unilocular radiolucency at the apex of tooth #28. Owing to the increasing size and nonhealing nature of the lesion after root canal therapy, an incisional biopsy was performed. Histopathologic examination revealed an epithelial malignant neoplasm of odontogenic origin consistent with PIOC. The patient was treated with anterior mandibulectomy followed by reconstruction with a fibula free flap. In addition to a comprehensive literature review, we discuss the diagnostic criteria and clinical, histopathologic, therapeutic and prognostic features of PIOC.


Adenosquamous carcinoma (ASC) is a rare and aggressive malignant neoplasm with a poor prognosis. It arises from both the surface and the salivary ductal epithelium, with histologic features of both squamous cell carcinoma and adenocarcinoma. The most common site in the upper aerodigestive tract is the larynx, followed by the oral cavity. An exhaustive literature search revealed <20 documented cases of intraoral ASC. The most common intraoral locations are the tonsillar pillars, floor of the mouth, and posterior tongue. We report a case of ASC on the palate of a 72-year-old edentulous patient, who presented with a chief complaint of pain and soreness of 3 weeks’ duration under the denture. Clinically, the lesion presented as a thick diffuse leukoplakia extending from the right vestibule to the alveolar ridge and the hard and soft palate, with cratered ulceration of the left side of the hard palate. An incisional biopsy was performed. The microscopic examination displayed squamous cell carcinoma and adenocarcinoma, favoring a diagnosis of ASC. The patient opted for treatment with chemotherapy and radiation only, without extensive surgery. The clinical and histopathologic features of ASC, differential diagnosis, and review of literature are presented.


Leukoplakia is the most frequently occurring oral lesion with malignant potential: a clinical entity defined by the World Health Organization as “white plaques of questionable risk having excluded (other) known diseases or disorders that carry no increased risk for cancer.” Essentially, leukoplakia is a diagnosis of exclusion. Histologically, leukoplakia may represent hyperkeratosis or parakeratosis, with or without acanthosis, inflammation, and/or dysplasia. Cases submitted for histopathologic examination from January 2007 to June 2008 to Pathology Services, a surgical pathology laboratory in Cambridge, Massachusetts, affiliated with the Harvard School of Dental Medicine, were reviewed for inclusion in the study. In total, 1,269 cases were accepted. Among these, 417 were true leukoplakia, and the other 852 were specific benign lesions. Of the 417 true leukoplakias, 241 showed evidence of reactive lesions, and only 176 cases were nonreactive nonspecific leukoplakia. Among these 176, 43.2% (76) were dysplastic, and all 176 cases were atypical. Current literature suggests that 80.1% of leukoplakias reveal no histopathologic evidence of epithelial dysplasia. This may be partly because frictional injuries such as benign alveolar ridge keratosis and all classic morsicatio mucosae oris (chronic bite injury) were excluded. This study found 10.9% of leukoplakia to be dysplastic and 89.1% without evidence of dysplasia. After exclusion of these benign frictional and otherwise reactive keratotic conditions, this study found the proportion of cases of true leukoplakia that represent atypia, dysplasia, carcinoma-in-situ, and invasive squamous cell carcinoma to be 43.2%, twice that previously reported.

P38 REGULATES INTERLEUKIN-12–MEDIATED CYTOKINE SECRETION IN HEAD AND NECK SQUAMOUS CELL CARCINOMA. R. Vander Broek, E. van Tubergen, K. Kirkwood, N. D. Silva. U Michigan School of Dentistry, Ann Arbor, Medical U South Carolina School of Dentistry, Charleston.

Background. Cytokines and proinflammatory factors are critical mediators of head and neck squamous cell carcinoma (HNSCC). RNA-binding proteins, such as tristetraprolin (TTP), target cytokine mRNA for degradation and decrease cytokine production. However, during an inflammatory response, TTP is functionally inactivated by phosphorylation through p38 activity, leading to increased expression of cytokines. A constitutively active p38 pathway is implicated in tumor survival and interleukin (IL, IL-6 production. Previously, we showed that increased IL-6 in HNSCC is prognostic for poor disease-specific survival and higher probability of tumor recurrence. Therefore, an active p38 mitogen-activated protein kinase pathway may inactivate TTP and contribute to tumor progression.

Objective. The aim of this study was to delineate the role of p38 activity in regulating cytokine secretion in HNSCC.

Study design. p38 activation was optimized with an IL-12 dose curve. UM-SCC-11A and 81B were transfected with small interfering (si) RNA nontarget (NT) and p38. Conditioned medium was collected from cells transfected with siNT or si-p38 in the presence of IL-12. IL-6, vascular endothelial growth factor, and prostaglandin E2 secretion were quantified by ELISA.

Results. p38 is activated in HNSCC cell lines. IL-12 mediates p38 activation in HNSCC cell lines maximally at 10 ng/mL. p38 knockdown was verified by immunoblot analysis. Maximal knockdown of p38 occurred at 72 hours post transfection. p38 knockdown reduced cytokine secretion even in the presence of IL-12 at 72 hours after transfection.

Conclusions. These findings support the potential for targeting regulators of cytokine secretion, such as p38 or downstream targets of p38, as a practical means for limiting the progression of HNSCC. Future studies will elucidate the mechanisms of p38 regulation of TTP activity in HNSCC. (U Mich School of Dentistry and National Institute of Dental and Craniofacial Research grant nos. RO1 DE018512 and K02 DE019513)


In head and neck squamous cell carcinoma (SCC) samples, we observed the intimate association of myeloid dendritic cells (DC) with SCC cells in both primary tumors and their lymph node metastases. In vivo videomicroscopy studies showed that the direct interactions between monocyte-derived DC and SCC cells produced a significant effect on SCC cell migration. Our current research further examines the influence of monocyte-