Mucosal Lichen planus Update 23 March 2012


OLP is a relatively common immune-mediated mucosal condition with a predilection for middle-aged women. Although classified as a premalignant condition, this classification remains controversial. Using stringent diagnostic criteria, some authors have found that OLP patients are not at increased risk for oral SCC. Credible but limited genetic evidence also indicates that epithelial tissues from OLP patients diagnosed using stringent criteria differs from premalignant or malignant oral lesions but is similar to epithelium from benign oral lesions. To further investigate this genetic line of evidence, biopsy specimens diagnosed as fibroma, OLP, low-grade dysplasia, high-grade dysplasia, and SCC were retrieved from the archives of the Oral Pathology Consultants at the Ohio State University. Using laser capture microdissection, tissue of interest was captured from each case and DNA subsequently extracted. Fluorescently labeled PCR primers were used to amplify DNA at 3 tumor suppressor gene loci (3p14.2, 9p21, and 17p13) and evaluated for LOH or microsatellite instability (MSI). OLP was found to be significantly different from low-grade dysplasia, high-grade dysplasia, and SCC when LOH/MSI was found at more than 1 loci (P = .011, P = .032, P = .003), but not different from benign fibromas (P = .395). In agreement with previous studies, well-documented cases of OLP diagnosed using stringent criteria exhibit a genetic profile more similar to a benign or reactive process than a premalignant/malignant one. These findings do not support the classification of OLP as a premalignant condition. Copyright Copyright 2011 Mosby, Inc. All rights reserved.


Differential Path-length Spectroscopy (DPS) was used to non-invasively determine the optical properties of oral leukoplakias in vivo. DPS yields information on microvascular parameters such as the mucosal blood content, the microvascular blood oxygenation and the average micro-vessel diameter as well as on tissue morphological parameters such as the scattering slope and scattering amplitude. DPS measurements were made on non-dysplastic and dysplastic oral leukoplakias using a novel fiber-optic probe, and were correlated to the histological outcome of biopsies taken from the same location. Our data show borderline significant increases in mucosal blood content in dysplastic lesions compared to non-dysplastic lesions, with no changes in microvascular oxygen saturation and light scattering signatures. These results suggest that dysplastic and non-dysplastic leukoplakias may be discriminated non-invasively in vivo through differences in their microvascular properties, if they can be reproducibly quantified in the presence of a variable thickness keratin layer that optically shields the mucosal layer. 2011 Elsevier Ltd. All rights reserved.


Early detection of oral cancer is crucial in improving survival rate. Identification and detection of oral potentially malignant disorders (OPMD) allow delivery of interventions to reduce the evolution of these disorders to malignancy. A variety of new and emerging diagnostic aids and adjunctive techniques are currently available to potentially assist in the detection of OPMD. The objective of the present study was to evaluate the accuracy of autofluorescence against conventional oral examination and surgical biopsy. A total of 126 patients, 70 males and 56 females (mean age 58.5 +/- 11.9 years) who presented to the Oral Medicine Clinics at King's and Guy's Hospitals, London with oral white and red patches suspicious of OPMD were enrolled. Following a complete visual and autofluorescence examination, all underwent an incisional biopsy for histopathological assessment. Seventy patients had oral leukoplakia/erythroplakia, 32 had oral lichen planus, 9 chronic hyperplastic candididiasis and rest frictional keratosis (13) or oral submucous fibrosis (2). Of 126 lesions, 105 (83%) showed loss of fluorescence. Following biopsy 44 had oral epithelial dysplasia (29 mild, 8 moderate and 7 severe). The sensitivity (se) and specificity (sp) of autofluorescence for the detection of a dysplastic lesion was 84.1% and 15.3% respectively. While VELscope was useful in confirming the presence of oral leukoplakia and erythroplakia and other oral mucosal disorders, the device was unable to discriminate high-risk from low-risk lesions. 2011 Elsevier Ltd. All rights reserved.


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Background: Oral potentially malignant disorders (OPMD) are known to precede the development of oral cancer. Detection of OPMD allows delivery of interventions that may reduce the evolution of these disorders to malignancy. Following oral examinations, the accuracy of detection of OPMD by chemiluminescence was evaluated using a commercially available detection kit - ViziLite. Data derived were compared in relation to conventional oral examination and surgical biopsy. Methods: A total of 126 patients, 70 men and 56 women (mean age 58.5+/−11.9years) attending Oral Medicine Clinics at King's and Guy's Hospitals, London, with oral white, red, and mixed white and red patches were enrolled. Sixty-one patients were current smokers, 28 were ex-smokers, while 92 were alcohol users. In a detailed investigation, these patients underwent ViziLite examination followed by surgical biopsy. Results: Based on the clinical diagnosis, 70 patients had oral leukoplakia/erythroplakia, 32 had oral lichen planus, nine had chronic hyperplastic candidiasis, and rest had frictional keratosis (13) or oral submucous fibrosis (2). Of 126 lesions, 95 (75.4%) showed aceto-whitening. Most oral leukoplakias had enhanced visibility and sharpness of the lesion when viewed with the ViziLite system. Following biopsy, 44 had oral epithelial dysplasia (29 mild, eight moderate, and seven severe). The sensitivity (se) and specificity (sp) of chemiluminescence for the detection of a dysplastic lesion were 77.3% and 27.8%, respectively. Conclusion: While ViziLite has the ability to detect OPMD, it does not accurately delineate dysplastic lesions. The device can be used as a general oral mucosal examination system and may in particular improve the visualization of leukoplakias. 2011 John Wiley & Sons A/S.


Purpose of the study: to prove that the selection of the laser wavelength adapted to different target tissue and medical conditions may solve important clinical problems. Comportment of Er:YAG, Nd:YAG, KTP, Combined 1064 and 930 nm diode and CO2 lasers are then discussed. Background: Today a lot of different lasers may be used in current oral soft tissue surgery. The use of lasers in the treatment of such conditions results in significant benefits in comparison to conventional scalpel surgery. Dental practitioners often ask about which wavelength to choose. Two parameters may be evoked: results are operator dependant and the choice of the best adapted laser wavelength helps the practitioner and the patient to reach the desired results. Materials and methods: To guide the practitioner making his decision, different soft tissue procedures such as vestibular deepening, crown lengthening, fibroma excision, leukoplakia, lichen planus, haemangioma and epluis fissuratum were compared once treated with 532 nm, combined 930 and 1064 nm, 1064 nm, 2940 nm and 10600 nm. The efficiency of each laser and the quality of healing process was observed and registered. followed. Pain perception level was measured using a visual analog scale. Results: In terms of pain threshold, the best results were observed with Er: YAG, differences between KTP, Nd- YAG, CO2 and Diode being not significant. Vestibular deepening procedure proved to be the least tolerated regardless any wavelength. In terms of quality of healing process, Er:Yag and CO2 Laser proved to have the fastest and most stable healing process. Discussion and Conclusion: The use of the adapted wavelength for each procedure helps in obtaining optimized wound healing process with reduced oedema and swelling, reduced postoperative pain, convenient mucosa removal and reduced intensity of inflammatory reaction.


Although gene expression studies have shown that human PLUNC (palate, lung and nasal epithelium clone) proteins are predominantly expressed in the upper airways, nose and mouth, and proteomic studies have indicated they are secreted into airway and nasal lining fluids and saliva, there is currently little information concerning the localization of human PLUNC proteins. Our studies have focused on the localization of three members of this protein family, namely SPLUNC1 (short PLUNC1), SPLUNC2 and LPLUNC1 (long PLUNC1). Western blotting has indicated that PLUNC proteins are highly glycosylated, whereas immunohistochemical analysis demonstrated distinct patterns of expression. For example, SPLUNCl2 is expressed in serous cells of the major salivary glands and in minor mucosal glands, whereas SPLUNC1 is expressed in the mucous cells of these glands. LPLUNC1 is a product of a population of goblet cells in the airway epithelium and nasal passages and expressed in airway submucosal glands and minor glands of the oral and nasal cavities. SPLUNC1 is also found in the epithelium of the upper airways and nasal passages and in airway submucosal glands, but is not co-expressed with LPLUNC1. We suggest that this differential expression may be reflected in the function of individual PLUNC proteins. The Authors Journal compilation 2011 Biochemical Society.


Objective: It is well known that certain salivary constituents might be disturbed in patients suffering from oral lichen planus (OLP), however, the results of the published studies are inconsistent. The aim of this study was to assess the concentrations of salivary analytes because most of them are part of salivary enzymes which maintain integrity of the oral mucosa which is compromised in OLP patients. Materials and Methods: In 25 patients with ABM Library Services

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OLP (73+/−1.4 yrs) and in the 24 controls (24+/−3.7yrs) levels of total proteins, amylase, salivary magnesium, calcium, copper, chloride, phosphate, potassium and sodium were determined. Total proteins were determined by pyrogalol colorimetric method. Amylase levels were determined by continued colorimetric method. Salivary sodium, potassium and chloride were determined by indirect potentiometry whereas salivary copper and magnesium were determined by atomic absorption spectrophotometry whereas phosphates were determined by colorimetric method with use of molybdate. Statistical analysis was performed by use of X<sup>2</sup> test, Mann Whitney U test analysis of covariance and Spearman's correlation. Results: Significantly higher concentration of salivary chloride was detected in OLP patients in comparison to the controls (p=0.025). Furthermore, when the obtained results for salivary analytes were adjusted with respect to the salivary flow rate, increased levels of salivary potassium, sodium, chloride and total proteins were found in patients with OLP when compared to the controls (p=0.622; p=0.504; p=0.600; p=0.586). Concentrations of salivary analytes were not affected by smoking habit. Conclusions: Increased levels of salivary sodium, potassium and chloride are probably a result of significant differences in salivary flow rate between patients with OLP and controls and do not indicate increased salivary antimicrobial activity.


Background Lichen planus is an autoimmune, inflammatory dermatosis of unknown cause that affects the skin and mucous membranes. Objective The aim of this study was to report the clinical features and response to therapy in a series of patients with ocular lichen planus. Methods A retrospective chart review was performed to identify patients with ocular lichen planus. Information about clinical presentation, treatment, and therapeutic response was extracted from the medical records. Results Eleven patients with ocular lichen planus were identified. The diagnosis was confirmed histologically for 10 patients. Nine patients were women. The average time from onset of ocular symptoms to diagnosis was 4.1 years. Eight patients had mucous membrane involvement at other sites. Disease was well controlled in eight patients. Conclusion Lichen planus should be considered in the differential diagnosis of cicatrical conjunctivitis, especially when severe lichen planus is noted at other sites. 2010 European Academy of Dermatology and Venereology.


Systemic drugs play an important role in the modern practice of dermatology. The purpose of this article is to review systemic therapies in the following categories: antifungals, immunosuppressants, retinoids, and biologic immunomodulators. We provide a historical perspective, summarize current clinical indications, and discuss novel mechanisms of action for each drug. Suggestions for dosing regimens and laboratory monitoring are given. To help clinicians safely implement these therapies in their practice, we review major adverse reactions and clinically important drug interactions of these systemic medications in dermatology.


Introduction: The purpose of this study was to evaluate the efficacy of the toluidine blue (TB) test as a diagnostic tool in the detection of malignant and dysplastic lesions of the oral cavity. This study was carried out because of a lack of consensus among different authors on the utility of TB, as well as to determine useful adjuncts to detect oral pre-cancer and cancer. Materials and methods: The study included 160 patients with oral mucosal disorders that included suspicious or malignant lesions detected at clinical visual examination, confirmed by histopathological evaluation. All lesions were submitted to TB staining. Results: The sensitivity and specificity for the detection of malignant or dysplastic lesions by this test were 65.5% and 73.3%, respectively. Overall, the detection rate with TB (sensitivity) was slightly lower compared with those reported by other authors but the specificity was comparable to several reports. Positive predictive value (35.2%) was also lower than previous studies, whereas negative predictive value (90.6%) was similar. Conclusions: The simplicity of the test procedure and the validity of derived values suggest TB staining can be a valuable adjunct to the diagnostic process, as long as it is carefully correlated with the clinical characteristics of the mucosal disorder and histopathological diagnosis. 2010 John Wiley & Sons A/S.


Objective: To determine whether a series of diseases of the oral mucosa - Sjogren syndrome, ectodermal dysplasia, epidermolysis bullosa and lichen planus - reduce the survival rate of dental implants. Material and
Method: A Medline search was carried out using the key words: "Sjogren syndrome", "ectodermal dysplasia", "epidermolysis bullosa", "lichen planus" and "dental implants", including those publications involving clinical series comprising more than one patient with the mentioned disorders and treated with dental implants, in the last 10 years. Results: The study included three articles involving patients with Sjogren syndrome subjected to dental implant treatment, representing a total of 12 patients and 86 implants, with a mean pondered success rate of 86.33%. As regards ectodermal dysplasia, we included 14 articles, of which 11 corresponded to clinical series, two were reviews and one constituted a survey of dental professionals. The percentage success rate of the implants varied between 35.7-100%. In relation to epidermolysis bullosa, we included 6 articles corresponding to clinical series, with a total of 16 patients and 92 implants, and a success rate between 75-100%. In the case of oral lichen planus we found only two articles corresponding to clinical case series, with a total of 5 patients and 14 implants, and an implant survival rate of 100%. Conclusions: Based on our review of the literature, dental implant rehabilitation in patients of this kind is seen to be a valid treatment option, with a high percentage success rate. Long-term patient follow-up is essential in order to periodically monitor the condition of the disease and of the implants. Medicina Oral S. L.


Objective: The objective of the study was to assess the prevalence of oral mucosal lesions (OML) and to perform a multivariable risk assessment of demographic, socioeconomic, behavioral, and oral risk indicators for its occurrence in an urban population in South Brazil. Methods: This cross-sectional study selected 1586 subjects (719M/867F, age: 14-104 years) using a multistage probability sampling strategy (65.1% response rate). Prevalence, odds ratios (OR), and confidence intervals (95% CI) were calculated accounting for the survey design. Results: Leukoplakia and lichen planus were observed in 1.01% and 1.02% of subjects, respectively. In the multivariable analysis, these lesions were significantly associated with moderate/heavy smoking (OR=9.0, 95% CI=2.1-39.1) and heavy drinking (OR=2.0, 95% CI=1.1-3.7). Candidiasis and proliferative lesions were observed in 14.09% and 3.80% of the subjects, respectively. These lesions were significantly associated with female gender (OR=2.2, 95% CI=1.5-3.2 and OR=1.7, 95% CI=1.0-2.8), older age (OR=22, 95% CI=8.0-60.8 and OR=8.9, 95% CI=3.4-23.7), and low socioeconomic status (OR=1.9, 95% CI=1.0-3.5 and OR=3.0, 95% CI=1.2-7.2). Conclusions: This population is in need of OML prevention and treatment. Future studies should validate the findings that premalignant lesions are causally related to smoking and alcohol consumption, and that other OML are associated with socioeconomic-demographic disparities in this and similar populations.


