Conclusion: The intensification of the anti-tobacco legislation and campaigns in South Africa might have contributed to the slightly declining incidences of oral and pharyngeal cancer. Contrary to data reported in the United States and Europe, there is no indication of a rise in HR-HPV driven oropharyngeal cancers over the period 1998-2013 which could indicate that South Africa is lagging behind in the HR-HPV related carcinoma epidemic.

SYSTEMIC DRUG-INDUCED ORAL HYPERPIGMENTATION: SYSTEMATIC REVIEW.

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Background and Objective: Oral hyperpigmentation was associated with many systemic therapeutic drugs. The mechanism of tissue pigmentation by drugs usage is quite variable and non-specific. However, resolution of the discoloration was proven to occur after the suspected drug withdrawal in majority of cases. Most of the published reports on a causal relation evidence between medicinal drugs and oral hyperpigmentation are based on individual case studies or repeated observations. Evidence-based literature is rarely found to prove this causal relation.

The aim of this systematic review of literature is to provide a causal relation evidence between medicinal drugs and their adverse reaction presented as oral/mucosal pigmentation.

Study Designs: A systematic review and analysis of literature was conducted using PubMed, ScienceDirect, Scopus and ProQuest. Original articles, written in English and published till December 2017, were included in the analysis.

Findings: A total of 206 articles were found of which, 49 observational studies were eligible for inclusion in the analysis. In these studies; antimalarial medications, chemotherapeutic medications, and antibiotics were significantly associated with oral hyperpigmentation.

Conclusion: Medication use was significantly associated with oral/mucosal hyperpigmentation in older adults. The risk of oral pigmentation was greatest for antimalarial medication used for immune-mediated diseases and certain chemotherapeutic agents. Future research should develop a risk score for medication-induced oral pigmentation to assure the patient during prescription and management of these medications.

ORAL RADIOGRAPHIC FINDINGS IN SICKLE CELL DISEASE PATIENTS.

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Sickle cell disease causes vascular microinfarcts that lead to multi-organs alterations including dental involvements. Teeth, oral structures, and maxillofacial bones are affected. Dental alterations of oral and maxillofacial bones are of anatomical, radiographical, and structural significance. Due to compensatory hematopoiesis, hemolysis, and vaso-occlusive events in the maxilla and mandible, bony changes are noticed radiographically in SCD patients. Seven oral radiographic features were reported in the literature among SCD patients: large trabecular spaces, increased medullary spaces, thinning of the inferior mandibular border (osteoporosis), interproximal alveolar bone staircase pattern, thickening of lamina dura, resorption in alveolar bone, and radiopacities/osteosclerosis. Mandibular Hypo-vascularity can induce osteomyelitis and osteonecrosis in SCD patients. Mandibular osteomyelitis can be followed by osteosclerosis (radiopacities) if proper healing is achieved. In this study, we obtained multiple radiographs of 35 SCD patients to 1)determine the common radiographic features seen in SCD patients and 2) assess the seven radiographic features reported in the literature.

Results: Some SCD patients demonstrated more than one radiographic feature, while other SCD patients manifest no radiographic findings. The most common feature was the staircase pattern and the least common was osteoporosis. A detailed table of the number of SCD patients presented with notable radiographic features is presented in this poster, in addition to a comparison between the common and uncommon features.

Conclusion: not all SCD patients demonstrate oral radiographic findings, and among the oral radiographic findings reported in the literature, some features are more common than others. Hopefully, 50 or more SCD patients will be included in the study for further evaluation. Furthermore, an equal number of radiographs of competent patients will be examined randomly from Kuwait University's bank of radiographs to serve as a control group. Therefore, we will be able to determine if the reported oral radiographic features are suggestive of SCD or not.

OPTIMIZATION OF DIAGNOSTIC IMMUNOHISTOCHEMISTRY OF FORMALIN-FIXED, PARAFFIN-EMBEDDED TISSUES.

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Objective: Immunohistochemistry (IHC) is a widely used diagnostic technique in the Oral and Maxillofacial Pathology. Various variables affect results of the IHC technique. Therefore, standardization and optimization of the IHC technique are essential in generating reliable and reproducible results. The aim of this study was to determine the optimal conditions for IHC staining of multiple antibodies with minimal background.

Findings: In our study, we noticed that 2% hydrogen peroxide (H2O2) is most effective to block endogenous peroxidase activity. Formalin-fixed, Paraffin-embedded tissues from mice and human biopsies were subjected to IHC with three different monoclonal chimeric antibodies. Various combinations of antibody concentrations and incubation time were investigated. Two secondary antibody kits namely Vectastain Universal ABC-AP KIT (PK-6200) and Alkaline Phosphatase Universal (AK-5200) as well as two chromogen systems namely ImmPACT DAB EqV (Chromogen and peroxide) and Alkaline Phosphatase substrates were used. The optimal concentration of individual antibodies varied greatly (From 1 to 20 μg/ml) based on their affinity to the primary antigen. While the manufacturer instructions recommend 30 minutes incubation for all primary antibodies, we observed overnight incubation at 4oC obtained best results. The optimal counterstain with peroxidase (brown) substrate was Hematoxylin and Alkaline Phosphatase (blue) substrate was Nuclear Fast Red. Digital imaging parameters such as white balance, exposure time and file format were optimized. Evaluation of the IHC results was performed using the light microscope and digital imaging.

Conclusion: Overall, our results confirm careful validation of individual IHC technique is critical in obtaining