and absence of myogenic differentiation in 2 SpRMS cases. Cytogenetic and molecular analyses identified NCOA2 rearrangements in 2 SpRMS and MyoD1 mutations in 1 SpRMS and 2 ScRMS. SpRMS were negative for ETV6 rearrangements associated with infantile fibrosarcoma. MyoD1 mutation RMS demonstrated chemoresistance and progressive disease; while NCOA2 RMS responded favorably to oncologic management.

Conclusions: SpRMS and ScRMS occurring in neonates and infants require molecular characterization for diagnosis, initiating appropriate oncologic and surgical management, and predicting outcome. SpRMS may mimic infantile fibrosarcoma closely, and it is recommended that spindle cell tumors in neonates and infants be assessed for myogenic differentiation.

FACTORS INFLUENCING ODONTOGENIC MAXILLOFACIAL INFECTIONS AND THE ECONOMIC IMPACT AT A UK HOSPITAL.

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Objectives: To describe the presentation, management, and demographics of 100 consecutive patients with odontogenic infection managed at the Royal Surrey County Hospital, UK. To identify factors influencing Length of Stay (LOS) with the resulting economic impact.

Findings: Male: female ratio was 54:46 with a mean age of 36 years and mean LOS of 2.38 nights. 29% had not received treatment prior to admission. Age, White cell count, male gender, and multiple space infection were associated with a significantly greater LOS.

The most commonly involved fascial spaces were the submandibular (39%) and buccal (39%) spaces. 10% of patients experienced complications as a result of infection. Diabetes, smoking and treatment prior to admission were found not to significantly affect LOS.

A total of 238 nights in hospital were spent by these patients in this study. Assuming an average cost of £400 ($ 560) per night, and OR cost of £1200/hour this cost the national health system an estimated £133,600 ($186,600) for an often preventable disease.

Conclusions: Severe odontogenic infection are preventable by regular dental attendance, and represent a significant morbidity and economic cost to patients and limited health resources that are under financial constraints.

Aggressive management of odontogenic infections should be considered for older, male patients with multiple space involvement and a high White Cell Count.

EGR1 IS NEGATIVELY ASSOCIATED WITH HNSCC CELL INVASION VIA INHIBITION OF MMP9 AND MDM2.

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Objectives: The effect of early growth response-1 (EGR1) on cancer invasion remains controversial depending on the cancer type. EGR1 is known to slow the progression of cancer by inhibiting the expression of MMP2. However, the effect of EGR1 on MMP9, which is important for HNSCC invasion, is disputed. Our aim is to clarify the tumor suppressor role of EGR1 in downregulating MMP9. We also consider MDM2, an enhancer of MMP9 expression.

Findings: EGR1 mRNA and protein expression were compared in normal and HNSCC tissues using The Cancer Genome Atlas (TCGA) dataset analysis as well as immunohistochemistry (IHC). In vitro cell invasion was performed by two-dimension (2-D) and three-dimension (3-D) spheroids Matrigel invasion assay. TCGA data showed significantly higher EGR1 mRNA levels in nonmetastatic HNSCC tissues than in metastatic tissues. IHC analysis showed significantly higher levels of nuclear EGR1 expression in primary tumor tissues than in paired metastatic lymph node tissues. Transient EGR1 overexpression inhibited the Matrigel invasion of HNSCC cells, as well as decreasing mRNA of MMP9 and MDM2. Consistent with these observations, TCGA data analysis found significantly fewer metastatic patients among a subgroup of a large population presenting higher EGR1 expressions with lower MMP9 and/or MDM2.

Conclusions: Our data suggests that EGR1 might be a potential candidate to attenuate HNSCC metastasis.

EXFOLIATIVE CYTOLOGY AS A COMPLEMENTARY TOOL FOR ORAL DIAGNOSIS: COST-EFFECTIVENESS OR TIME LOST?.

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Objective: To analyze the cytological diagnosis and compare with the clinical provisional diagnosis to determine the sensitivity and specificity of exfoliative cytology in oral lesions.

Findings: We retrieved 1,000 consecutive diagnosis from the cytology diagnosis files of the Oral Pathology Service at the University of São Paulo, comprising 621 females patients and 379 males patients with a median age of 53yo (range: 3-91). Regarding race, 676 patients were caucasians and 181 blacks. The most frequent sites where material was collected were tongue (n=267), palate (n=261), buccal mucosa (n=149) and gingiva (n=55). The most frequent clinical suspicion was a search for fungus (n=330) and candidiasis (n=276). Concerning the final cytological diagnosis, 25/330 cases aiming for fungus search came out as candidiasis. In those 276 cases that had candidiasis as clinical hypothesis, only 66 resulted positive for the fungus. In the 20 samples where herpes simplex was the clinical suspicion, the cytological diagnosis of herpes was confirmed in 5 cases (all classified as class II of Papanicolaou), for the remaining 15 cases only a Papanicolaou class was attributed, being 4 cases class I and 10 class II and 1 case could not be analyzed. In 15 cases there was a suspicion of squamous cell carcinoma, and of these, 4/15 were classified as class V and 2 as class 4. The remaining were 6 class II and 3 class III. Other diagnosis did not show a pattern of cytological characteristics matching the clinical suspicion.

Conclusions: We conclude that exfoliative cytology is mostly not helpful for diagnosis in Oral Pathology, and, biopsy remains the gold standard, unless the patient refuses a biopsy.

DIAGNOSTIC CONCORDANCE AMONG PATHOLOGISTS INTERPRETING ORAL MUCOSAL BIOPSIES FROM INDIVIDUALS AFFECTED BY GVHD.

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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.

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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.

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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.

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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.