Erosive oral lichen planus (EOLP) is a rare form of mucosal lichen planus characterized by intractable symptoms and complications that significantly impact patients' quality of life. It usually results in pain which can lead to severe problems in daily activities such as eating, drinking, speech, and interpersonal relationships. EOLP usually has a chronic course and spontaneous remissions are scarce. Although there are many treatment options for EOLP including both topical and systemic immunosuppressive agents, therapeutic results are frequently disappointing and effective treatment modality remains elusive. It is often resistant to topical steroid and the use of systemic agents is limited by side effects. Tacrolimus is a new non-steroidal topical immunomodulator agent approved for the treatment of atopic dermatitis. In recent years, it is shown to be effective in other persistent inflammatory skin and mucosal diseases as well as atopic dermatitis. Herein, we report on a 76-year-old male with recalcitrant EOLP of the lower lip who had an excellent improvement of his lesion following a four-week course of topical 0.1% tacrolimus ointment. Copyright 2011 by Turkish Klinikleri.


LEARNING OBJECTIVES: 1. Recognizing the clinical features of Pemphigus vulgaris to avoid misdiagnosis in its earliest stage. 2. Using histology for accurate diagnoses & knowing the aims of treatment and follow up to achieve complete remission. CASE INFORMATION: A 27 year old male presented to the ER with complaints of two and a half month history of painful oral lesions and macroGLOSSIA. Patient noted that the lesions were very painful and caused considerable discomfort affecting normal oral function. He had been treated with Penicillin for possible Streptococcus pharyngitis and subsequently with nystatin mouthwash for possible candidiasis with which the lesions did not resolve. No history of fever, cough, ocular, vascular, neurological symptoms. No arthralgia, or genital lesions. Personal and family histories not significant. Patient is a non smoker. On intraoral examination ulcers were noted on the cheek, soft palate, ventral surface of the tongue, posterior pharyngeal wall, tonsils which bled on peeling it off. No skin lesions were seen on extra oral examination. Autoimmune workup, HIV, fungal, viral cultures, respiratory cultures were all negative. Laryngoscopy done showed a supraglottic
ulcer. Diagnosis of pemphigus vulgaris was made after evaluating the biopsy samples. Histological findings showed squamous mucosa with suprabasal cleft formation, detached fragments of relatively unremarkable squamous epithelium, few small clusters of detached squamous epithelium with reactive nuclear changes & in addition, chronic inflammation of the lamina propria. The overall histologic findings were consistent with pemphigus vulgaris. Direct Immunofluorescence demonstrated IgG and C3 in the intercellular regions of the epithelium with negative staining along the basement membrane zone. The patient was referred to dermatology & was started on a taper dose of prednisone with the intention of starting an immunosuppressant at the end of 4 week taper. Patient is currently been followed by dermatology for treatment. IMPLICATIONS/DISCUSSION: Pemphigus vulgaris is an autoimmune blistering disease with antibodies directed against cadherin-type epithelial cell adhesion molecules, desmoglein 3 in particular. This interferes with the intercellular cement that holds epidermal cells together & results in intraepidermal blister formation. Pemphigus vulgaris has a strong genetic background with ethnic groups like Ashkenazi Jews & those of Mediterranean origin being liable. It may be associated with other autoimmune disorders such as rheumatoid arthritis, myasthenia gravis, lupus erythematosus or pernicious anaemia & drugs such as penicillamine & captopril. Any part of the oral mucosa may be affected, although sites of trauma like the buccal mucosa, gingiva & palate are affected. Oral lesions are initially vesiculobullous, but they readily rupture to form ulcers which are initially red but as infection supervenes, they develop a yellowish slough & heal slowly but rarely with scarring. Gingival lesions comprise severe desquamative gingivitis where bullae have ruptured to leave flaps of peeling tissue with red erosions or deep ulcerative craters mainly on the attached gingivae. Open denuded areas become infected. Lesions do not resolve without therapy & heal with postinflammatory hyperpigmentation resolving within 1-2 years & do not leave scarring. Diagnosis is made by biopsy of the lesions, histologically showing intraepithelial acantholysis without disruption of the basement membrane. DIF will show deposits of IgG between epidermal cells. Differential diagnosis include herpes simplex virus, aphthae, lichen planus, erythema multiforme. The aim of treatment is to induce disease remissions followed by a period of maintenance. Steroids are the primary drugs used in combination with immunosuppressive therapy. Long term follow up is the rule. Some patients require years to life long suppressive therapy with a minority of patients achieving complete remission after initial treatment.


Castleman disease (CMD) is an uncommon lymphoproliferative disorder characterised by hyperplasia of lymphoid tissue. There are three histopathologic types of CMD: hyaline-vascular type, plasma cell type and mixed type. Hyaline-vascular CMD is typically unicentric, while plasma cell CMD tends to be multicentric. In rare occasion, CMD can be associated with paraneoplastic pemphigus (PNP), an autoimmune syndrome which encompasses a multitude of mucocutaneous and systemic clinical features. In children with PNP associated with Castleman disease, they have been reported to have very poor prognosis and high mortality rate as a result of respiratory compromise despite aggressive treatment. We report a case of unicentric, CD-20 positive, hyaline-vascular retroperitoneal CMD presenting with paraneoplastic pemphigus and bronchiolitis obliterans with significant clinical improvement in oral mucositis and the prevention of tumour recurrence, using regular rituximab (375 mg/m<sup>2</sup>/dose) and 3-day course of pulse methylprednisolone therapy (10 mg/kg/day) after tumour resection.


Background: The vulva is susceptible to a variety of cutaneous and mucosal inflammatory disorders. While well-developed lesions are easy to recognize, most inflammatory vulvar biopsies are challenging due to histologic overlap among early lesions and under-recognition of rare entities. We aim to identify subtle features that help in classifying these cases. Design: BIDMC archive was searched for non-neoplastic and non-infectious vulvar biopsies. A total of 188 cases were reviewed by the authors blinded to the original diagnoses. Final diagnoses were based on consensus among the authors’ and the original pathologist’s impressions, and clinical correlation where available. Associations between histologic features and diagnoses were analyzed by chi<sup>2</sup> test. Results: Five cases were excluded due to presence of Corynebacteria (4 cases) and Herpesvirus (1 case) upon review. Twenty-two cases (12.0%) show evidence of two concurrent processes. A limited differential diagnosis is rendered in 15 cases (8.2%). Conditions encountered include: Eczema (22.4%), lichen sclerosus (LS) (38.8%), lichen simplex chronicus (LSC) (29.0%), Zoon's vulvitis (7.7%), Behcet's (2.7%), hidradenitis (2.2%), ruptured cyst (1.6%), psoriasis (1.1%), radiation dermatitis (1.1%), sebopsoriasis (1.1%), seborrhiec dermatitis (1.1%), ulcer NOS (1.1%), and lichen planus (0.5%) (Total>100% due to multiple diagnoses in some cases). Early LS and Zoon's vulvitis are commonly part of a differential diagnosis (6 cases each). LS is significantly associated with subepithelial wiry fibrosis with lymphocyte entrapment (p<0.0001). Eosinophils are seen in 44.7% of LS. LSC is associated with zones of pale epithelium (p<0.0001) and prominent stromal fibroblasts (p=0.0004). Fifty
percent of Zoon's vulvitis were originally misdiagnosed. Basal keratinocytic crowding with increased N:C ratio is a common finding (92.9%) in Zoon's vulvitis. Conclusions: Early LS may be confused with LSC, eczema, and Zoon's vulvitis; a useful feature is subepithelial wiry fibrosis with lymphocyte entrapment. The frequent finding of eosinophils in LS suggests a component of hypersensitivity. Zones of pale epithelium and prominent stromal cells help in diagnosing subtle LSC. Zoon's vulvitis tends to be underdiagnosed; while the number of plasma cells may vary, the finding of basal crowding, in combination with more typical features such as intraepithelial neutrophils and mild spongiosis, aids in its diagnosis. We also propose an algorithm to help in classifying vulvitis.


The vulva stretches between the mons pubis and the anus and is bounded by the genitocrural folds. The epithelium includes the keratinized, hair-bearing squamous area of the labia majora and mons pubis and the squamous mucosa of the vaginal introitus. The anatomy produces relative occlusion of the area and contributes to high humidity and levels of surface organisms, whilst hormonal variation also influences skin and mucosal function. Skin disorders that can affect any part of the skin can appear slightly different in the vulval area and there are a number of disorders that occur more frequently at anogenital sites than elsewhere on the body. 2011.


Background: Topical use of systemic agents to treat cutaneous disorders is widely applied. However, there is a lack of articles summarizing the relevant literature in a systematic way. Objective: We sought to review the published literature regarding topical use of systemic drugs that were categorized according to their mode of actions. Only drugs that are not yet commercially available in a topical preparation are included. Methods: A PubMed search was performed, using as key words "topical," "extemporaneous," "compounding," and names of each generic drug, to identify all clinical reports (1966-2009). Results: Although many systemic drugs are used topically, randomized controlled trials were limited to a few agents. Limitation: Many of the reports consist only of small case series or are anecdotal in nature. As the level of evidence is limited, larger prospective trials are needed before firm conclusions can be drawn. Conclusion: Extemporaneous compounding helps physicians to individualize treatment to the patient's specific needs and to create topical preparations that are not otherwise commercially available. However, comparative effectiveness studies are needed to determine whether or not topical use of systemic therapeutics is more beneficial than existing therapies. 2010 by the American Academy of Dermatology, Inc.


Oral lichen planus (OLP) is frequently associated with hepatitis C virus infection but uncommonly with other causes of liver disorder. The authors report the case of a 41-year-old male patient with a clinical and histological diagnosis of OLP who presented with a marked alteration of the transaminase values, with no signs of past or present HBV, HCV, HGV or TTV infection. The patient did not consume alcohol and no exposure to hepatotoxic substances was reported. All autoantibodies were negative. Hepatic fine needle biopsy showed macrovesicular steatosis with a slight chronic portal inflammatory infiltrate and signs of siderosis. Iron metabolism was slightly altered. Genetic tests showed a heterozygotic mutation for hereditary haemochromatosis gene (HLA-H C282Y) but not for HLA-H63D. The patient presented slight insulin resistance but had normal glycaemic values. The results are consistent with a diagnosis of non-alcoholic steatohepatitis (NASH). This is the first reported case of NASH associated with OLP. 2010 International Association of Oral and Maxillofacial Surgeons.


Background: Perforin and granzyme B (GB) are the main constituents of cytotoxic T-lymphocyte granules, and they have important roles in preventing the initiation and progression of cancer. Methods: The aim of this study was to compare the expression of CD8<sup>+</sup>/perforin<sup>+</sup> and GB<sup>+</sup> cells, by immunohistochemistry, in primary oral cavity squamous cell carcinoma (OCSCC), lip squamous cell carcinoma (LSCC), non-dysplastic leukoplakia (LK), dysplastic LK, actinic cheilitis (AC), oral lichen planus (LP) and normal oral mucosa. Results: Our results showed a higher expression of CD8<sup>+</sup>/perforin<sup>+</sup> and GB<sup>+</sup> cells in LSCC when compared with the samples of OCSCC, non-dysplastic and dysplastic LK, AC, oral LP and normal oral mucosa. In addition, increased CD8<sup>+</sup>/perforin<sup>+</sup> and GB<sup>+</sup> cell numbers were observed in all pre-malignant lesions (non-dysplastic LK, dysplastic LK, AC) when compared with the control. Conclusions:
Perforin and GB proteins may contribute to antitumoural immunity, leading to the direct killing of tumour cells; however, it seems to occur more effectively in LSCC than OCSCC. 2011 John Wiley & Sons A/S.


Lichen planus is an inflammatory mucocutaneous disorder. Skin, oral and genital mucosal surfaces, scalp, and nails can be affected. Its development is chronic, with a possible malignant degeneration. Spontaneous remission is rare. Although the etiology of oral lichen planus is still unclear, there is evidence that it is a complex immunologic disease mediated by cytotoxic cells directed against basilar keratinocytes and resulting in vacuolar degeneration and lysis of basal cells. In long-standing, atrophic and erosive forms, the treatment is usually aimed at relieving pain and may include immunosuppressive agents, especially corticosteroid, topical cyclosporin, or tacrolimus, topical and systemic retinoids. However, the use of these drugs may be accompanied by several side effects. For this reason clinicians, currently, have focused their attention to new biological agents which provide selective immunological results with less side effects than generic immunosuppressants. 2011 Informa Healthcare USA, Inc.


Background: Oral lichen planus (OLP), which is a chronic inflammatory disease of the oral mucosa with unknown etiology, affects about 2% of the population. MicroRNAs are small non-coding RNAs involved in normal processes such as development and differentiation as well as progression of human diseases. The aim of this study was to investigate the expression of miR-21, miR-125b, and miR-203 and to compare RNA levels of their potential targets, the tumor suppressor p53 and its relative p63, both known to be deregulated in OLP.

Methods: In biopsies from 20 patients with OLP and 20 age- and sex-matched healthy controls, epithelium was laser dissected and analyzed for the expression of miR-21, miR-125b, miR-203, p53, and p63 using qRT/PCR.

Results: Increased expression of miR-21 and miR-203, decreased expression of miR-125, and down-regulation of p53 and Np63 RNA were seen in OLP compared to normal oral mucosa. When comparing microRNA expression to levels of p53 and p63 RNA, a significant negative correlation was seen between Np63 and miR-203 and between miR-21 and p53, respectively. Conclusion: Results indicate a role for the studied microRNAs in changes seen in OLP. 2011 John Wiley & Sons A/S.


BACKGROUND: Immune-mediated skin diseases encompass a variety of pathologies that present in different forms in the body. OBJECTIVE: The objective of this study was to establish the prevalence of the principal immune-mediated skin diseases affecting the oral cavity. METHODS: A total of 10,292 histopathology reports stored in the archives of the Anatomical Pathology Laboratory, Department of Oral Pathology, Federal University of Rio Grande do Norte, covering the period from 1988 to 2009, were evaluated. For the cases diagnosed with some type of disease relevant to the study, clinical data such as the gender, age and ethnicity of the patient, the anatomical site of the disease and its symptomatology were collected. RESULTS: Of all the cases registered at the above-mentioned service, 82 (0.8%) corresponded to immune-mediated skin diseases with symptoms affecting the oral cavity. The diseases found in this study were: oral lichen planus, pemphigus vulgaris and benign mucous membrane pemphigoid. Oral lichen planus was the most common lesion, comprising 68.05% of the cases analyzed. Of these cases, 64.3% were women and the cheek mucosa was the anatomical site most commonly affected (46.8%). CONCLUSION: Immune-mediated skin diseases affecting the oral cavity continue to be rare, the prevalence found in this study being similar to that reported for the majority of regions worldwide. Nevertheless, early diagnosis is indispensable in the treatment of these diseases, bearing in mind that systemic involvement is possible in these patients. 2011 by Anais Brasileiros de Dermatologia.


