS. One school assessed BP, P, and CBS on diabetic patients at every patient appointment. Two schools assessed PL at every appointment. All 5 schools do assess VS in their clinics, but under patient parameters unique to each school. Four schools cite benefits to the patient which include an increase satisfaction with their dental care, and a better perception of their systemic health. Two schools cited time issues as barriers towards VS assessment. None of the respondents favored mandatory VS assessment by dentists who practice in NYS.

Conclusions:

All five NYS dental schools teach VS assessment in their pre-doctoral curricula and grade students accordingly. There are no uniform parameters that the five schools follow when implementing VS assessment in their respective clinics.

#47:

Evaluation of the Oral Diseases in a Turkish Population: A Cross-Sectional Study

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Objectives:

The aim of this population-based study was to introduce the frequency and types of oral diseases and to determine the possible risk factors according to the knowledge of localization of lesions in the mouth, age and sex distribution, biochemical tests and histopathological examinations.

Methods:

The subjects of this cross-sectional study were the 66385 patients who refer to the Dental School of a private University for the routine dental examination between 2007-2017 years. All oral diseases were diagnosed and classified by one Oral Medicine Specialist. Anatomic variations were not included. Statistical analyses were performed using SPSS software version 25. Descriptive analyses were presented using frequencies and percentages for categorical data. Prevalence and 95% confidence intervals (CI) were calculated. The one sample Chi-Square and Chi-square test, where appropriate, were used to compare the proportions of the diseases. 5% Type-I error level was used to infer a statistical significance.

Results:

A total of 1727 patients (%2.601) had oral disease. The most common lesion was Oral Lichen Planus (OLP) with the prevalence of 0.456% (95% CI 0.405-0.508) followed by 0.361% Denture Stomatitis and Candidiasis (95% CI 0.316-0.407) and 0.322% Aphthous Stomatitis (95% CI 0.279-0.365). Respectively, 0.247% Leukoplakia (95% CI 0.209-0.285), 0.195% Cheilitis (95% CI 0.162-0.229) and 0.183% Pemphigoid diseases and Pemphigus (95% CI 0.151-0.216) were observed. %0.161 Burning Mouth Syndrome (BMP) (95% CI 0.131-0.192), 0147% Herpetic Gingivostomatitis and Zona (95% CI 0.118-0.177) cases were seen. Less often, %0.054 Squamous Cell Carcinoma and Kaposi Sarcoma (95% CI 0.37-0.72), %0.048 MRONJ (95% CI 0.32-0.65), %0.042 Papilloma and Condyloma Acuminatum (95% CI 0.27-0.58) were recognized. There was a significant difference in the female/male ratio for lichen planus ($p<0.001$) and diseases associated with pemphigus ($p<0.005$). Subjects that smoking was found to have an increased risk for leukoplakia ($p<0.001$) and carcinoma ($p<0.001$). Biochemical tests and oral diseases have no significant difference.

Conclusions:

Because of the patients with a high socioeconomic condition were referred to this private university clinic, the prevalence values of oral diseases might be different from literature. Further studies will shed light on the literature.

#48:

Erythema Multiforme Minor And Other Oral Manifestations In A Patient With Fistulizing Crohn's Disease

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Background:

Crohn's disease (CD) is a chronic inflammatory disease that can affect any part of the gastrointestinal tract. Oral manifestations of CD vary widely. Oral erythema multiforme (EM) has been reported in association with CD. We describe a patient with CD who presented with oral manifestations including EM.

Case Summary:

A 23-year-old female with 14-year history of CD presented with complaints of oral ulcers of 10 days duration. She reported this as her second episode, the first occurred 3 months previously lasting 3-4 weeks. Since childhood, she had experienced recurring episodes of isolated aphthous ulcers with significantly milder symptoms. For her CD, she had been on infliximab for 8 months and was receiving a maintenance dose every 8 weeks. Both episodes of oral ulcers were unrelated to the timing of infusions and she denied extraoral lesions. Multiple practitioners had evaluated her with no definitive diagnosis. HSV 1 and 2 IgG titers were negative. Upon clinical examination, her lips were dry and crusted with commissural fissuring. Intraoral examination revealed diffuse, large irregular erythematous, coalescing ulcerative lesions involving the oral mucosa. A clinical diagnosis of EM minor in the setting of CD and infliximab was made. Her gastroenterologist who was consulted via phone informed that her CD is complicated with a rectovaginal fistula, which had been improving on infliximab. Therefore, the risk of discontinuing infliximab was high. The patient was treated with prednisone 40mg tapering dose and dexamethasone elixir with resolution within 2 weeks. 4 months later, while experiencing a Crohn's exacerbation, she presented with multiple pinpoint ulcers, 2 focal aphthous ulcers and mucogingivitis. She was successfully treated as before and a representative left buccal mucosa incisional biopsy was reported as a non-specific ulcer. The frequency of her infliximab infusion was increased to 6-week intervals and she is currently stable with no oral or perianal activity.

