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Objective: The objective of this study was to compare the final diagnosis agreement between 4 pathologists when they follow the Horn criteria and the NIH criteria for analysis of oral mucosa and minor salivary glands biopsies possible affected by GVHD.

Findings: 41 slides of oral mucosa and minor salivary glands obtained from individuals with GVHD were analyzed by 4 oral pathologists. Following the Horn criteria based on minor salivary gland and oral mucosa independently, all pathologists gave the same final diagnosis in 11 out of 41 cases, 3 of them agreed in 12 cases and 2 in 18 cases. Following NIH Consensus based on specific criteria in both epithelium and salivary glands, 4 pathologists gave the same final diagnosis in 9 out of 41 cases, 3 agreed in 24 cases and 2 in 7 cases. One case received 4 different diagnoses. To verify the agreement inter-observer in both oral cGVHD classifications, Kappa test showed to Horn classification k=0.22 and to NIH consensus k=0.35.

Conclusions: The concordance of the final diagnosis of oral mucosa biopsies of hematopoietic stem cell transplantation patients suspected of GVHD was very low when the pathologists followed both the Horn criteria and NIH consensus.

PSORIASIFORM MUCOSITIS BY ANY OTHER NAME... A CASE REPORT AND LITERATURE REVIEW OF ORAL PSORIASIS. *DR. NORA ODINGO. STONY BROOK UNIVERSITY SCHOOL OF DENTAL MEDICINE*

A 60−year-old male presented for evaluation of "gum" lesions noted by an oral surgeon. The patient had been treated with chlorhexidine rinse, but the lesions had persisted. The medical history was significant for diabetes mellitus type 2, well-controlled HIV infection, and cutaneous psoriasis. On examination, multiple red macules were noted on the palate. Exfoliative cytology was performed and the patient treated empirically for erythematous candidiasis. On return for re-evaluation, the oral lesions had become widespread. The patient reported that he had discontinued apremilast for insurance reasons, and his cutaneous lesions had also worsened. Exfoliative cytology was negative for Candida organisms. A biopsy of the palatal lesions was recommended and a tentative diagnosis of oral psoriasis rendered. Microscopic examination revealed hyperparakeratosis and psoriasiform mucositis. Since the oral lesions were asymptomatic, the patient was reassured and advised to return for evaluation one month after resumption of psoriasis medication. Clinical assessment is ongoing.

USE OF FLUORESCEIN DYE IN DETECTION OF ORAL DYSPLASIA AND ORAL CANCER. *DR. DEEPIKA MISHRA[A], PROF. OP KHARBANDA[A], PROF. ANURAG SRIVASTAVA[A], DR. DARAKHSHAN QAISER[A], DR. RAHUL YADAV[B], DR. KRUSHNA BHATT[A], DR. ANUBHUTI SOOD[A]. [A] ALL INDIA INSTITUTE OF MEDICAL SCIENCES, NEW DELHI, [B] ALL INDIA INSTITUTE OF MEDICAL SCIENCES, DELHI*

Objectives: Photodetection has played role in detection and localization of various tumors of the body like ovarian cancer, breast cancer etc. but there is paucity of information regarding its use to identify oral cancer and dysplasia. Thus, we hypothesized that fluorescence dye can be helpful in detecting early potentially malignant disorders (OPMD) and oral squamous cell carcinoma (OSCC) after topical application.

Findings: We included 83 individuals of Indian origin which comprised 33 OPMD, 30 OSCC and 20 controls in the study. After obtaining ethical clearance from institutional review board, all patients recruited in study were examined by the investigators regarding the lesion location and extent. After application of Fluorescein dye (0.25 ml of 20 % Fluorescein diluted in 4 ml of saline), the mouth was examined by the blue light to see the fluorescence and incisional biopsy was taken from the respective lesion and evaluated histologically. Moderate to intense fluorescein staining was seen in 83% histopathologically confirmed cases of Squamous cell carcinoma (25/30 cases) and 90% of dysplasia (9/10 cases) and 61% of hyperkeratosis (8/13 cases). Mild or no fluorescein staining was seen in 50% of mild dysplasia (3/6), 50% of OSMF (4/8), 67% of OLP (2/3) and 38% of hyperkeratosis (5/13) cases. No fluorescein staining was seen in 100% of control group. Test was found to be highly significant in diagnosing dysplasia and carcinoma compared to controls ($p<0.01$). The test showed sensitivity of 63%, specificity of 85%, positive predictive value of 82% and negative predictive value of 68%.

Conclusions: We concluded that fluorescein dye staining is a simple, non-invasive test of the oral mucosa, which can help the experienced clinician to find oral precursor malignant lesions. It is a cost-effective measure and can be used for mass screening programs. It might help to identify most appropriate site of biopsy.

INCIDENCE RATES OF ORAL AND OROPHARYNGEAL CANCER IN SOUTH AFRICA 1988-2013. *PROF. JOHANNES HILLE, DR. DANIEL SHEPHERD. UNIVERSITY OF THE WESTERN CAPE/NHLS*

In South Africa, the four different population groups (White, Black, Coloured/Mixed Race and Asian) have very different incidence rates of oral cancers. The possible impact of HR-HPV infection on the incidence of oropharyngeal cancer in this country has not been assessed.

Objectives: To describe and compare the trends in age standardised incidence rates (ASIR) of oral and oropharyngeal cancer in South Africa from 1988 to 2013.

Methods: The ASIRs of these cancers were calculated from the incidence rates published by the National Cancer Registry (SA-NCR), a pathology-based registry.

Findings: The average ASIR (/100,000/year) of oral cavity cancer for all males was 5.9 and for all females 1.74; the highest affected were the males of mixed race (8.47) and white males (6.19) and the Asian females (4.61). The latter population group is known for a high consumption of Areca nut. The average ASIR of pharyngeal cancer for all males was 2.61 and for all females 0.71; The highest incidence of pharyngeal cancer was noted in the males of mixed race (3.86) and white males (2.73). As South Africa is not known for a high incidence of nasopharyngeal cancer, these rates would more or less apply to oropharyngeal cancers. The trends of oral cavity and oropharyngeal cancer ASIRs over the period 1988-2013 show a slight downward trend except for white and mixed-race females. The incidence trends in pharyngeal cancer also show a decline over that period.

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 HYPER-PIGMENTATION: SYSTEMATIC REVIEW. *DR. NADA BINMADI, DR. MARAM BAWAZIR, DR. SOULAFA ALMAZROOA. KING ABDULAZIZ UNIVERSITY, FACULTY OF DENTISTRY*

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. *DR. HUS-SAIN DASHTI[A], DR. AREF GHAYYATH[A], DR. MARIAM BAGHDADY[A], DR. HASSAN AL-JAFAR[B]. [A] UNIVERSITY OF KUWAIT, [B] KUWAIT MINISTRY OF HEALTH*

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 IMMU-NOHISTOCHEMISTRY OF FORMALIN-FIXED, PARAFFIN-EMBEDDED TISSUES. *DR. FATMA ALKASSIMI, DR. SAEED UR RAHMAN, DR. PRAVEEN ARANY. UNIVERSITY AT BUFFALO, THE STATE UNIVERSITY OF NEW YORK*

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 (H_2O_2) 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