A 78-year-old lady presented with worsening hair thinning over the crown area of the scalp, associated with mild pruritus, occurring gradually over several years. She had taken tamoxifen for breast cancer for 7 years and stopped it 1 year before the presentation. She was on simvastatin and bendroflumethiazide for 6 years. There was a family history of male pattern alopecia. Full blood count, iron studies and thyroid function tests were within the

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normal range. On examination she had alopecia in a female pattern distribution, predominantly affecting the crown, with preservation of the frontal hairline. However, on closer inspection of the affected area, there was perifollicular inflammation, scaling and scarring. There were no associated cutaneous, nail or mucous membrane features of lichen planus. Histology of a scalp biopsy showed vertical scarring in the dermis with loss of hair follicles and significant focal perifollicular fibrosis associated with a lymphocytic infiltrate. The majority of hair follicles were terminal. No miniaturization of hair follicles was evident. However an element of female pattern of hair loss could not be excluded due to the lack of a sample from the occiput. The features represented cicatricial alopecia consistent with lichen planopilaris (LPP). She was treated with topical clobetasol twice weekly. When reviewed 2 months later, she reported some hair thinning on the eyebrows. Management with clobetasol alternate days to the scalp and twice weekly to the eyebrows led to satisfactory control of the inflammation and to date alopecia has been stable for over 12 months. Fibroising alopecia in a pattern distribution, also called patterned LPP, is a distinct and rare subset of cicatricial alopecia, where inflammation and fibrosis are confined to the area of pattern hair loss. Zinkernagel and Trueb first described a series of 19 patients with this type of alopecia in 2000 (Zinkernagel MS, Trueb RM. Fibroising alopecia in a pattern distribution: patterned lichen planopilaris or androgenetic alopecia with a lichenoid tissue reaction pattern? Arch Dermatol 2000; 136: 205-11). The clinical and histological features overlap with those seen in LPP, frontal fibrosing alopecia, follicular degeneration syndrome and pseudopelade of Brocq although the pathogenetic mechanisms underlying the sequence of generation of inflammation and development of fibrosis remains to be elucidated as well as the role of genetic and environmental factors.


Aims: To investigate the prevalence of oral mucosa alterations in patients with type 2 diabetes and to identify possible risk factors related to oral mucosa alterations. Methods: 146 patients with type 2 diabetes and 111 age- and gender-matched healthy controls subjects were consecutively recruited from Araraquara School of Dentistry to answer a structured questionnaire designed to collect demographic data as well as current and former history of diabetes. Clinical examination of the oral mucosa was carried out by a stomatologist. Results: A higher prevalence of oral mucosa alterations was found in patients with diabetes than in patients without diabetes (p<0.001), with significant difference to development conditions (p<0.0001), potentially malignant disorders (p<0.0001) and fungal infections (p<0.05). In the multiple logistic regression, diabetes (odds ratio 9.9 IC 5.1-19.16) and smoking habit (odds ratio 3.17 IC 1.42-7.12) increased the odds of oral mucosa alterations significantly. Conclusions: Patients with diabetes mellitus not only showed an increased prevalence of oral mucosa alterations but also a significant percentage of potentially malignant disorders. These findings elucidate the necessity of regular clinical examination to ensure early diagnosis and prompt management of oral mucosa lesions in patients with diabetes. 2011 Elsevier Ireland Ltd.


BACKGROUND: Oral lichen planus (OLP) is a T-cell-mediated chronic autoimmune disease whose precise etiology is unknown. The recently identified costimulatory programmed death-1 (PD-1) molecule and its ligands, PD-L1 and PD-L2, have been identified as CD28-B7 family molecules and constitute a regulatory pathway of potential therapeutic use in immune-mediated diseases. METHODS: We examined the expression of two ligands of PD-1 at both the protein and gene level was statistically different in the focal mucosa and peripheral blood of OLP patients using immunohistochemistry and real-time PCR. Next, we used the PD-L2.Ig fusion protein and observed its effects on T cells, which were co-cultured with IFN-gamma-treated keratinocytes (KCs) in the presence of PHA. RESULTS: We found that the expression of PD-L2 at both the gene and protein level was statistically different in peripheral blood and local lesion tissue of patients with OLP compared to the normal controls. The proliferation ability of T cells and the expression level of IFN-gamma in the supernatant of the above co-culture model were significantly augmented (P<0.05). PD-L2.Ig fusion protein significantly aggravated the apoptosis of T cells, inhibited the proliferation of T cells and decreased the release levels of IL-2 and IFN-gamma in the model (p<0.05). CONCLUSION: These data show that the increased expression of PD-L2, as a costimulatory molecule, may have an important modulatory function on the local immune responses of OLP in vivo. Copyright 2011 John Wiley & Sons A/S.


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both the protein and gene level in the focal mucosa and peripheral blood of OLP patients using immunohistochemistry and real-time PCR. Next, we used the PD-L2.Ig fusion protein and observed its effects on T cells, which were co-cultured with IFN-γ-treated keratinocytes (KC) in the presence of PHA. Results: We found that the expression of PD-L2 at both the gene and protein level was statistically different in peripheral blood and local lesion tissue of patients with OLP compared to the normal controls. The proliferation ability of T cells and the expression level of IFN-γ in the supernatant of the above co-culture model were significantly augmented (P<0.05). PD-L2.Ig fusion protein significantly aggravated the apoptosis of T cells, inhibited the proliferation of T cells and decreased the release levels of IL-2 and IFN-γ in the model (P<0.05). Conclusion: These data show that the increased expression of PD-L2, as a costimulatory molecule, may have an important modulatory function on the local immune responses of OLP in vivo. 2011 John Wiley & Sons A/S.


Objectives: The initiating cause of Behçet's disease (BD) is unknown, but an aberrant response to infection has been suggested. In this study, single nucleotide polymorphisms in Toll-like receptors (TLRs) and associated molecules that have a sentinel function at mucosal surfaces were analysed in patients with BD. Methods: TLR expression was determined by immunohistochemistry in buccal mucosal tissue from patients with BD, in tissue from patients with lichen planus (LP) or pyogenic granuloma (PG) as disease controls, or from healthy individuals. Using SSP-PCR we analysed SNP in CD14, TLR2, TLR4 and TIRAP (TIR domain-containing adaptor protein) in patients with BD from different geographical regions. Results: TLR expression was increased in buccal lesions from patients with BD compared with healthy controls; however, a similar increase was seen in lesion tissue from patients with LP or PG, suggesting that this was a generalized inflammatory response as opposed to a BD-specific response. SNP analysis showed no association between CD14, TLR2 or TLR4 polymorphisms. However, TIRAP 180Leu was significantly associated with BD in UK, but not Middle Eastern, patients. Conclusion: TLR expression showed no difference in tissue from patients with BD compared with either disease or healthy controls. Likewise, SNPs in TLR genes were no different from healthy controls. The association with the increased function variant of TIRAP suggests that encounter with a pathogen at mucosal sites will lead to increased cytokine production and tissue damage with persistence of mucosal lesions. The Author 2011. Published by Oxford University Press on behalf of the British Society for Rheumatology. All rights reserved.


Oral lichen planus (OLP) is a relatively common chronic disease of the oral mucosa for which the aetiopathogenesis is not fully understood. It mainly affects middle aged and elderly. The finding of autoantibodies against p63, a member of the p53 family, is a strong indication of autoimmunity as a causative or contributing factor. The WHO classified OLP as a potentially malignant disorder, but still there is an ongoing debate in the literature on this subject. The TP53 gene encodes a tumour suppressor protein that is involved in induction of cell-cycle arrest or apoptosis of DNA-damaged cells. The p63 gene encodes six different proteins that are crucial for formation of the oral mucosa and skin. The coordinated stabilization of p53 and decreased expression of p63 seen in OLP cause induction of apoptosis enabling removal of DNA-damaged cells. In view of the complexity of cancerogenesis, no firm statement can at present be made about the relevance of the observed relationship between p53 and p63 and the possible malignant transformation of OLP. 2010 John Wiley & Sons A/S.


Introduction: Topical immunomodulating preparations have utility in inflammatory/immune-mediated oral mucosal disease resistant to topical steroids, in immunologically mediated systemic disease with primary oral involvement or more severe lesions primarily involving the oral mucosa. Areas covered: This paper is the second part of a systematic review of a variety of topical immunomodulators for management of immune/inflammatory oral mucosal conditions. The literature search revealed studies of azathioprine, benzydamine, GM-CSF and G-CSF, tetracyclines, retinoids, imiquimod, amlexanox, sirolimus and bacillus Calmette-Guerin polysaccharide nucleic acid. Weighted conclusions are provided for the topical use of each of the immunomodulators reviewed in the management of these oral diseases. Expert opinion: Topical immunomodulators may be useful as second line treatment in several oral diseases, particularly oral lichen planus and recurrent aphthous stomatitis. Benzydamine was found to be preventive in radiotherapy-induced mucositis; however, it is unclear if this outcome is related to its immunomodulating effects or other mechanisms of action. Topical application of tetracyclines and retinoic acid also shows potential anti-inflammatory actions. 2011 Informa UK, Ltd.
Disorders of the mouth, whether as a consequence of primary disease, systemic disease or as a consequence of treatment, may be encountered across most medical specialties. Whilst recurrent aphthous ulceration represents the most common primary oral disease, oral lesions may indicate active systemic disease at less accessible sites. Moreover, when oral disease is present, it may have a detrimental impact on quality of life. For these reasons it is important to be aware of the more common lesions affecting the oral cavity and to formulate a differential diagnosis appropriate for each lesion. In this article, we address the more common disorders seen in clinical practice. Distinction is made between primary oral disease and systemic disease with oral manifestations. Moreover, we have attempted to categorize systemic diseases affecting the oral cavity into the medical specialties where they are likely to be encountered and for ease of reference for the general reader. Finally, we include a table of commonly used therapeutic regimens for oral diseases, summarizing their mode of action and indications.


Oral lichen plan is a relatively common chronic disorder that occurs in 0.5 to 2.2 percent of the population. Controversy exists in the literature about malignant potential of OLP. Two cases of oral SCC within pre-existing OLP lesions were diagnosed in our department. One of patients was a 31 years old man and another was a 29 years old woman. Location of the lesions was border of the tongue. Both patients had OLP in oral mucosa for many years. They didn't have any known risk factors and were healthy. No viral infection was detected by PCR analysis.


Background: Oral Lichen planus (OLP) is a chronic lesion of the oral mucosa with unknown origin. Basement membrane changes are common in OLP and may be mediated by proteases such as matrix metalloproteinase (MMPs) and mast cell chymase. The aim of our study was to evaluate the level of serum MMP-3 in OLP compared to normal individuals and assess its clinical significance. Methods: Thirty four serum samples from patients diagnosed with OLP (12 males, 22 females, age: 42.2 +/- 10.8 years) and 34 serum samples from healthy control subjects (11 males, 23 females, age: 42.5 +/- 13.3 years) were collected and MMP-3 concentration was measured by ELISA. Results: The serum MMP-3 level in OLP patients was higher (21.64+/-24.31 ng/ml) compared with healthy controls (16.52+/-23.63 ng/ml), but showed no statistically significant difference. A statistically significant difference was demonstrated between the two types of OLP, being more pronounced in the erosive/atrophic form 6). Conclusion: The different clinical appearances of OLP are associated with significant differences in MMP-3 serum level. Iranian Red Crescent Medical Journal.


Background: Inflammation of the gingivae (periodontitis) has been associated with raised serum biomarkers of inflammation, sub-clinical markers of atherosclerosis, and increased risk of and/or mortality from cardiovascular disease (CVD). There remain little information regarding the association between other common oral inflammatory disease, systemic inflammation, and CVD. The objective of the study was to assess the association between common oral mucosal diseases, circulating markers of inflammation, and increased prevalence of CVD in a cross-sectional survey of a nationally representative sample of the noninstitutionalized civilians in the United States. Methods: Data for this study are from 17,223 men and women aged >=17 years who received oral examination as part of the Third National Health and Nutrition Examination Survey. The primary and secondary outcome measures were the association of oral mucosal diseases with raised serum levels of C-reactive protein/fibrinogen and increased prevalence of CVD, respectively. Adjustment for common confounding factors was performed. Results: Having oral mucosal disease was associated with systemic inflammation (serum levels of C-reactive protein >=10 mg/dL) (odds ratio 1.41, 95% CI 1.02-1.94). Individuals with oral mucosal disease were 1.36 times (95% CI 1.02-1.80) more likely to have history of myocardial infarction and 1.33 times (95% CI 1.03-1.71) more likely to report angina than unaffected individuals. All associations were independent of common confounding factors. Conclusions: This is the first study to suggest that common oral mucosal diseases are independently associated with raised markers of systemic inflammation and history of CVD. 2011 Mosby, Inc.


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Diversity of TTV1 was assessed in the head and neck region in patients with potentially malignant (oral lichen planus, oral leukoplakia) and malignant lesions (oral and laryngeal squamous cell cancers) and was compared to that found in the uterine cervix (cervical atypia and cervical cancer) by directly sequencing the NG061-063 segment of ORF1. These sequences were classified by the formerly used genogroup-genotype system as well as by the newly accepted species classification by aligning with the corresponding region of the type sequences of the 29 TTV species. All sequences obtained during the study clustered together with the TTV1 type sequence; to express diversity within TTV1, genotypes and subtypes of the former classification were used. The commonest subtypes were 2c followed by 2b, 1a and 1b. Subtypes 2b and 2c were evenly distributed among cervical samples; subtype 1a was more frequent in patients with cervical atypia or cancer. Subtypes 2c was more frequent than 2b in head and neck lesions. In conclusion, genotype and even subtype distribution may be important in association with diseases, therefore using this classification for characterization of intraspecies diversity of TTV1 is proposed.


Torque teno virus (TTV) lineages may play different roles in different diseases. Present study aims at comparing diversity of genogroup 1 TTVs in a Hungarian population at two mucosal sites, head and neck region and the uterine cervix in individuals with normal mucosa, in patients with potentially malignant (oral lichen planus, oral leukoplakia and cervical atypia) and malignant lesions (oral squamous cell, laryngeal and cervical cancers). The N22 segment commonly used for phylogeny was directly sequenced for all genogroup 1 TTV positive samples. All previously described Hungarian TTV sequences found in the GeneBank were included for comparison. Sequences were classified into genotypes and subtypes using well-defined reference sequences. The commonest subtypes were 2c followed by 2b, 1a and 1b. Subtypes 2b and 2c were evenly distributed among cervical samples; 1a was more frequent in patients with cervical atypia or cancer. Subtypes 2c was more frequent than 2b in samples from the head and neck region. Other Hungarian sequences were also dominated by subtype 2c. Genetic diversity within subtypes was relatively low (<0.04) in case of genotype 1, but much higher in subtypes 2b (0.08) and 2c (0.15). Comparing subtype distribution to available data suggested a geographically or racially determined pattern; far Eastern studies report dominance of subtypes 1a and 1b while subtype 2c seems to be common in Central European populations. In conclusion, subtype distribution may be more important than genotype distribution in association with diseases, and subtypes show variations in frequency in different geographical regions or different tissues.