Conclusions:

Our patient presented with multiple oral manifestations of CD. EM as an oral manifestation of CD is rare. It is prudent to consider the role of medications in triggering EM in CD patients. Our patient's EM was suggestive of an extraintestinal manifestation of CD.

#49:

Recurrent Oral Erythema Multiforme Minor With Associated Lip Swelling

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Background:

Erythema multiforme (EM) is an ulcerative, immune-mediated mucocutaneous disorder, which can be triggered by various factors. EM has a wide spectrum of clinical manifestations and recurs in a subset of patients. Recurrent EM is most commonly triggered by herpes simplex virus (HSV). We describe the diagnostic work-up and management of a patient with recurrent oral EM.

Case Summary:

A 29-year-old female presented for evaluation of a second episode of debilitating oral ulcers and lip swelling. Her first episode occurred 3 months earlier, lasting 2-3 weeks. She denied fever, malaise, extraoral lesions or correlation with menses, diet, cosmetics, medications or oral hygiene products. Upon examination, her lips appeared edematous with mild crusting. Diffuse erythema with multiple irregular coalescing ulcers was evident on the labial and anterior buccal mucosa with pseudomembraneous covering of the ventral tongue. Treatment with prednisone 40mg tapering dose and valacyclovir 500mg daily for HSV prophylaxis was commenced based on a presumptive diagnosis of HSV-triggered oral EM minor. Microscopic examination and direct immunofluorescence studies of lesional and perilesional tissue did not support a desquamative process and was HSV 1/2 negative. Three months later, associated with increased stress, she experienced a recurrence of ulcers with concomitant profound lower lip swelling. Orofacial granulomatosis was considered as a differential diagnosis; cinnamon/benzoate free diet was recommended, she was treated as before and referred to immunology. Extensive hematologic and immunologic work-up including HSV 1/2 IgM was completed without significant findings and histopathologic re-evaluation of the biopsy specimen did not reveal granulomatous inflammation. As recurrences continued, HSV prophylaxis was discontinued and normal diet re-instated. Considering EM minor involves one mucosal site with or without skin involvement, a definitive diagnosis of recurrent oral EM minor was made. Currently, the severity has greatly diminished and the patient is effectively managed with topical corticosteroids.

Conclusions:

Oral EM must be differentiated from other inflammatory and immune-mediated disorders. Lip swelling in our patient is most consistent with edema resulting from acute inflammation. A definitive identifiable trigger for recurrent EM may not be established in all patients; however, this case demonstrates the role of stress as a precipitating factor.

#50:

Dental Management Of The First Finnish Face Transplant Patient

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Background:

Devastating facial deformities can cause significant functional and psychosocial impairment. Face transplant (FT), with 13 years of experience, may offer a prominent solution. We summarize dental management of the first Finnish FT (Feb2016).

Case summary:

34-year old male received an allotransplantation of facial tissues due to previous ballistic injury. Computer-assisted 3D-planning and imaging was used to manufacture donor and recipient patient-specific osteotomy guides and a custom-made funeral mask. The FT consisted of a LeFort II maxilla with teeth, central mandible with teeth, lower ⅔ of the midface muscles, facial and neck skin, oral mucosa, anterior tongue, floor of mouth muscles, sublingual salivary glands, facial nerve (three bilateral branches), and bilateral hypoglossal and buccal nerves. Immunosuppressive medication consists of tacrolimus, MMF and prednisolon. Other medications include antihypertensive, magnesium, allopurinol, vitamins. 6 months post-op, opportunistic infection by Candida albicans, C.krusei and C.glabrata resulted in bone exposure and three teeth needed extractions on the upper right side. Besides immunosuppression, this was probably due to limited blood flow which is also speculated to have caused apical periodontitis in the upper first premolar which needed a root canal treatment. The teeth have a hollow sound referring that pulpal chambers may be empty due to lack of vascularization in the root canals.

Hyposalivation, mainly due to polypharmacia (n=9), along with cariogenic diet have added to high caries prevalence. Additionally, there has been compromised oral selfcare due to limited function of the stomatognathic muscles and inadequate spatial perception. Gingival overgrowth has been prevalent and we assume that previous use of calcium channel blocker, limited blood flow and hyposalivation are causative factors. For comprehensive oral rehabilitation, crowns and implants have been planned. Currently, 34-months post-op, the sensation of the transplanted oral mucosa has improved and patient is very happy with the results. He is eating normal food and his speech has improved.

