delicately and densely collagenous matrix. Scattered throughout were clustered basophilic spherical calcifications associated with condensations of spindled cells, rarely associated with odontogenic rests. A dentigerous cyst was also present. Following this, the residual lesion was curetted and revealed only an inflamed dentigerous cyst. The differential diagnoses for this condition include regional odontodysplasia or unusual hyperplastic dental follicle with dystrophic calcifications.

Conclusion: We review the past and current literature on dental follicular hamartoma. To the best of our knowledge, our case report represents only the 9th documented case of dental follicular hamartoma and the first not to be associated with any dental-related dysplasia and other dental abnormalities.

A 10-YEAR RETROSPECTIVE CASE-CONTROL ANALYSIS OF MEDICATION-RELATED OSTEONECROSIS OF THE JAW AT A MAJOR TERTIARY CARE DENTAL INSTITUTION.

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The connection between antiresorptive medications, like bisphosphonates and denosumab, and osteonecrosis of the jaw has been well studied in the literature. A 10-year retrospective case-control analysis of the patient population at the University of Southern California, Herman Ostrow School of Dentistry, found a robust population of patients of record with a history of bisphosphonate or denosumab use and a significant subset of those patients had medication-related osteonecrosis of the jaw (MRONJ). This study explores the demographic and clinical factors associated with risk for MRONJ in patients taking antiresorptive medications. Multivariate analysis indicated that patients at greatest risk were over 60 years of age, female sex, Asian race, had cancer as a comorbidity, had a history of tooth extraction, and also patients on long-term antiresorptive pharmacotherapy. The findings of this study should help guide clinicians to identify patients at high risk for MRONJ, and thus patients that would benefit from risk reduction and prevention protocols.

DIFFERENTIAL EXPRESSION OF PD1 AND PDL1 IN ORAL POTENTIALLY MALIGNANT LESIONS AND ORAL SQUAMOUS CELL CARCINOMA:A PILOT STUDY.

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Background: Programmed cell death protein 1 (PD-1, CD279) is a 50-55 kDa type I transmembrane receptor expressed by activated T and B cells, as well as subset of monocytes and dendritic cells (DCs). PD-1 and its ligands (PDL1, PDL2) are part of "checkpoint" immune recognition and peripheral tolerance system that emerged as a critical signaling pathway in cancer. PDL1 is expressed in various types of cancers and activation of PD1-PDL1 inhibits T-cell mediated cancer surveillance. Here we describe a quantitative, reproducible 2-color fluorescence-based protocol to determine the differential expression of PD1/PDL1 in oral biopsy specimens.

Methods: Histopathological samples with a diagnosis of hyperkeratosis (HK), OMPL (mild, moderate, severe dysplasia) and squamous cell carcinoma (OSCC) were selected from the archives of the Toronto Oral Pathology service, University of Toronto. FFPE sections were stained with monoclonal antibodies for PD1 and PDL1 (Abcam) and Alexa Fluor-labelled secondary antibodies allowing visualization of both proteins in the same section using a spinning disk confocal microscope (Quorum). PDL1 staining was assessed in basal/spinous layers of the epithelium while PD1 staining was assessed in inflammatory cells in tumor stroma/lamina propria. The mean fluorescent intensity (MFI) was quantified and normalized against background signal.

Results: Our results show a significant increase in PD1 expression in inflammatory cells in dysplasia and OSCC compared to hyperkeratosis. PDL1 expression in epithelial cells was significantly increased in OSCC but not in dysplasia or HK. The results suggest that PD1 increase in inflammatory cells precedes malignant transformation while PDL1 overexpression in epithelial cells only occurs after malignant transformation.

Conclusion: We developed a new quantitative method to study PD1/PDL1 expression in FFPE oral biopsy samples. The expression of PD1 and PDL1 may be used as predictive markers of transformation and the data may be used to develop early intervention in OPML using PD1 inhibitors.

ATAXIA-TELANGIECTASIA-MUTATED PROTEIN EXPRESSION AS A PROGNOSTIC MARKER IN ADENOID CYSTIC CARCINOMA OF SALIVARY GLANDS.

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Adenoid cystic carcinoma (ACC) is one of the high grade malignant tumors in salivary glands, prognosticallycharacterized by multiple recurrences and late distant metastasis. Recently, Myb-NFIB fusion or rearrangements of Myb have been detected as a hallmark of ACC. However, no biological marker estimating the outcome of ACC has been proven yet. Purpose of this study was to investigate whether the protein expression of ATM gene is related to patients' survival in ACC.

Experimental Design: This study consists of 48 surgical samples for detecting expression of ATM and its downstream p53. Kaplan-Meier plots were used to evaluate the relationship between the protein expression ratios of ATM, p53 and its ATM-mediated phosphorylation and the overall survival rate of patients with ACC.

Results: low expression of ATM in cancer cells correlated with poor survival rate ($p = 0.037$). However, low expression of ATM in stromal fibroblasts was not significantly associated with patient outcome. Moreover, this study evaluated ATM expression stratified by p53 and its ATM-mediated phosphorylation status. ATM loss was associated with a significantly decreased overall survival in patients simultaneously showing overexprssion of p53 ($p = 0.01$) and low expression of p53 phospho S15 ($p = 0.05$). These data supported that loss of ATM and its functional status in p53 pathway is an important factor associated with poor outcome of patients in ACC of salivary glands.

DESTRUCTIVE LESION OF THE ANTERIOR MANDIBLE: A UNIQUE PRESENTATION OF LEPROSY.

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