Micronucleus test in buccal exfoliated cells is a minimally invasive method and it is used to assess genomic instability and cancer risk. The risk of malignization of the oral potentially malignant disorders (PMD), as leukoplakia (OL) and lichen planus (LP) is discussed. The aim of this study was to evaluate the frequency of micronucleus (MN) in patients with OL (n=10), LP (n=16) and oral carcinomas (n=15). Exfoliated cells samples were collected from three oral mucosa sites: lesion site, around the lesion site, and opposite side to the lesion site. For control, a pool of oral mucosa cells was collected from healthy subjects (n=27). To check the frequency of MN, exfoliated oral mucosa cells were stained with Feulgen/fast green and analyzed in light microscopy under 400 x magnification. Statistical analysis was done using the Poisson distribution. Higher frequencies of MN were observed at the lesion site from patients with OL, LP and oral carcinomas than in healthy controls. In LP patients, the lesion site presented higher frequency of MN than the around and opposite side to the lesion site. Higher frequencies of MN were detected in opposite side to the lesion in OL patients than in controls. In conclusion, patients with OL, LP and oral carcinomas have increased frequency of micronucleus and, in some cases not restricted to the area of lesion.


Objectives: To highlight the most characteristic histopathological findings of oral lichen planus and their correlation with the clinical manifestations and forms. Study design: We performed a retrospective study of 50 biopsied and diagnosed cases of oral lichen planus obtained over a period of 11 years, spanning from May 1998 to April 2009. We analyzed the age and sex of the patient, type of lichen planus, location and different histopathological findings, comparing them with the clinical lesions. Results: Seventy eight percent of the patients are female and 22% are male, with an average age of 56.06 years for both sexes. The most frequent clinical form is reticular, present in 78% of the cases, and the most common location is the buccal mucosa, present in 70% of the patients. Hydropic degeneration of the basal layer and lymphocytic infiltration in the subepithelial layer are observed in the entire sample. Signs of atypia were identified in 4% of the cases, but

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without dysplastic features. Other common histological findings were the presence of necrotic keratinocytes (92%), hyperplasia (54%), hyperkeratosis (66%), acanthosis (48%), and less frequently, serrated ridges (30%) and the presence plasma cells (26%) Conclusions: Oral lichen planus is a disease that is more common in women, usually appearing in the fifth and sixth decades of life. The most common clinical form is reticular, manifesting mainly in the buccal mucosa. Histological findings characteristic of oral lichen planus include hydropic degeneration of the basal layer, lymphocytic infiltration in the subepithelial layer and the absence of epithelial dysplasia; however, it is also frequent to observe hyperplasia phenomena at the epithelial level, hyperkeratosis, acanthosis and the presence of necrotic keratinocytes. Medicina Oral.

Figueiras, A., A. Vieira, et al. (2011). "Mucoadhesive buccal systems as a novel strategy for anti-inflammatory drugs administration." Anti-Inflammatory and Anti-Allergy Agents in Medicinal Chemistry 10(3): 190-202. This is a review article that intends to emphasize the advantages of buccal delivery as an alternative route of administration of anti-inflammatory drugs. The oral cavity has a number of features that make it desirable for drug administration: a rich blood supply that drains directly into the jugular vein, thus bypassing the liver and sparing the drug from first pass metabolism. To understand this point of view, some considerations are done relatively to the oral mucosal structural characteristics with relevance to drug administration, oral mucosal permeability, as well as drug absorption mechanisms through oral cavity. However, to design a buccal delivery system, it is necessary to take in account the residence time of drug formulation in the buccal mucosa. Mucoadhesion mechanism can be a solution to overcome this limitation. For this reason the main buccoadhesive pharmaceutical forms are approached, as well as the importance of oral mucosal in buccal anti-inflammatory drug delivery systems in terms of future perspectives. 2011 Bentham Science Publishers Ltd.

Fistarol, S. K. and P. H. Itin (2011). Anti-inflammatory treatment. Topical Applications and the Mucosa. Allschwilerstrasse 10, P.O. Box, Basel CH-4009, Switzerland, S. Karger AG: 58-70. Inflammatory mucosal disorders are treated conventionally with potent or superpotent topical corticosteroids. For more than 20 years, topical cyclosporine has been used in the management of oral mucosal membrane affections. Recently other topically applied calcineurin inhibitors, namely tacrolimus and pimecrolimus, expanded the armamentarium for the treatment of inflammatory mucosal diseases. This chapter places its main emphasis on the efficacy and safety of topical calcineurin inhibitors in the management of different oral and genital conditions, including anogenital lichen sclerosus (LS), oral and genital lichen planus, plasma cell balanitis and vulvitis, mucous membrane pemphigoid and pemphigus vulgaris, all conditions having usually a protracted course, requiring long-lasting treatment. There is current evidence for the effectiveness of both pimecrolimus and tacrolimus in the topical treatment of inflammatory oral mucosal diseases and genital dermatoses, especially oral lichen planus and genital LS. 2011 S. Karger AG, Basel.

Fonseca-Silva, T., M. V. M. De Oliveira, et al. (2012). "DNMT3B (C46359T) polymorphisms and immunoexpression of DNMT3b and DNMT1 proteins in oral lichen planus." Pathobiology 79(1): 18-23. Objective: To investigate the DNMT3B (C46359T) polymorphism and immunoexpression of DNMT3b and DNMT1 in oral lichen planus (OLP) compared to a control group. Methods: We aimed to investigate the DNMT3B (C46359T) polymorphism and immunoexpression of DNMT3b and DNMT1 in OLP (n = 32), comparing it with oral mucosa (control; n = 24). The DNMT3B (C46359T) polymorphism was analyzed using the RFLP-PCR and DNMT1, and DNMT3a proteins were identified using immunohistochemistry. We also compared the DNMT3B expression in OLP and oral inflammatory fibrous hyperplasia (OIFH), another oral inflammatory disease. Differences between the groups were determined by specific statistical analyses. Results: The CT genotype of DNMT3B was associated with OLP development (p = 0.012). Increased expression of DNMT3B and DNMT1 was observed in OLP compared to the control group (p = 0.014 and p = 0.001, respectively). A significant increase in DNMT3B protein levels was observed in the genotype CT in DNMT3B (C46359T) polymorphisms (p = 0.045). No DNMT3B expression differences between OLP and OIFH were observed. Conclusions: Our data show that the DNMT3B (C46359T) polymorphism is associated with OLP development. Furthermore, increased expression of the enzyme DNMT3B, an epigenetic-associated protein, is present in OLP. 2012 S. Karger AG, Basel.

Gencoglan, G., S. Nanir, et al. (2011). "Imiquimod 5% cream for isolated lichen planus of the lip." Journal of Dermatological Treatment 22(1): 55-59. Lichen planus (LP) of the lips is a rare condition that is generally associated with other parts of the oral mucosa. Lip localization has an increased risk, since external trauma, smoking and ultraviolet light trigger malignant transformation. Only a few cases of isolated LP of the lips have been reported up to now, but results of larger series on oral LP suggest that it might be underestimated. Treatment of oral LP is usually difficult and lesions are generally resistant or recur, so that novel therapy alternatives are necessary. Here we report four cases of isolated LP of the lip successfully treated with imiquimod 5% cream. It was applied twice daily, 5 days a week, for 2
weeks. Two weeks after therapy, complete clinical and histopathological resolution was observed. No recurrence was observed during the 5, 10 and 18 months' follow-up period in cases 4, 3 and 1, respectively. Clinical and histopathological cure was also observed in case 2, but the patient showed clinical activation after 6 months. We suggest that imiquimod 5% cream is a safe and effective therapeutic treatment for oral LP. 2011 Informa Healthcare USA on behalf of Informa UK Ltd.


Background: Epidemiologic researches about oral mucosal lesions have been performed in different populations. But, in dermatology outpatients, oral mucosal lesions have not been investigated previously. Objective: We aimed to determine the prevalence of oral mucosal lesions among dermatology outpatients and the relationship between OML and smoking, alcohol intake, denture and dental filling use and skin diseases. Methods: Randomly selected 1041 dermatology outpatients were examined for dermatological diseases and oral mucosal lesions. All of the patients were questioned about smoking, alcohol intake, denture and dental filling use. Results: In 235 patients, oral mucosal lesions were recorded. 268 (25.7%) of the patients had history of smoking, 42 (4%) drinking alcohol and 180 (17.3%) denture and dental filling. 32 (64%) of the smokers, 54 (30%) of denture users and 10 (23.8%) alcohol consumers had at least one OML. Age and smoking were found as significant risk factors for oral mucosal lesions. Fissured tongue was the most common oral lesion and it was seen significantly higher in patients with denture. Smoking was risk factor for coated tongue and linea alba. Conclusions: Oral mucosa should be examined carefully even if the patients do not attend with the complaint of oral lesions, especially in elderly patients, smokers and denture users.


Aims: To study the clinicohistopathological correlation of mucosal involvement in various dermatological disorders. Background: The mucosa of the oral cavity is very important from the dermatologist's point of view as it originates from the ectoderm. The structure and the lining of the oral cavity has importance in the diagnosis of oral as well as systemic diseases, as it is the site of various isolated mucosal lesions as well as mucosal lesions of systemic diseases. The physical examination is completed by doing a histo-pathological examination in order to establish a final diagnosis. Materials and Methods: 110 patients who had oral lesions, who were diagnosed clinically were included in the study. A 4-5 mm punch biopsy specimen of the oral lesion was taken under local anaesthesia and sent for histo-pathology. Results: Of the 110 cases, Lichen planus and Pemphigus vulgaris formed a majority of the cases and the lips and the buccal mucosa were the most common sites which were reported. Conclusion: From the ongoing discussion and observations, it can be concluded that for any disease which presents with oral manifestations or for diseases in which oral manifestations precede the systemic onset, especially of longer duration, the histo-pathology of the oral lesions should always be performed as it is an essential diagnostic tool.


Background: Tobacco and alcohol consumption are identified as one of the main risk factors for developing oral cancer. The oral mucosa is known to be directly affected by these factors leading to changes on the cellular and sub-cellular levels. Identification of early structural changes in the oral mucosa can help in predicting premalignant and malignant changes. Objectives: We used optical biopsy (optical coherence tomography-OCT) in evaluating oral epithelial changes and thickness for high risk patients. Methods: Participants of different risk groups (n = 120) were included in this study. Fifteen had a history of smoking and seventeen of alcohol abuse. Twelve had history of smoking and drinking. Other groups included submucous fibrosis, lichen planus and oral leukoplakia. These were compared to a control group of 30 individuals. All these patients were subjected to optical coherence tomography. Result: By analyzing the thickness of the oral epithelium, the thickness was similar among smokers, alcohol drinkers and the patients who combined both habits. However, the thickness of these groups was significantly higher compared to the control group. The epithelial thickness was significantly thinner in patients with submucous fibrosis compared to controls. Oral lichen planus and oral leukoplakia epithelial thickness was significantly higher when compared to the normal group. Conclusion: By using OCT, epithelial thickness was measured. Tissue changes in risk group patients were identified. This modality holds a great promise in predicting pathological tissue changes by identifying structural and morphological changes.


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OBJECTIVES: To report a rare mucosal plasmacytosis of the larynx and discuss treatment options. Study Design: Case report and review of literature. Methods: We report the case of a 49 year old male who presented with new onset dysphonia and dypsnea. Flexible fiberoptic laryngoscopy revealed supraglottic and glottic laryngeal edema with a verrucous appearance. Biopsy of the lesion showed hyperplastic mucosa with severe chronic inflammation composed mainly of plasma cells. Results: Studies to evaluate for plasma cell dyscrasia including protein electrophoresis and free light chains were all normal. A diagnosis of idiopathic mucous membrane plasmacytosis was made. Treatment with systemic steroids and intralesional steroid injection provided temporary improvement in symptoms but no resolution of the lesion. Conclusions: Mucous membrane plasmacytosis is a rare, benign, plasma cell proliferative disorder with an unknown etiology. It is a diagnosis of exclusion as there are similar conditions such as extramedullary plasmacytoma which can affect the upper aerodigestive tract. The condition is generally of long standing duration and management is typically targeted at symptomatic relief.


Background: Graft-versus-host (GVH) disease is a common problem in transplant patients, whereas vulvovaginal gingival syndrome is an uncommon and severe variant of lichen planus characterized by erosions of characteristic mucosal surfaces, with frequent vaginal involvement, resulting in scarring or stricture formation. Both conditions have the potential to present with similar clinical pictures. Case: We report the history, evaluation, and treatment of a woman who had recently undergone stem cell transplant for acute lymphoblastic leukemia who presented with vaginal agglutination. A clinical diagnosis of erosive lichen planus versus chronic GVH disease was considered. Conclusions: Lichen planus and GVH disease are both inflammatory processes, which can present with a range of clinical conditions. Each may result in the development of irritative symptoms and erosive lesions on mucosal surfaces. Although lichen planus is a well-defined dermatosis, GVH disease is an iatrogenic process. We report the case history of a patient with erosive vulvovaginal lesions with scarring, likely caused by GVH disease, which mimicked erosive vulvovaginal lichen planus. Although the clinical presentation and treatment of these 2 entities are similar, this case demonstrates the subtle diagnostic difference between the 2 diseases. 2010, American Society for Colposcopy and Cervical Pathology.


Objectives: Oral lichen planus (OLP) is a well recognized chronic mucocutaneous disorder which can manifest in the oral mucosa, whose exact pathogenic mechanisms have not been understood. Estimation of serum cortisol in patients with OLP may be helpful in understanding the pathogenesis. Therefore a study was undertaken to analyze the serum cortisol levels in OLP patients. An attempt was also made to evaluate the stress levels in these patients. Design and key methods: A case control study was conducted on 15 cases each of non-erosive oral lichen planus (NEOLP) and erosive oral lichen planus (EOLP) and 10 controls. The serum cortisol levels of all 40 patients were estimated by using electrochemoluminiscence. HADS questionnaire was administered to evaluate the psychiatric status of all the patients. Results: The mean serum cortisol level of the OLP group showed a highly significant difference (p = 0.001) from the controls. The mean anxiety and depression scores of the OLP group showed highly significant difference (p = 0.001) from the controls. The difference in mean cortisol level between NEOLP group and control was not significant (p = 0.06), whereas the difference was very highly significant between the EOLP group and controls (p = 0.001). The difference between the anxiety score between the NEOLP group and EOLP group, but the depression scores between the two groups were not very significant (p = 0.085). Conclusion: These findings suggest that psychiatric factors play a vital role in the pathogenesis of OLP and serum cortisol could be a possible indicator for the erosive nature of the lesion.