Conclusions:

The outcome of the first Scandinavian FT has been impressive despite the many challenges. Immunosuppressive and other medications predispose to oral manifestations. Teeth and a balanced occlusion are crucial for facial esthetics and function. Multiprofessional work continues to further improve the quality of life.

#51:

Long Term Clinical Management of Oral Erosive Lichen Planus

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Background:

Erosive lichen planus (ELP) has specific diagnostic criteria and frequently a pathognomonic clinical appearance. Clinical follow-up varies, since studies suggest malignant transformation ranges from 0.5-2.0%1. ELP is often diagnosed on classic clinical signs without biopsy, but the current literature lacks a definitive protocol for monitoring. The following case comes from a retrospective review undertaken to suggest monitoring protocols for ELP, biopsy-proven or otherwise.

Case Summary:

A 69-year-old Caucasian female was referred to Oral Medicine in May 2016 for a chief complaint of lip swelling. She reported a history of lichen planus diagnosed by biopsy in 2011, however the pathology report and slides were not retrievable. She had been managed during symptomatic periods with topical triamcinalone. The lip swelling was likely unrelated to the ELP and had subsided upon her initial visit. She also complained of ulceration of the left side of her tongue that was unresponsive to the topical steroid. Clinical exam revealed a 3x2mm ulcer in a field of 7x3mm erythema of the left lateroventral tongue. Other areas of shallow erosions were noted on the bilateral buccal mucosa. The more potent dexamethasone rinse was prescribed, and the patient was followed at 4-week intervals. Mucosal sites improved but the tongue failed to heal. In December 2016, the tongue lesion persisted with a focal point of erosion, thus a 4mm punch biopsy was taken. The histopathological diagnosis was mild dysplasia extending to one margin of the specimen. At one-month follow-up, the entire ulcer was excised, measuring 1.0cm x 3mm with a diagnosis of mild to moderate dysplasia. The patient has since been monitored on an 8-week recall basis with classic but asymptomatic ELP on the buccal mucosa and a linear scar on the tongue. Additional biopsy is considered at each visit. Including this case, 185 ELP cases have been reviewed and 32 cases have been re-biopsied at persistent sites of poor response to steroid due to suspicion of increased risk of premalignancy.

Conclusions:

Dysplasia can exist in a field of classically presenting ELP. Confirmatory biopsy is recommended in areas not responsive to conventional treatment in order to assess potential for malignant transformation.

#52:

Analysis of Clinical and Histologic Characteristics of Proliferative Verrucous Leukoplakia

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Objectives:

Proliferative verrucous leukoplakia (PVL) is a form of oral leukoplakia that is rare, with recurrence, uncertain etiology and high risk of malignant transformation. Beginning as homogenous white plaques often on the attached gingiva, they progress to become multifocal with areas of erythema. PVL lacks association with accepted risk factors (smoking, alcohol, and areca nut/betel leaf chewing). This study developed objectively scored histological characteristics with grading and intensity of early oral leukoplakia, potentially predictive of future progression into PVL. The secondary goal of this study was to develop a more objective regimen of follow-up and counseling for patients with leukoplakia lesions that possess the established predictive pre-PVL histological and clinical features.

Methods:

Following IRB approval, clinical and pathology records of 120 patients with oral leukoplakia and/or PVL were reviewed. Eight patients were selected, four of which had multiple biopsies and a final diagnosis of PVL with or without dysplasia and an initial biopsy of hyperkeratosis, hyperparakeratosis, or acanthosis. The remaining four patients had a diagnosis of hyperkeratosis or acanthosis and no mention of PVL. In three of the four PVL cases the lesion progressed to dysplasia in the latest biopsy. All slide specimens were de-identified and given a unique research number prior to examination by the board certified oral pathologist.

Results:

Prospective early manifestations of PVL were scored relative to the presence or absence and intensity/extent of each histologic characteristic: hyperkeratosis, acanthosis, stratified squamous epithelium, layers of keratinizing cells, blunt rete ridges, hyperchromatic nuclei, increased nuclear-cytoplasmic ratio and dyskeratosis. When the unique code was unmasked, all early specimens of subjects that went on to develop PVL exhibited high scores for the predetermined characteristics, while 2 of the 4 subjects with no mention of PVL also exhibited the same histological patterns, suggesting potential risk.

Conclusions:

The potential for malignant transformation of PVL warrants the use of strict objective criteria in early diagnosis. Refinement of the developed scoring system may aid in planning for the clinician to mandate frequent recall and focused pre-malignancy risk counseling for these patients.