(PCA) and principal component-linear discriminant analysis (PC-LDA). The results show that Raman spectroscopy coupled with PCA could differentiate the nucleus and cytoplasm of the cell, the PC loadings showing that the cytoplasmic regions are dominated by protein bands while thenuclear regions are dominated by DNA bands. Furthermore, patient samples were discriminated from healthy volunteers based on DNA and lipids bands inthe PC loadings. Sensitivities of 91% and 97% and specificites of 98% and 89% were achieved for the cytoplasm and nucleus respectively, using PC-LDA. Thus, the findings of the study support the potential of Raman microspectroscopy for providing molecular level information from oral exfoliated cells and the future potential for screening of minimally invasive brush biopsy samples for oral pre-cancer and cancer.

HYPERKERATOSIS OF THE ORAL MUCOSA RELATED TO USE OF GORO: A CASE REPORT.

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Background: Hyperkeratosis is a frequent finding in oral mucosa commonly associated with smokeless tobacco, trauma and sometimes idiopathic as in leukoplakia. Goro (kola nut) is a caffeine-containing nut of evergreen trees, available in various genera most commonly Cola acuminata and Cola nitida. It contains caffeine (2-4%), kolanin and theobromine in which all provide euphoric and mental stimulation properties to human subjects. Consumption of Goro is a popular habit in African communities. To the best of our knowledge, we are reporting the first case of hyperkeratosis of the oral mucosa induced by Goro.

Case description: A 22 year-old man attended the dental clinic at King Abdulaziz University – Faculty of Dentistry for dental consultation and treatment. Patient had no medical conditions and denied taking any medication or allergies. In addition, he had no significant family history and never smoked or consumed alcohol. However, he has been chewing Goro five times/day for around 10 years. Extraoral examination, was insignificant. Intraoral examination was significant for a smokeless tobacco keratosis-like lesion, greyish-white, velvety folded plaque on lower vestibule where he chew and pack Goro. Incisional biopsy of the lesion was obtained and showed hyper-parakeratosis with otherwise normal epithelium. The connective tissue was fibrovascular with no inflammation, or hyalinization. The case was managed with patient education with no treatment. The patient was followed up for a year without any changes.

Conclusion: This is the first report of a hyperkeratosis of oral mucosa induced by Goro. Even with clinical presentation matching smokeless tobacco keratosis, there were some histological differences. As Goro is mainly a caffeine-containing fruit, it is reasonable to consider Goro-induced keratosis a reactive lesion with no potential for malignancy. Close follow up and habit cessation is advised pending more data. Further longitudinal studies is needed to better understand this lesion pathogenesis.

LANGERHANS CELLS IN THE EPITHELIUM OF UNICYSTIC AMELOBLASTOMAS.

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Background and Objectives: Langerhans cells (LC's) are specialized dendritic cells known to colonize epithelial lined surfaces. Few studies relating to the distribution of LC's in odontogenic tumors and especially ameloblastomas are available and the influence of inflammation on the presence of these cells in odontogenic tumors is unclear. This study investigate the number of LC's in a series of unicystic ameloblastoma using two immunohistochemical stains, Langerin and S100. The association between the presence of LC's and the degree of inflammation was also investigated.

Methods: Formalin fixed, paraffin imbedded tissue blocks of thirty cases of unicystic ameloblastoma were retrieved from the archives of the department of Oral Pathology. A 4μm tissue sections in each case was stained with S100 and Langerin antibodies respectively. The average number of LC's/1mm of cyst wall were calculated from 10mm of cyst or the entire epithelial lining if less was available. The nature and density of inflammation was scored and compared to the number of LC's present.

Results: LC's were detected in 21 (70%) and 15 (50%) unicystic ameloblastomas stained with Langerin and S100 antibodies respectively. A statistically significant difference was noted in the number of LC's on Langerin (mean = 0.66/mm) compared to S100 (mean = 0.31/mm) (P=0,014). 26/30 cases (86.67%) were associated with inflammation distributed either diffusely (60.00%) or focally (26.67%) in the wall. The degree or type of inflammation did not have any influence on the presence or numbers of LC.

Conclusion: LC's are present in the epithelial lining of the majority of unicystic ameloblastomas irrespective of the type or degree of inflammation present in the wall. Their presence may be due to their epithelial tropism or as part of the normal anti-tumour immuno-surveillance. The exact role of LC's and what attracts them should be investigated on molecular level.

THE ORIGINS OF ODONTOGENIC KERATOCYST BASED ON THE DISTRIBUTION OF MELANOCYTES.

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Objectives: Melanocytes are pigmented-producing cells and derived from the neural crest. Melanin pigmentation is widely distributed in the skin and often in oral mucosa, but normally not existing in bone tissue. However, melanin pigmentation is detected on rare occasions with odontogenic lesions in the jaw bones, especially odontogenic keratocysts (OKC). Moreover, development of the tooth germ is originated from the neural crest, but elimination or expression of neural crest cells with odontogenic lesions is not obvious. The present study aimed to consider the origins of OKC based on the distribution of melanocytes in OKC.

Findings: One hundred and ten OKC were used. Eighty-eight cases showed sporadic type (SPO), and 22 cases involved basal cell nevus syndrome (BCNS). All samples were divided into 54 cases of juvenile group (0-29 years old) and 56 cases of advanced group (30-70 years old). Melanocytes were detected using Melan-A and HMB45 immunohistochemical stainings, and melanin pigmentation was detected using Schmorl's method. The positive rate of Schmorl's reaction, Melan-A and HMB45 staining were significantly higher in juvenile group than