Basal cell carcinoma (BCC), the most common human cancer, is seldom seen in the genital area. We present a case of an extensive pigmented BCC that developed on the mucosal surface of the vulva of an elderly woman and briefly review the relevant literature on vulvar BCC. 2011 Dermatology Online Journal.


Introduction: Cigarette smoking is related to many pathological conditions; however, chemical substances affect the oral cavity first, so it is important to consider its influence on oral mucosa and oral potentially pre-malignant lesions. The aim of this study was to investigate the effect of smoking on microvessel density in oral lichen planus. Special emphasis was placed on examining the relationship between the expression of c-Met receptor in blood vessels and smoking habits. Material and methods: This study included 34 patients with oral lichen planus.

Autoimmune bullous skin diseases are characterized by autoantibodies against adhesion molecules of the skin. Pemphigus is a disorder with an intraepidermal loss of adhesion and is characterized by fragile blisters and erosions. Pemphigus vulgaris often shows extensive lesions of the oral mucosa, while pemphigus foliaceus is commonly restricted to cutaneous involvement with puff pastry-like scale formation. Paraneoplastic pemphigus is obligatorily associated with malignancies and often presents as hemorrhagic stomatitis with multiforme-like exanthems. IgA pemphigus typically presents with pustules and annular plaques but not with mucosal involvement. The clinical spectrum of the pemphigoids includes tense blisters, urticarial plaques, and prurigo-like eczematous lesions. Pemphigoid gestations mostly occurs during the last trimester of pregnancy and mucous membrane pemphigoid primarily involves the oral mucosa and conjunctivae and leads to scarring. Linear IgA bullous dermatosis manifests with tense blisters in a "cluster of jewels"-like pattern in childhood and is more heterogeneous in adulthood. Classical epidermolysis bullosa acquisita shows extensive skin fragility. Dermatitis herpetiformis is associated with gluten-sensitive enteropathy and manifests clinically with severe itching and papulovesicles on the extensor surfaces of the extremities and the lumbosacral area. The intention of the review is to demonstrate the heterogeneous clinical spectrum of autoimmune bullous disorders. Blackwell Verlag GmbH, Berlin.


Saliva is a biological fluid that is easily obtainable and that can give useful information both in systemic and oral diseases. In this study, a chromatographic method was applied to determine the amount of defensin HNP-1 in human saliva of patients with oral mucosal diseases before and after treatments and compared with controls. Defensin human neutrophil peptide-1 (HNP-1) was identified and confirmed. The concentration of HNP-1 in saliva was determined by comparing the area of eluted HNP-1 with that of HNP-1 standard. Linear calibration range of defensin HNP-1 was 0.10 to 0.90 mg/10μL with R² values of 0.996. The concentrations of HNP-1 in the saliva of patients with oral lichen planus, Behcet's disease, and recurrent aphthous stomatitis were 33.6+/−10.6, 15.5+/−7.6, and 36.3+/−9.5 mgμM/L, respectively. The salivary defensin-1 concentration was significantly higher in patients with oral mucosal diseases than in healthy volunteers; furthermore, in patients with oral mucosal diseases, the concentration was significantly higher before treatment than after treatment. Copyright Taylor & Francis Group, LLC.


In the first part of the review, topical agents and first-line systemic treatment options for cutaneous lupus erythematosus were discussed whereas in the second part, recent information on efficacy, dosage, and side effects for further systemic treatment options are described in detail. In contrast to other immunosuppressive agents, such as azathioprine, cyclophosphamide, and cyclosporine, methotrexate has recently received more attention in the treatment of the disease. Further second-line treatment includes retinoids, dapsone, and mycophenolate mofetil. Because of severe side effects or high costs, other agents, such as thalidomide or high-dose intravenous immunoglobulins, are reserved for severe recalcitrant CLE. Biologics, i.e., rituximab, have been used to treat systemic lupus erythematosus; however, in CLE, most biologics have only been applied in single cases. In addition to successful treatment, induction of CLE subtypes by biologics has been reported. In conclusion, many treatment options exist for CLE, but not many are supported by evidence from randomized controlled trials. 2010 by the American Academy of Dermatology, Inc.


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Objective: This study aimed to investigate the roles of the epidermal growth factor receptor (EGFR) family in oral leukoplakia (LP). Patients and methods: The expression of four EGFR-like receptors were measured in LP tissue from 14 patients and compared with levels in oral lichen planus (OLP) from 10 patients and normal oral mucosa (NOM) from 10 healthy donors. Results: Synchronous mRNA coexpressions of EGFR, ErbB2, ErbB3, and ErbB4 were detected in LP lesions. Out of the receptors, only ErbB4 mRNA and protein was more highly expressed in LP compared with NOM and OLP tissues. These were strongly expressed by epithelial keratinocytes in LP lesions, as shown by immunohistochemistry. Conclusions: The synchronous modulation of EGFR family genes and enhanced ErbB4 expression on the keratinocytes could contribute to the pathogenesis of LP.


Human papilloma virus (HPV) is one of the most common virus groups affecting the skin and mucosal areas of the body in the world today. It is also a known fact that HPV causes many lesions in the oral cavity. The most common conditions induced by oral HPV infection are usually benign-like oral papillomas, oral condylomas, and focal epithelial hyperplasia. Oral HPV infection has been found to be associated with some cases of oropharyngeal cancer, but it is not the main risk factor for this kind of cancer. HPV is been proved to be the causative agent in causation of cervical cancers without doubt, but its role as aetiologic agent in causing oral cancers needs to be evaluated and studied more to come into any conclusion. We have used review papers, case reports, cohort studies, case control studies, and various internet sources published from 1960 to 2011 to prepare this review of literature.


Annular lichen planus is one of the rare clinical forms of lichen planus which manifests in a variety of morphologic patterns. Annular lichen planus has the predilection for localized intertriginous areas, such as penis, scrotum, axillae, and groin folds. Rarely, generalized annular lichen planus is described and characterized by generalized flexural eruptions with no involvement of oral mucosa. A 43-year-old man presented with mildly pruritic erythematous to brownish annular macules, confluent patches with peripheral elevated rim for 5 months. His medical and family histories were noncontributory. The annular lesions involved abdomen, back, upper and lower extremities, predominantly distributed on flexural areas, such as both axillae, inguinal areas and popliteal fossae. There was no involvement of the oral mucosa or nails. Laboratory tests, including complete blood cell counts, urine analysis, liver and renal function tests, and antinuclear antibody were within normal limits. Viral hepatitis markers were negative. Histopathologic features of the lesion from lower abdomen revealed hyperkeratosis, wedge-shaped hypergranulosis, apoptotic cells in the epidermis, and subepidermal cleft with lichenoid infiltration in the upper dermis, which were compatible with lichen planus. The patient was treated with methylprednisolone, hydrochloroquine, and dapsone for 3 weeks and all erythematous lesions disappeared with remaining marked hyperpigmentation. We present herein a rare case of generalized annular lichen planus which that extensive involvement of flexural areas.


Oral lichen planus (OLP) is a chronic inflammatory disorder of oral mucosa, which represents cell-mediated autoimmune diseases. Pathological study demonstrated that abundant T lymphocytes infiltrated the oral mucosa, in which the activated T cells that trigger apoptosis of oral epithelial cells is an important mechanism for OLP. However, to date the molecular mechanisms underlying the T lymphocytes infiltration and accumulation in OLP remain unclear. In this paper, we found that the levels of plasma OPN were elevated and were associated with the up-regulated expressions of CD44 in OLP patients. In vitro, the addition of exogenous OPN can suppress the apoptosis of activated CD8<sup>+</sup> T cells via CD44, and this T cell resistance to apoptosis may be attributed to the reduction of endogenous mature granzyme B. Our results suggested that the abnormally elevated levels of OPN may contribute to the abnormal infiltration and accumulation of the activated T cells by up-regulating CD44 in OLP. 2010 Elsevier Inc.


Oral lichen planus is a chronic inflammatory disorder of the oral mucosa that represents T cell-mediated autoimmune diseases. The regulation and roles of carcinoembryonic antigen-related cellular adhesion molecule 1 (CEACAM1), a novel immune molecule, in the immunopathogenesis of T cell-mediated autoimmune diseases remain unclear. In the current paper, CEACAM1 was found to be overexpressed in peripheral T cells and epithelial cells in oral lichen planus patients. A fraction of infiltrating inflammatory mononuclear cells in the
lamina propria of the oral lichen planus mucosa also expressed CEACAM1. Importantly, for the first time, CEACAM1 expression in T cells and in normal human keratinocytes was demonstrated to be regulated differently by osteopontin in vitro. Furthermore, the apoptosis of oral keratinocytes and activated T cells can be markedly suppressed by CEACAM1-specific monoclonal antibodies. In conclusion, OPN-regulated CEACAM1 expression may play a critical role in the immunopathogenesis of oral lichen planus. Springer Science+Business Media, LLC 2011.


Malignant transformation of oral epithelial dysplasia: clinicopathological risk factors and outcome analysis in a retrospective cohort of 138 cases Aims: To explore the usefulness of a new binary system of grading dysplasia proposed by the World Health Organization and to identify significant risk factors for malignant transformation in a long-term follow-up cohort of patients with oral epithelial dysplasia. Methods and results: A total of 138 patients with histologically confirmed oral dysplasia between 1978 and 2008 were reviewed retrospectively in our department. The mean follow-up period was 5.1years. Of these dysplasias, 37 (26.8%) developed into cancer, with a mean duration of 4.6years. Cox regression analysis revealed that high-grade dysplasia was an independent risk factor for transition, but age, gender, lesion site, diet habit, smoking and alcohol intake were not risk factors. High-grade dysplasia was associated with a 2.78-fold (95% confidence interval 1.44-5.38; P=0.002) increased risk of transition, as compared with low-grade dysplasia. Consistently, high-grade dysplasia had a significantly higher incidence of malignancy than low-grade dysplasia by Kaplan-Meier analysis (log-rank test, P=0.001). Conclusions: The utilization of high-grade dysplasia as a significant indicator for evaluating malignant transformation risk in patients with potentially malignant lesions is suggested; this may be helpful to guide treatment selection in clinical practice. 2011 Blackwell Publishing Limited.


Candida species were detected and identified in samples from the buccal mucosa, dorsal surface of the tongue and supragingival plaque of subjects with oral lichen planus (OLP). The Candida in the samples were cultured on selection agars, and identified by sequence analyses of 18S, 5.8S and 25/28S rRNA. The isolation frequency of Candida was higher in subjects with OLP than in those with healthy oral mucosa. Non-C. albicans were only isolated from people with OLP. These results support the notion that subjects with OLP are more likely to have oral colonization with Candida, and that non-C. albicans are specifically present in subjects with this condition. 2010 The Societies and Blackwell Publishing Asia Pty Ltd.


Oral postinflammatory pigmentation (OPP) is a discoloration of the oral mucosa caused by an excess of melanin production and deposition within the basal layer of the epithelium and connective tissue of areas affected by chronic inflammation. Therefore, it is mandatory to demonstrate the association with a previous or concomitant inflammatory process in the same area of oral mucosa. Clinically OPP appears as a localized or diffuse, black to brown pigmentation. OPP may persist for many years even though the disappearing of the pigment after the resolution of the inflammatory state has been reported. We reviewed retrospectively the medical records and, when performed, biopsy examinations of 7 cases of OPP. Four cases were associated with oral lichen planus, two cases with lichenoid lesions and one case with proliferative verrucous leukoplaikia. Despite a possible high prevalence of OPP, only a few reports concerning diagnosis, etiopathogenesis and clinical manifestation have been published so far. Medicina Oral S. L.


Macrophages are present in healthy oral mucosa and their numbers increase dramatically during disease. They can exhibit a diverse range of phenotypes characterised as a functional spectrum from pro-inflammatory to anti-inflammatory (regulatory) subsets. This review illustrates the role of these subsets in the oral inflammatory disease lichen planus, and the immunosuppressive disease oral squamous cell carcinoma (SCC). We conclude that the role of macrophages in driving progression in oral disease identifies them as potential therapeutic targets for a range of oral pathologies. 2011 The British Association of Oral and Maxillofacial Surgeons.


Dermatoscopy, also known as dermoscopy, epiluminescence microscopy, or surface microscopy, is a noninvasive technique allowing rapid and magnified (x10) in vivo observation of the skin with the visualization of
Lichenoid changes in the oral mucosa can be encountered in a wide range of lesions and can have varied morphologic features often imperceptible to the naked eye. Videodermatoscopy (VD) represents the evolution of dermatoscopy and is performed with a video camera equipped with lenses providing higher magnification (x10 to x1000). Over the past few years, both dermatoscopy and VD have been demonstrated to be useful in a wide variety of cutaneous disorders, including ectoparasitic infestations, cutaneous/mucosal infections, hair and nail abnormalities, psoriasis, and other dermatologic as well as cosmetologic conditions. Depending on the skin disorder, both dermatoscopy and VD may be useful for differential diagnosis, prognostic evaluation, and monitoring response to treatment. Nowadays, it represents an important and relatively simple aid in daily clinical practice. 2010 by the American Academy of Dermatology, Inc.


The expression of p16(INK4A) has been investigated in oral leukoplakias (OLK), but no data are available about oral lichen planus (OLP). In this study, p16(INK4A) immunohistochemical expression was evaluated in 56 OLP and 36 OLK (12 without inflammation [NI-OLK] and 24 with chronic inflammation [I-OLK]) and compared with 23 reactive nonspecific inflammations (INF) and 14 normal control samples. The p16(INK4A) immunostaining was considered to be positive when >5% of keratinocytes were stained. All normal control samples were negative. Positive p16(INK4A) was detected in OLP, IOLK, and INF. Significant differences in p16(INK4A) positivity were found between OLP (64%) and OLK (28%) (chi(2) = 17.7; P < .01), and between I-OLK and NI-OLK (chi(2) = 4.5; P < .05). No significant difference was found between OLP and INF (43%). In conclusion, positive p16(INK4A) in OLP patients seems to be related to reactive inflammatory processes rather than to a risk of progression to oral squamous cell carcinoma. Copyright Copyright 2011 Mosby, Inc. All rights reserved.


Lichenoid changes in the oral mucosa can be encountered in a wide range of lesions and can have varied etiologies. Immune-mediated disorders, including lichen planus, mucous membrane pemphigoid, discoid lupus erythematosus, and graft-versus-host disease, can have clinical and histologic overlaps. Lichenoid reactions to dental materials, such as amalgam, or to many systemic drugs are also well documented. Dysplasia of the oral cavity at times can also express a lichenoid histology, which may mask the potentially cancerous component. Proliferative verrucous leukoplakia, an unusual clinical disease, mimics oral lichen planus clinically and requires careful correlation of the clinical and pathologic features. 2011 Elsevier Inc.


