

reactions, infectious diseases (fungal or bacterial), sarcoidosis, and Crohn's disease. Here we review CGIR seen over ten years and attempt to clarify their etiologies with the hope that this data will yield information which will allow us to better guide clinicians in the evaluation and treatment of their patients. A review of all cases of CGIR from New York Presbyterian/Queens between 2007-2016 was performed. After eliminating all lesions where foreign material or fungal organisms could be seen, 120 cases of CGIR were identified. Additionally, cases seen in conjunction with a lichenoid inflammatory infiltrate were excluded from the review as they warrant further, separate study. Using relevant clinical information submitted as well as responses to a ten-question survey sent to doctors which included questions regarding the etiology of the CGIR, medical work up, the presence of additional lesions, treatment, progression and recurrence, we identified the following information. Of the 120 cases, 56 were male and 64 were female. The age range was 3–88 years old. 122 sites were identified as some cases had multiple lesions. Only 13 of the 122 lesions were central in bone. The most striking findings was that 9 cases occurred under the age of 18 and all these were in males. Two of these patients had intrabony lesions. In this group, Crohn's disease was found to be the commonest etiology, seen in 5 patients. Therefore, the finding of granulomas, especially intrabony, in a young male warrants a gastrointestinal work up prior to an extensive medical evaluation.

IN VITRO EVALUATION OF THE ANTINEOPLASTIC EFFECT OF METFORMIN ON ORAL SQUAMOUS CELL CARCINOMA. MR. ALEX-

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Metformin is one of the most commonly prescribed drugs worldwide for the management of diabetes. Oral Squamous cell carcinoma is a public health problem worldwide and very little has been achieved regarding survival rates since the 1980s, despite some advancement in traditional treatment options. Metformin has demonstrated a cytotoxic effect on neoplastic cells by inhibiting anabolism and stimulating catabolism. AMPK lead to inhibition of the mTOR pathway, thus reducing global protein translation and, therefore, slowing tumor progression.

Objectives: To evaluate the effect of metformin on viability and proliferation of oral squamous cell carcinoma cells in vitro.

Methods: Three cell lines were used, namely CAL27, HaCat and SCC4 (ATCC). The cultures were treated with a single dose of metformin at 10 mM and 20 mM. Cell proliferation and viability were evaluated at 24h and 48h using flow cytometry. Annexin V-FITC and propidium iodide (PI) were used to establish the rate of apoptosis and cell death, respectively.

Results: metformin proved cytotoxic with increased rates of apoptosis and cell death and in the HaCat (24.5% and 43%, respectively) and SCC4 lines (55% and 35%), especially at 20mM and 48h of treatment, except for the CAL27 line, which did not respond to the treatments.

Conclusion: Metformin caused cell death via apoptosis in oral squamous cell carcinoma cultures in vitro in a dose and time dependent manner.

PERICORONAL LESIONS OF UNERUPTED TEETH: EXPERIENCE IN 25 YEARS. DR.

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Objectives: The aim of this study was to determine the epidemiology and clinical concordance of pericoronal lesions of unerupted teeth in biopsies of the Oral Pathology Laboratory of Universidad Peruana Cayetano Heredia (1991-2015).

A retrospective study was performed. Request forms for anatomical-pathological examination and histopathological slides were assessed. Data registered included: Age, sex, dental piece, presumptive and definite diagnosis. The WHO Classification (2017) was used for cysts and odontogenic tumors

Findings: 270 pericoronal lesions were found (1.69% of the total). There was relationship between the diagnoses and association to teeth ($p=0.021$), but not with position of the teeth and sex. It was present more in second and third decade of life (range: 5-80 years). The main histopathological diagnoses were dentiger cyst (40%) and normal dental follicle (23.7%). About pericoronal lesions, they mainly were located in inferior third molars (35.93%) and superior canines (21.85%). The concordance between presumptive and definitive diagnosis is low ($Kappa=0.2536$).

Conclusion: No concordance was found between presumptive and definitive diagnosis, it is the reason why the histopathological study in pericoronal lesions is very important.

A NEW HIGH-RESOLUTION INVASION TEST (HIT) CAN PREDICT MALIGNANT TRANSFORMATION IN ORAL EPITHELIAL DYSPLASIAS. MS. ANDRESA BORGES SOARES^A, MS. DENISE LOPEZ EYMAEL^B, DR. MARCO MAGALHAES^B.

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Rationale: Detecting the earliest signs of invasion and predicting transformation in oral potentially malignant lesions (OPMLs) can facilitate earlier treatment of oral squamous cell carcinoma (OSCC) and decrease morbidity and mortality. Here we described a new test to diagnose early invasion and predict malignant transformation in OPML.

Methods: Fluorescent immunohistochemist and multi-channel colocalization were used to identify invadopodia markers FISH, cortactin and MMP14 in OSCC and OPML. The presence of invadopodia markers was calculated using 3-channel colocalization analysis based on a custom algorithm developed using Volocity Software. The threshold for colocalization was determined by linear least-square fit of the channel intensities and the product of the difference of the means was (PDM) was used to compare the area of colocalization (HIT score). This algorithm was applied to 80 cases (10 cases of non-dysplastic hyperkeratosis, 22 cases of epithelial dysplasias (ED), 20 cases of OSCC and 28 cases from patients who progressed from ED to OSCC) to determine the overall validity of the approach and establish cut off values.

Results: There was a significant and progressive increase in the colocalization of invadopodia markers (HIT score) in dysplasias and OSCC compared to control. The results