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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