Background: Lichen planus is a common inflammatory autoimmune condition of unknown etiology that commonly affects the skin and mucous membranes. Isolated ocular lichen planus is an extremely rare presentation that most commonly involves the eyelids, conjunctiva, and cornea, leading to severe scarring, and is clinically indistinguishable from other causes of cicatricial conjunctivitis. Observations: A 79-year-old man complained of a chronic keratoconjunctivitis refractory to multiple topical treatments. Slit-lamp examination revealed diffuse bilateral conjunctival hyperemia, subepithelial fibrosis, and symblepharon, with a marked shortening of the lower conjunctival fornix. There were no other skin or mucosal lesions. Hematoxylin-eosin staining revealed acanthosis, focal thickening of the basement membrane, and a dense subepithelial mononuclear infiltrate. Direct immunofluorescence demonstrated a linear shaggy fibrinogen deposition along the basement membrane, suggestive of lichen planus. Ultrastructural examination revealed a marked widening of the epithelium-lamina propria interphase, with prominent fragmentation, reduplication, and reticulation of the lamina densa of the basement membrane. The patient was successfully treated with systemic immunosuppressive agents.

Conclusions: Isolated conjunctival lichen planus is an exceptional and severe cause of cicatricial conjunctivitis. Distinguishing this unusual presentation from other inflammatory diseases with conjunctival involvement is crucial to initiate an appropriate therapy early to avoid irreversible damage of the visual function. 2011 American Medical Association. All rights reserved.


Introduction: The aims of this study were to test the validity and reliability of a newly developed discipline-specific questionnaire, the Chronic Oral Mucosal Diseases Questionnaire (COMDQ), to measure quality of life in patients with chronic oral mucosal conditions. Materials and methods: Two patient samples were recruited for the purposes of this study. First, a random sample of 160 patients attending the Oral Medicine Unit of Cork University Dental School and Hospital with the following chronic oral mucosal conditions, recurrent aphthous stomatitis, oral lichen planus, the more common vesiculobullous conditions (mucous membrane pemphigoid and pemphigus vulgaris) and orofacial granulomatosis. Second, the COMDQ was randomly distributed to a sample of

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100 patients without a chronic oral mucosal condition. Convergent and discriminative validity and internal consistency of the newly developed questionnaire were assessed. Results: This study has demonstrated that the newly developed questionnaire has good convergent validity with Pearson correlation coefficient of 0.819 with Oral Health Impact Profile-14 and 0.883 with Visual Analogue Scale for pain scores. The discriminative validity was also good with statistically significant differences between patients with chronic oral mucosal conditions and without chronic oral mucosal conditions. The new instrument has also demonstrated excellent reliability with Cronbach's alpha of 0.929. Conclusions: In conclusion, this study has demonstrated that the COMDQ is a valid and reliable measure to assess quality of life in patients with chronic oral mucosal diseases and therefore will be a valuable instrument in the management of these conditions. 2011 John Wiley & Sons A/S.


Objective: To test the reliability and responsiveness of the Chronic Oral Mucosal Diseases Questionnaire (COMDQ), in measuring the quality of life (QoL) in patients with chronic oral mucosal conditions. Methods: A random sample of 160 patients with the following chronic oral mucosal conditions, recurrent aphthous stomatitis, oral lichen planus, the more common vesiculobullous conditions (mucous membrane pemphigoid and pemphigus vulgaris) and orofacial granulomatosis received a copy of the COMDQ. A subset of 100 patients received the questionnaire on two further occasions, 2 weeks and 3 months later. Statistical tests were carried out to evaluate the test-retest reliability and responsiveness of this instrument. Results: This study has demonstrated that the COMDQ has good test-retest reliability with an intraclass correlation coefficient of 0.81 and is responsive to changes in the patients' overall conditions. Conclusion: In conclusion, this study has further demonstrated the reliability and responsiveness of the COMDQ in assessing QoL in patients with chronic oral mucosal diseases. 2011 John Wiley & Sons A/S.


Oral lichen planus (OLP) is a relatively common mucosal disease that can present isolated or associated with cutaneous lichen planus. Contrarily to its cutaneous counterpart, though, OLP tends to be chronic, relapsing, and difficult to treat. Severe morbidity is related to erosive forms, and more aggressive presentations have been described, such as the "gingivo-vulvar syndrome". This article reviews the current knowledge about the pathogenesis, clinical picture, differential and laboratorial diagnosis, prognosis, and treatment of OLP.


Although metals are common contact allergens, clinical findings of metal contact dermatitis have varied. Such patients have subsequently become rare in Japan as gold dermatitis caused by ear piercing or baboon syndrome by broken thermometers. To evaluate such clinical findings and to determine the frequency of metal allergy, we analyzed the results of patch testing with 18 metals from 1990-2009. Nine hundred and thirty-one patients (189 men and 742 women, mean age 39.0 years [standard deviation +/- 17.8]) were tested. Metals were applied on the back for 2 days, and the results read with the International Contact Dermatitis Research Group (ICDRG) scoring system 3 days after application. Reactions of + to +++ were regarded as positive. Differences of positive rates between men and women, and patients from 1990-1999 and those from 2000-2009 were analyzed with the <sup>&gt;</sup>2<sup>&lt;</sup>-test. Differences were considered significant at P < 0.05. The metal to which the most patients reacted was 5% nickel sulfate (27.2%), irrespective of sex and phase. Significantly more women reacted to nickel sulfate (P < 0.01), mercuric chloride (P < 0.05) and gold chloride (P < 0.01) than men. Significantly more patients in the 1990s reacted to palladium chloride, mercuric chloride and gold chloride (all P < 0.01) than from 2000-2009. Nickel has been the most common metal allergen and mercury-sensitivity has decreased over 19 years in Japan. 2010 Japanese Dermatological Association.


White and red lesions of the oral cavity remain a diagnostic and treatment challenge. Leukoplakia and erythroplakia are the most common premalignant lesions of the oral cavity (oral premalignant lesions [OPLs]). They have a potential for mucosal growth and malignant transformation. Obtaining a representative biopsy of the lesion is imperative to confirm histologic diagnosis and exclude malignant invasion. Subsequent management of such lesions includes observation, excision, ablation, or topical medical therapies. Despite these treatments, the lesions have a tendency to recur and prolonged observation with multiple retreatments is the rule rather than the exception. Laser treatment is well described for management of premalignant lesions. With the advent of smaller and more cost-effective lasers, this technology is now feasible for outpatient management of such lesions in the office setting. Furthermore, angiolytic lasers can be used to target the vasculature of oral lesions, leaving intact mucosa, which should result in less discomfort for the patient. We describe our management approach to
premalignant oral cavity lesions as well as more benign oral cavity lesions amenable to treatment via an office-based laser. We also detail our experience and the theory behind various types of ablative and angiolytic lasers including CO\(_2\), thulium, 532-nm and 940-nm diode, and 532-nm pulsed potassium-titanyl phosphate laser in this setting. 2011 Elsevier Inc.


Background: Mucosal lichen planus is a severe variant of lichen planus, Lichen planus (LP), which in many ways affect patients' lives. The aetiology is not fully understood, and there is no treatment clearing the disease once and for all. Oral LP has by the WHO been classified as a precancerous lesion. Micro-RNAs, miRNAs, are non-coding, small single-stranded RNAs involved in biological processes like apoptosis, proliferation, differentiation, metastasis, angiogenesis and immune response. Methods and Results: In sera from 30 patients with multifocal mucosal LP, 15 miRNAs were identified as significantly differentially expressed compared with controls. The three most up-regulated miRNAs are all connected to oral squamous cell carcinoma or epithelial carcinoma in general. Discussion: Even if no specific LP-associated miRNA profile was found, data clearly indicate that miRNAs could play a role in the earlier phases of lichen planus. 2011 John Wiley & Sons A/S.


Some members of the Toll-like receptor (TLR) family, which plays key roles in both innate and adaptive immune responses, are involved in the pathogenesis of autoimmune, chronic inflammatory and infectious diseases. However, the role of TLR in the pathogenesis of oral lichen planus (OLP) has not been investigated. The aim of this study was to understand the roles of TLR in OLP. The expression of TLR genes in OLP tissues was analyzed by cDNA microarray and reverse transcription polymerase chain reaction, and TLR protein expression in OLP tissues and peripheral blood monocytes was examined by immunohistochemical analysis and flow cytometry, respectively. Furthermore, TLR ligand-induced cytokine production from peripheral blood monocytes was measured by enzyme-linked immunosorbent assay. Among 10 TLR genes, the average expression ratio of the genes for TLR1, 2, 3, 5, 6 and 10 in OLP tissues compared to that in the normal buccal mucosa was more than 1.0. In contrast, the average ratio of the genes for TLR7, 8 and 9 was less than 1.0. TLR2 but not TLR4 was highly expressed in the cells of the spinous layer and infiltrating monocytes in OLP tissues, and the mean fluorescence intensity of TLR2 on peripheral blood monocytes was significantly higher in OLP patients than in healthy controls. Furthermore, the peripheral blood monocytes from OLP patients produced considerably higher amounts of interleukin (IL)-12 and lower amounts of IL-10 than those from healthy controls. In OLP, the T-helper cell (Th)1/Th2 balance appears to shift toward Th1 dominance, probably depending on the upregulation of TLR2 expression and these alterations in TLR2-mediated immunity may be involved in the pathogenesis and maintenance of OLP. 2010 Japanese Dermatological Association.


Head and neck squamous cell carcinomas (SCCHN) arise in the mucosa of the upper aerodigestive tract at multiple anatomic sites. While tobacco and alcohol exposure remain the primary risk factors for this malignancy, infection with the human papilloma virus is emerging as a major contributing factor to cancers that arise primarily in the oropharynx. Despite therapeutic advances, survival has remained relatively unchanged over the past few decades. Increased understanding of the cellular and molecular biology of these cancers will improve our understanding of this malignancy and facilitate the development of more effective therapeutic strategies. Alterations that have been studied to date include genetic and epigenetic changes. While the epidermal growth factor receptor (EGFR) is the only established molecular therapeutic target, other proteins and pathways are under active investigation to determine their contribution to SCCHN carcinogenesis and progression. 2011 - IOS Press and the authors. All rights reserved.


Acitretin, a synthetic retinoid, is a pharmacologically active metabolite of etretinate. It replaced etretinate for the treatment of severe psoriasis (e.g. psoriatic erythrodermia and pustular psoriasis) because of its more favourable pharmacokinetic profile. Acitretin is 50 times less lipophilic than etretinate and has a shorter elimination half-life. However, there is evidence that small amounts of acitretin (especially in the presence of alcohol) are converted to etretinate. In psoriasis acitretin normalizes epidermal cell proliferation, differentiation and cornification. Acitretin appears to be as effective as etretinate (the effective dose of acitretin varies between 25 mg/day and 50 mg/day)

Background: Cell cycle arrest and increased cell proliferation have been demonstrated in oral lichen planus (OLP). This study evaluated the expression of cdk4, cdk6 and p16, important proteins in the G1 phase, in OLP and compared the expression of these proteins of OLP with those of normal mucosa. Methods: Expression of cdk4, cdk6 and p16 were investigated in 23 OLP and 10 normal mucosae using immunohistochemistry technique. Positive cells were counted and presented as a percentage of positive cells. Results: Expression of cdk4, cdk6 and p16 was observed in 3/10 (30%), 1/10 (10%) and none of normal mucosa, respectively. Expression of cdk4, cdk6 and p16 was detected in 18/23 (78.3%), 8/23 (34.8%) and 15/23 (65.2%), of OLP, respectively. The numbers of cdk4 and p16 positive cases of OLP were significantly higher than normal mucosa. In normal mucosa, the averages of the percentage of positive cells for cdk4 and cdk6 staining were 1.48 and 0.18, respectively. In OLP, the averages of the percentage of positive cells for cdk4, cdk6 and p16 staining were 2.73, 1.06 and 2.24, respectively. The percentage of cdk4-positive cells of OLP was significantly higher than those of normal mucosa group. Conclusion: Oral lichen planus demonstrated overexpression of cdk4 and p16, but not cdk6, suggesting that epithelial cells in OLP are in the hyperproliferative state and in cell arrest. Altered expression of cdk4 and p16 provides evidence of the malignant potential in OLP. 2011 John Wiley & Sons A/S.


Introduction: Good syndrome is an acquired immunodeficiency characterized by thymoma with hypogammaglobulinemia and variable defects in cellmediated immunity. It is associated with various infectious phenotypes, autoimmune disorders, chronic diarrhea and pure red cell aplasia. The immunological abnormalities do not correct after thymectomy. Few case reports have documented an association of Good Syndrome and lichen planus, mainly of the erosive oral phenotype. Skin and vaginal lesions are infrequently documented. Previous authors have reported resolution of oral lesions after a thymectomy. Other reports have described development of hyperkeratotic lichen planus post-thymectomy but no mucocutaneous lesions. Case Description: A 50 year old female with Good Syndrome developed oral ulcers 1.5 years post-thymectomy. Treatment with acyclovir and compounded mouth rinses containing lidocaine, tetracycline, hydrocortisone, and Benadryl failed to result in improvement. A short course of oral steroids relieved her symptoms temporarily. Tongue and mucosal biopsies revealed erosive lichen planus. Subsequently, she developed vaginal lesions and cutaneous lichen planus on her lower extremity. Topical treatments were unsuccessful, and systemic immunosuppression was required. Discussion: Previous case reports document regression of the oral lichen planus after thymectomy. Our patient developed oral lesions post-thymectomy, and her disease progressed to include skin and vaginal involvement. The link between thymoma, Good Syndrome and lichen planus is poorly understood. Lichen planus as a complication of Good Syndrome is extremely rare. In the absence of classic cutaneous findings, mucocutaneous lesions may be misdiagnosed leading to prolonged suffering and unnecessary treatments.


Background. Lichen planus is a chronic inflammatory mucocutaneous disease with an unclear pathogenesis. Oral lesions may occur anywhere and in various clinical forms - white, red or red-white, alone or coexistent with skin lesions. Objectives. This study was aimed to assess the clinical presentation of oral lichen planus lesions in relation to general health and oral symptoms. Material and Methods. The authors investigated a group of patients with oral lichen planus lesions consisting of 30 women and 10 men between the ages of 25-80 years. Results. White oral lichen planus lesions were found in 33 patients and red lichen lesions in 11 patients. The range of duration of the pathology was from 1 to 144 months. The most frequently present form was the reticular oral lichen planus form. Buccal mucosa was the most common site of involvement. Candida infection was confirmed in 10 patients. Systemic diseases were reported in 16 patients. As is characteristic for lichen planus, concurrent skin lesions were detected in 5 subjects and nail lesions in 3 patients. In no cases was there malignant transformation. Conclusions. OLP is a chronic disease with broad clinical presentations and symptoms. It is said that, after a long time, some lesions may undergo malignant transformation. All irritating factors should be avoided. Patients should be examined periodically. It is important to pay special attention in erosive, bullous or atrophic forms. Copyright by Wroclaw Medical University.
The oral mucosa is frequently involved by autoimmune bullous diseases and often this is the first site of manifestation. In this site the lesions are very similar, making the clinical diagnosis difficult; therefore, the definition of the immunohistopathologic characteristics of each one becomes essential for a differential diagnosis. The authors review the clinical-pathological and therapeutic aspect of these oral injuries in order to help in the diagnosis, treatment and prognosis of the oral conditions of those diseases. 2011 Elsevier Inc.


Objective: We report an extremely rare case of laryngeal lichen planus. Method: A case report and literature review of the aetiopathogenesis, clinical features and management of laryngeal lichen planus are presented. Results: A male patient presented with hoarseness and a history suggestive of squamous cell carcinoma of the larynx. However, characteristic histopathological findings demonstrated lichen planus. The patient responded very well to oral steroids, and at the time of writing had remained symptom-free for two years. Conclusion: This is the first English language report of laryngeal lichen planus. Lichen planus is a diagnosis of exclusion and responds well to steroids. However, patients should be followed up regularly as malignant change is known to occur. 2011 JLO (1984) Limited.


A 53 year old Burmese man presented with a seven year history of perianal and peristomal plaques. His past medical history included presentation with jaundice, weight loss and abdominal pain two years prior to this. He was found to have an ampulla of Vater adenoma and underwent Whipple's procedure requiring a temporary gastrostomy. His jaundice improved, however he continued to have ongoing abdominal pain. Despite extensive investigation a cause for this was not found. Crohn's disease was suspected, however colonoscopy and mucosal biopsies were considered normal at the time. The differential diagnoses considered for his dermatological presentation were contiguous cutaneous Crohn's disease, extramammary Paget's disease, lichen planus, lichen sclerosus or an atypical infection. Skin biopsy showed non-caseating granulomas without evidence of infection, foreign body, necrobiosis or sarcoidosis. Quantiferon gold, CXR and serum ACE were normal. A working diagnosis of contiguous cutaneous Crohn's disease was made. Referral to gastroenterology prompted re-investigation, confirming a diagnosis of Crohn's disease on colonoscopy and commencement of treatment. After several years of recurrent undiagnosed abdominal pain, signs in the skin prompted the diagnosis and treatment of systemic disease. The skin signs of inflammatory bowel disease are presented in our discussion.


Objective: To explore the experience of daily life of persons with chronic oral mucosal conditions. Methods: Purposive sampling was used to recruit patients from the Oral Medicine Unit of Cork University Dental School and Hospital. An experienced independent facilitator convened the focus groups and conducted individual interviews in a non clinical setting. Focus groups were mixed with regard to gender, age, chronic oral mucosal condition, time since diagnosis and severity. A total of 24 patients took part, including patients with oral lichen planus, mucous membrane pemphigoid, pemphigus vulgaris, recurrent aphthous stomatitis and orofacial granulomatosis. Results: Analysis of the interviews revealed that patient views could be divided into the
Most of the mucocutaneous diseases are confined to the stratified squamous epithelium and thus may involve skin, oral and other mucosae like the nasal, ocular, genital mucosa. Some patients present with oral lesions only whereas in others there may be involvement of skin and other mucous membranes. An understanding of the basic molecular aspects of these disorders is essential for proper diagnosis. Once a definitive diagnosis is determined, treatment is focused upon the alleviation of clinical signs and symptoms, referral for consultation with other specialists to assess the extent of the disease process, and the prevention of recurrence. 2011 Academic Journals.


Lichen planus is a common mucocutaneous disease in adults. Childhood lichen planus is an extremely rare entity which is characterized by violaceous, scaly flat topped polygonal papules with the oral involvement being extremely uncommon. Early and correct diagnosis is very important to avoid further complications. We report a nine year old boy with disseminated lichen planus involving the flexor aspect of the wrists and legs as well as, oral and genital mucosal involvement which regressed after treatment. This is to add another case of lichen planus in a child and to emphasize its consideration in the differential diagnosis of oral mucosal white patches in children.


There are few topical formulations used for oral medicine applications most of which have been developed for the management of dermatological conditions. As such, numerous obstacles are faced when utilizing these preparations in the oral cavity, namely enzymatic degradation, taste, limited surface area, poor tissue penetration and accidental swallowing. In this review, we discuss common mucosal diseases such as oral cancer, mucositis, vesiculo-erusive conditions, infections, neuropathic pain and salivary dysfunction, which could benefit from topical delivery systems designed specifically for the oral mucosa, which are capable of sustained release. Each condition requires distinct penetration and drug retention profiles in order to optimize treatment and minimize side effects. Local drug delivery may provide a more targeted and efficient drug-delivery option than systemic delivery for diseases of the oral mucosa. We identify those mucosal diseases currently being treated, the challenges that must be overcome and the potential of novel therapies. Novel biological therapies such as macromolecular biological drugs, peptides and gene therapy may be of value in the treatment of many chronic oral conditions and thus in oral medicine if their delivery can be optimized. 2011 John Wiley and Sons A/S.


Oral cancer refers to malignant neoplasms in the mucosal lip, tongue and mouth (ICD-O C00-06) caused by chronic exposure to tobacco, alcohol drinking or both and rarely by chronic traumatic irritation. Oral cancer incidence and mortality are high in the Indian sub-continent, Papua New Guinea, Taiwan Eastern Europe, France and parts of South America. It accounts for an estimated 264,000 new cases and 128,000 deaths annually globally, of which 172,000 cases and 97,000 deaths occurred in less developed countries. The age-standardized incidence rates range between 1 (Algeria) and 21 per 100,000 men (Pakistan); it ranges between 1 (Algeria) and 19 per 100, 000 women (Pakistan). Incidence rates exceeding 10 per 100,000 persons are observed in India, Pakistan, Taiwan, East European countries, France and Brazil. Oral cancer mortality rates ranged between 1 and 15 per 100,000 in the world; mortality rates exceed 10 per 100,000 in Eastern European countries such as Hungary and Czech Republic. The observed trends in incidence and mortality in the world is correlated with the trends in tobacco and alcohol use. A stable or decreasing trend in the incidence of oral cancers has been observed in India, France, US, Nordic and North European countries. An increasing trend has been reported from Pakistan, Taiwan, UK and in most East European countries. Overall survival for oral cancer exceeds 55% in the United States and Western Europe. In countries such as China, India, Singapore, South Korea, Thailand and Pakistan it varies between 32% and 54%. Survival from early localized cancers without regional node metastasis exceeds 80%; whereas it declines to less than 15% when regional nodes are involved. Oral cancer is often preceded by precancerous lesions such as leu-koplakia, erythroplakia, lichen planus and submucous fibrosis. Early oral cancers present as small indurated ulcer, surface thickening, nodules, reddish velvety areas or ulceroproliferative growths. Careful assessment of any suspicious oral mucosa is critical for the early detection of invasive cancer. Early oral neoplasia can be readily detected by trained clinicians, nurses and auxiliary health workers, by a systematic visual oral inspection and by palpation. Oral visual inspection is a reasonably sensitive and specific test to detect oral neoplasia. In a randomized screening trial during 1995-2004 in Tri-vandrum district, South India, three rounds of oral visual inspection at 3-year intervals provided by trained health workers was followed by a significant 33% reduction in mortality among tobacco and/or alcohol users as compared to similar control subjects. The cost-effectiveness of screening is improved by targeting those aged 35 years and above and who habitually use tobacco or alcohol or both. It is not yet clear whether adjunctive screening tests such as visualization aids and cytology are cost effective and improve oral cancer detection and hence their routine use
cannot be recommended. No organized population-based oral cancer screening programmes have been implemented in developed countries, although there have been a number of demonstration projects that have documented participation rates, screen positivity and disease detection rates. Despite the highest risk of oral cancer observed in South Asia and many studies in this region establishing the value of oral cancer screening, no national or regional screening programs have been established in India, Pakistan and Sri Lanka. There are ongoing national oral cancer screening programs in Cuba and Taiwan, but their impact on disease burden is not yet clear. Primary care physicians have a major responsibility in preventing people from taking up tobacco and alcohol habits and encouraging users to quit as well as in providing oral visual screening to people aged 30 years and above who have tobacco and/or alcohol habits, especially in the context that fewer public health policies have addressed reducing oral cancer burden globally.


"Potentially-malignant disorders" is the favoured term that encompasses a number of conditions that affect the oral mucosa, such as sub-mucous fibrosis, and discrete oral lesions, for example leukoplakia, with a defined potential to undergo malignant transformation. Lichen planus (LP) is a common, inflammatory disease of the stratified squamous epithelium, of presumed auto-immune aetiology. LP affects most frequently, and protractedly, the oral mucosa. The potential for OLP to undergo malignant transformation is controversial. If there is a risk, the risk is very difficult to quantify and possibly so low that it is very difficult to determine if OLP is truly associated with a significant risk for malignant transformation. This presentation will review the current evidence, based on long-term clinical surveillance studies of OLP, to try to quantify (if possible) what is the potential risk to a patient with OLP that they will develop an oral squamous cell carcinoma. The risk for OLP to undergo malignant transformation will be evaluated and compared against the risk, natural history and clinical evolution of other potentially-malignant oral conditions. Further, if the risk for OLP to undergo malignant transformation is quantifiable and real, what should we tell our patients and how do we approach the concerns about the long-term monitoring of patients with OLP.


Oral cancer appears to be increasing in incidence, and mortality has scarcely improved over past decades. Better understanding of aetiopathogenesis should lead to more accurate and earlier diagnosis and more effective treatments with fewer adverse effects, providing the best chance of a cure. Cancer is the result of DNA mutations arising spontaneously and from the action of various mutagens, especially in tobacco and alcohol. Cancer is a consequence of an interaction of many factors. A sequence of genetic changes leads eventually to loss of growth control and autonomy, but countering these changes are mechanisms to metabolise carcinogens, repair DNA damage, control growth, and defend against cancer. Potentially malignant (premalignant or precancerous) disorders which precede some neoplasms include erythroplasia (erythroplakia) - the most likely lesion to progress to severe dysplasia or carcinoma, leukoplakia, lichen planus and submucous fibrosis. Risk factors include tobacco, betel and alcohol use. Clinical features which suggest a potentially malignant lesion is likely to transform, or has transformed, to carcinoma include: the presence of red lesions (erythroplasia); a verrucous, speckled or granular appearance or an ulcer with fissuring or raised exophytic margins; induration; fixation of the lesion to deeper tissues or to overlying skin or mucosa; cervical lymph node enlargement. Single ulcers, lumps, red patches, or white patches - particularly if any of these are persisting for more than three weeks, may be manifestations of frank malignancy. There should be a high index of suspicion, especially of a solitary lesion present for over 3 weeks: biopsy is invariably indicated. The whole oral mucosa should be examined as there may be widespread dysplastic mucosa ("field change") or even a second neoplasm and the cervical lymph nodes must always be examined. Laboratory diagnostic aids increasingly look to detect cellular and now molecular changes. Molecular techniques are being introduced for prognostication.


BACKGROUND AND OBJECTIVE: A few samples of oral lichen planus and lichenoid reactions may be change to malignancy. Histopathological diagnosis is a tool for diagnosis but it is not correct for segregation of these lesions. The aim of this survey was to examine immunohistochemistry expression of P53 and P63 in oral lichen planus and oral lichenoid lesions according to different aetiopathogenesis, clinical behavior and neoplastic changes of these diseases. METHODS: The cross sectional study was done on 80 cases (40 cases of oral lichen planus and 40 cases of oral lichenoid lesions) gotten from pathology department of Babol dental faculty and Shahid Beheshti hospital. Slices gotten from paraffined block stained by P63 and P53 antibody, using immunohistochemical procedure. The percent of stained cells in basal layer, suprabasal layers and inflammatory inflammation was graded, when none of cells were stained (-); the stained cells were included < 10% of the total cell population (+); when the stained cells were included from 10% to 25% of the total cell population (++); when the stained cells were included from 26% to 50% of the total cell population (+++); and (++++) for the stained

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cells were accounted >50%. The obtained results were assessed and compared. FINDINGS: The expression of P53 in oral lichen planus was more than oral lichenoid lesions, (p<0.001), but there was not significant statistical relation regarding to P63 expression between oral lichen planus and oral lichenoid lesions (p=0.379). Expression of P53 and P63 in two types of oral lichen planus (Reticular, Erosive) did not have significant difference (p>0.05). The expression of P53 in oral lichen planus and lichenoid lesions, in basal layer was more than suprabasal layer and inflammatory infiltration and in suprabasal layer was more than inflammatory infiltration. The same result gotten about P63 expression (p<0.05). The rate of P53 in oral lichen planus, in basal layer (p=0.012) suprabasal layers (p<0.001) and inflammatory infiltration (p=0.003), was more than oral lichenoid lesions, but there was not significant statistical relation between oral lichen planus and oral lichenoid lesions in expression of P63 in basal layer, suprabasal layer and inflammatory infiltration. CONCLUSION: The results showed the coordination activity of P63 and P53 proteins to protect oral mucosa from harmful effects of inflammation.


Early detection of oral potentially malignant epithelial lesions (PMELs) is aimed at improving survival rates as carcinogenesis is a multistep process and prevention is possible if these lesions are detected at an early and reversible stage of the disease. A prospective clinical study aimed at determining the prevalence of bilateral 'mirror-image' oral PMELs was carried out. Sample consisted of 32 (53.3%) Indians, 23 (38.3%) Chinese, 4 (6.7%) Malays and one (1.7%) Nepalese. All had histopathological confirmation of their primary existing PMEL as inclusion criteria. A total of 70 primary lesions were detected. The most common PMEL found was oral lichen planus. Of these, 28 (46.7%) patients exhibited bilateral 'mirror-image' lesions (n = 42) either synchronously (n = 32/42) or metachronously (n = 10/42). The remaining 32 (53.3%) patients had normal-looking contralateral mucosa. Present findings suggest that patients presenting with oral PMELs are at greater risk of developing a second lesion, most probably in the contralateral 'mirror-image' site. 2011 Springer-Verlag.


Introduction: High alcohol consumption and poor oral hygiene are primary risk factors for oral carcinoma. Alcohol consumption leads to increased acetaldehyde levels in saliva due to microbial oxidation of ethanol to acetaldehyde. Acetaldehyde is a highly toxic and carcinogenic product of alcohol fermentation and metabolism in microbes and several studies have linked it to cancers of the upper digestive tract. Acetaldehyde has been classified as a Class I carcinogen in association with alcohol consumption. Acetaldehyde has been found to be able to cause point mutations in DNA, to form DNA adducts and induce gross chromosomal aberrations. It may interfere with the synthesis and repair of DNA. Oral carcinoma and potentially malignant oral lesions have been shown to differ in both the intensity and spectrum of microbial colonization compared to healthy mucosa. There are, however, little data on the acetaldehyde production of microbes isolated from malignant and potentially malignant oral lesions. The aim of our study was to analyze the microbial acetaldehyde production and the number of viable bacteria isolated from oral carcinoma lesions, oral lichen planus/lichenoid lesions and healthy mucosa. The hypothesis was that microbes colonizing oral lichen planus/lichenoid and oral carcinoma lesions produce higher amounts of acetaldehyde compared to microbes isolated from healthy mucosa. Material and Methods: Microbial samples were collected with a site-specific sampling method from the oral mucosa of 20 patients diagnosed with oral squamous cell carcinoma (OSC), 20 patients diagnosed with oral lichen planus/lichenoid reaction (OL) and 24 healthy controls (C). The samples of the OSC and OL patients were collected from oral lesions and contralateral healthy mucosa. The study was approved by the Helsinki University Central Hospital Ethical Committee. Microbes were cultured on non-selective and selective media, incubated at 37degreeC for 48 hours under aerobic conditions or 7 days under anaerobic conditions and the number of viable bacteria were enumerated as colony forming units (CFU). For the acetaldehyde production samples grown on non-selective blood agar were diluted into buffered saline, ethanol was added (final concentration 22mM) and the solution was incubated for 60 minutes at 37degreeC. All metabolic reactions were stopped by perchloric acid and acetaldehyde was measured by gas chromatography. The 2-tailed Mann-Whitney test was used for the statistical analysis. Results: Samples from OSC lesions showed significantly denser microbial colonization than samples from healthy mucosa of OSC patients (P < .0010), OL lesions (P < .0009), OLP patients (P < .0001) or control patients (P < .0001). Samples from OL lesions had significantly higher CFUs than OL control areas (P < .00231) or samples from control patients (P < .0184). All microbial samples produced potentially carcinogenic levels (40 mM) of acetaldehyde in ethanol incubation. Microbial samples from OSC lesions produced the highest amounts (mean 182.0 mM) and those from healthy controls produced the lowest amounts of acetaldehyde (mean 112.5 mM). This difference was statistically significant (P < .0229). Microbial samples taken from the healthy mucosa of OL patients produced higher amounts of acetaldehyde than those taken from OL lesions. Conclusions: Oral microorganisms may be the primary cause of oral mucosal lesions or secondary invaders in non-infectious
inflammatory mucosal lesions. According to our results OSC lesions have significantly denser microbial populations producing significantly higher amounts of acetaldehyde than OL lesions or healthy controls. Our results support the role of oral microbes in the pathogenesis of alcohol related oral cancer.


The coincidence of a few diseases related to auto-aggression in one patient has already been reported in the current Polish and foreign medical literature. A case of a 36-year-old male who suffered from two diseases of autoimmune origin - lichen planus and ulcerative colitis - is presented in this paper. The diagnosis of oral reticular lichen planus was made based on typical clinical findings in the oral cavity and confirmed in histopathological examination of the buccal mucosa specimen. To exclude candidiasis, culture on Candida-selective medium was also performed. 2011 Termedia Sp. z o.o. All rights reserved.


Cutaneous paraneoplastic syndromes are a group of dermatoses that demonstrate a range of morphological and pathological findings. These syndromes may precede, be concurrent with, or follow the diagnosis of an underlying malignancy. Treatment of the malignancy is often associated with improvement in or resolution of the mucosal and cutaneous disease; however, this is not the case with paraneoplastic pemphigus (PNP). PNP is a rare syndrome that was first described in 1990, and it occurs almost exclusively in patients with lymphocytic neoplasms. Pulmonary manifestations occur in 30% to 40% of cases, and it is the only form of pemphigus that attacks epithelium other than squamous epithelium in an antibody-mediated fashion. The mortality rate for PNP associated with malignancy is greater than 90%. Treatment guidelines are not available, but case series point to the use of rituximab (Drug information on rituximab) (Rituxan) as well as corticosteroids and various other immunomodulating agents. Here we present a diagnostic and treatment dilemma in a 39-year-old active-duty male who developed PNP in the setting of treatment with rituximab, cyclophosphamide (Drug information on cyclophosphamide), doxorubicin (Drug information on doxorubicin), vincristine, and prednisone (Drug information on prednisone) (R-CHOP) for grade 3 follicular lymphoma. This case report is followed by a review of the diagnosis and treatment of other cutaneous paraneoplastic syndromes that are associated with hematologic malignancies.


Human papillomavirus (HPV) in oral carcinoma (OSCC) and potentially malignant disorders (OPMD) is controversial. The primary aim was to calculate pooled risk estimates for the association of HPV with OSCC and OPMD when compared with healthy oral mucosa as controls. We also examined the effects of sampling techniques on HPV detection rates. Methods: Systematic review was performed using PubMed (January 1966-September 2010) and EMBASE (January 1990-September 2010). Eligible studies included randomized controlled, cohort and cross-sectional studies. Pooled data were analysed by calculating odds ratios, using a random effects model. Risk of bias was based on characteristics of study group, appropriateness of the control group and prospective design. Results: Of the 1121 publications identified, 39 cross-sectional studies met the inclusion criteria. Collectively, 1885 cases and 2248 controls of OSCC and 956 cases and 675 controls of OPMD were available for analysis. Significant association was found between pooled HPV-DNA detection and OSCC (OR=3.98; 95% CI: 2.62-6.02) and even for HPV16 only (OR=3.86; 95% CI: 2.16-6.86). HPV was also associated with OPMD (OR=3.87; 95% CI: 2.87-5.21). In a subgroup analysis of OPMD, HPV was also associated with oral leukoplaikia (OR=4.03; 95% CI: 2.34-6.92), oral lichen planus (OR=5.12; 95% CI: 2.40-10.93), and epithelial dysplasia (OR=5.10; 95% CI: 2.03-12.80). Conclusions: The results suggest a potentially important causal association between HPV and OSCC and OPMD. 2011 John Wiley & Sons A/S.


Lichen planus is a chronic, inflammatory, autoimmune disease that affects the skin, oral mucosa, genital mucosa, scalp, and nails. Lichen planus lesions are described using the six P's (planar [flat-topped], purple, polygonal, pruritic, papules, plaques). Onset is usually acute, affecting the fexor surfaces of the wrists, forearms, and legs. The lesions are often covered by lacy, reticular, white lines known as Wickham striae. Classic cases of lichen planus may be diagnosed clinically, but a 4-mm punch biopsy is often helpful and is required for more atypical cases. High-potency topical corticosteroids are first-line therapy for all forms of lichen planus, including cutaneous, genital, and mucosal erosive lesions. In addition to clobetasol, topical tacrolimus appears to be an effective treatment for vulvovaginal lichen planus. Topical cortico-steroids are also first-line therapy for mucosal erosive lichen planus. Systemic corticosteroids should be considered for severe, widespread lichen planus.
involving oral, cutaneous, or genital sites. Referral to a dermatologist for systemic therapy with acitretin (an expensive and toxic oral retinoid) or an oral immunosuppressant should be considered for patients with severe lichen planus that does not respond to topical treatment. Lichen planus may resolve spontaneously within one to two years, although recurrences are common. However, lichen planus on mucous membranes may be more persistent and resistant to treatment. 2011 American Academy of Family Physicians.


Background: Clobetasol is the most potent topical corticosteroid used in oral medicine for muco-cutaneous diseases. Several papers reported about patients with cushingoid appearance, suggesting an adrenal suppression related to clobetasol systemic absorption after local application. Owing to the lack of studies, our goal is to assess whether transmucosal assimilation, after its application on oral mucosa, really occurs and to define clobetasol pharmacokinetics profile. Methods: Data were recorded by collecting blood samples both on 10 patients in clobetasol treatment and on 14 healthy volunteers instructed about standardized clobetasol applications. A new technique of analytical chemistry was employed to detect its serum concentrations. Results: Clobetasol absorption was ascertained, showing a certain accumulation rate. Different levels have been found in relation to oral disease and individual features (as smoking habits and presence of oral mucosa erosion). Conclusions: Our study validates clobetasol systemic transmucosal absorption, also recommending a careful monitoring of patients in corticosteroid therapy to avoid local and systemic adverse effects. 2011 John Wiley & Sons A/S.


Summary: Lichen planus is a chronic inflammatory mucocutaneous disorder of the skin including the scalp, the nails, and the oral and genital mucosa. Ocular, esophageal, bladder, nasal, laryngeal, otic, gastric, and anal involvement has been documented. In this report, we describe a unique case of orogenital lichen planus affecting the external urinary meatus, masquerading as sexually transmitted urethritis and erosive genital disease.


Introduction: Oral cavity can be affected with chronic GVHD in 38-46% transplanted patients and in 54-80% patients with ongoing chronic GVHD. Oral acute GVHD is less common. Characteristic of oral GVHD in the FLU/MEL conditioning regimen have not yet been published in details. Methods and patients: Oral GVHD was prospectively observed in 71 patients after allogeneic SCT with the FLU/MEL (fludarabine 120 mg/m<sup>2</sup>/mg<sup>2</sup> and melphalan 140 mg/m<sup>2</sup>) conditioning regimen in 1/2005-12/2007. The median duration of the observation was 13 (0-65) months. The patients: median age 56 (23-68), males 51%, HLA identical donor in 57/71 (80%), peripheral stem cells graft in 100%. The intensity of oral GVHD was scored using the National Institutes of Health - NIH criteria: 0=no symptoms, 1=mild symptoms not limiting oral intake, 2=moderate symptoms and partial limitation of oral intake, 3=severe symptoms with major limitation of oral intake. Results: Oral acute GVHD developed in 57/71 (7%) patients and in 17% of these with systemic acute GVHD, median onset on day +85 (40-125) and median duration of 24 (7-54) days. The intensity of oral symptoms (NIH) was gr.1 in 5/5 (100%). Mild lichenoid changes on buccal mucosa were observed in 3/5 (60%) patients. Oral chronic GVHD developed in 22/62 (33%) patients and in 22/30 (73%) with chronic GVHD. Oral GVHD developed with the median onset on day +237 (10-540), persisted for 188 (11-665) days and resolved on day +420 (178-900) post-transplant. Lichenoid changes were in 22/22 (100%), erythema in 8/22 (36%), defect-pseudomembrane in 12/22 (54%) and atrophy in 3/22 (13%) patients. The intensity of oral symptoms (NIH): gr.1 16/22 (73%), gr.2 4/22 (18%), gr.3 2/22 (9%). The oral GVHD reoccurrence was observed in 7/22 (32%) patients. Tissue samples of buccal mucosa were excised in 3 patients with clinically acute and 9 patients with chronic oral GVHD. The interface lymphocytic inflammation, apoptotic bodies and satellite necrosis were typical findings in all of the samples. Conclusions: Even though the oral chronic GVHD was mild in the majority of the patients, the mucosal affection can be considered as clinically significant due to its rather prolonged duration, discomfort and pains in some patients. It is also important to be aware of other complications that can mimic the oral GVHD - local toxic or allergic reactions, viral infection, lichen ruber planus and dental-prosthesis lichenoid reaction.


Lichen planus (LP) is an idiopathic inflammatory disease of the skin and mucous membranes characterized by pruritic, violaceous papules. Spontaneous remission generally occurs over approximately 15 months but the disease can follow a chronic relapsing course. Mild cases usually respond to topical treatment with corticosteroids and calcineurin inhibitors. In patients with widespread symptomatic LP, second-line treatment with phototherapy

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or systemic treatment is often required. Photochemotherapy using broad-band ultraviolet (UV) A with psoralen (PUVA) has been shown to be effective in a small number of studies. More recently, the use of narrowband ultraviolet B (NBUVB) for disseminated LP has also been reported. There are no prospective studies comparing these two forms of phototherapy but a small retrospective study (Wackernagel A, Legat FJ, Hofer A et al. Psoralen plus UVA vs. UVB-311 nm for the treatment of lichen planus. Photodermatol Photoimmunol Photomed 2007; 23: 15-19) suggests that, although PUVA results in a better initial clinical response, both PUVA and NBUVB produce similar long-term outcomes. The aim of this audit was to investigate the response of patients with disseminated LP treated with whole body phototherapy in our dermatology unit between January 1999 and March 2010. The outcome was assessed under the supervision of the consultant dermatologist responsible for the phototherapy service as: good outcome (complete response or good improvement) or poor outcome (moderate, mild improvement or no benefit). A total of 34 patients completed a course of NBUVB and 26 patients were treated with PUVA. The median number of exposures with NBUVB was 30 [interquartile range (IQR) 24-5-32-5] with a median cumulative dose of 31-2 J cm\(^{-2}\) (IQR 20-1-51-7). The median number of treatments in the PUVA treated group was 22 (IQR 17-29) with a median exposure of 92-5 J cm\(^{-2}\) (IQR 71-2-173-2). Twentyseven of the 34 patients (79%) treated with NBUVB achieved a good outcome (complete response 47%) compared with 19 of the 26 patients (73%) in the PUVA group (complete response 46%). This audit shows that NBUVB and PUVA result in a similar initial clinical response rate in our patients with disseminated LP. This contrasts with the study by Wackernagel et al. in which the initial complete response rate for PUVA was significantly higher than for NBUVB (67% vs. 31%). A prospective randomized study is required to determine the optimum form of phototherapy for LP.


Introduction: Not having to take a biopsy of oral mucosal lesions can be a great relief for patients. Optical coherence tomography (OCT) allows non-invasive imaging of epithelial layers and subsequently of epithelial lesions. The aim of this study is to establish whether OCT can aid in clinical diagnosis and in the decision of taking a biopsy or not. Methods: Patients with a lesion of the oral mucosa were selected for this study. Before taking biopsies an OCT image (Niris, Imalux, USA) as well as a white light image was made. The spot was marked with a felt pen, which was biopsied. Histopathology was the gold standard. Uninformed on the diagnosis, two independent observers graded the OCT image and clinical white light image. Results: 36 biopsies were taken in 22 patients. Three images were graded as unable to interpret (2 squamous cell carcinoma, 1 lichen planus). On white light images the observers graded the lesions correctly in 67% and 68% of the cases. In 6% resp 20% of the cases OCT was considered relevant in the diagnosis of which 50% resp 39% was diagnosed incorrectly. The number of biopsies correctly omitted was 1.5% resp 3%. Interobserver agreement ranged from 41-80% on items of the grading list. Conclusion: In newly diagnosed lesions the value of OCT seems limited. Images are difficult to interpret and the OCT diagnosis is often wrong. In selected cases OCT may have an added value in long term follow up of lesions.


Symptomatic oral Crohn's disease is comparatively rare. The relationship between orofacial granulomatosis, (where there is granulomatous inflammation and ulceration of the mouth in the absence of gastrointestinal disease) and true oral Crohn's disease is discussed along with the plethora of clinical oral disease presentations associated with both disorders and the differential diagnosis of oral ulceration in patients presenting to a gastroenterological clinic. Specific oral syndromes are outlined including the association between oral manifestations in Crohn's disease and the pattern of intestinal disease and their relationship to other recorded extraintestinal manifestations. The histological and immunological features of oral biopsies are considered as well as the principles of management of symptomatic oral disease. At present, it is suggested that both orofacial granulomatosis and oral Crohn's disease appear to be distinct clinical disorders. 2011 European Crohn's and Colitis Organisation.

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23/03/2012