

examination. Unexpectedly, small foci of adenocarcinoma were found, with spiculae of medullary bone, prominent inflammatory changes and bacterial deposits. At immunohistochemistry, the tumour positively stained for CK7+ and TTF1+ but not for CK20 and PSA. Additional clinico-radiological investigations revealed a primary tumour of the lung, subsequently characterized as acinar adenocarcinoma.

Metastases to the oro-facial tissues can involve the oral mucosa, jawbones and salivary glands; lung, kidney, prostate and colon-rectum in males, uterus, breast, ovary and lungs in females are the most frequent primary localisations. It is accepted that metastatic neoplasms in the oro-facial region show high predilection for sites with peculiar clinical conditions, such as the parodontal inflammation or edentulous individuals bearing prosthesis.

The molar and premolar regions of the jawbones and the post-extraction sites frequently are involved; this was related to the rich vascularisation and high bone marrow content and/or to re-organisation of the blood clot of such sites. This report highlights the importance of histological examination of gingival-parodontal inflamed tissues when plaque and calculus accumulations have been excluded as primary causes.

DELAYED SCLEROSING GRANULOMATOUS REACTION TO HYALURONIC ACID REINFORCED WITH POLY-HYDROXY-ETHYL-METHACRYLATE INJECTION. DR. SAVERIO CAPODIFERRO^A, PROF. EUGENIO MAIORANO^A, DR. PASQUALE SPORTELLI^B, DR. ELIANO CASCARDI^A, PROF. ANNA NAPOLI^A, PROF. GIANFRANCO FAVIA^A. ^A UNIVERSITY OF BARI, ^B POLICLINICO HOSPITAL OF BARI

Objective: On the basis of manufacturers' and some authors' claims, all commonly used injection materials for aesthetic correction and different formulations of hyaluronic acid (HA), with or without adjunctive substances, result in no immunogenic reactions or other complications; nevertheless, unexpected, late or early adverse reactions have been reported. Overall, HA reinforced with hydroxyethyl-methacrylate (HEMA) can promote the formation of late foreign body granulomas (FBGs). The authors report on the histological (conventional and confocal laser scanning microscopy) features of a case occurred 10 years after the injection of HA+HEMA in the lower lip of a female patient.

Findings: The nodular lesion was mainly composed by several almost empty and polygonal spaces, surrounded by fibrous collagen and sparse multinucleated giant cells, pointing at long-standing FBG. The polygonal spaces were 20–120µm in size and partly filled with translucent particles, with a broken-glass appearance.

Conclusions: HA is a constituent of several normal tissues and, as such, does not lead to adverse reactions. When FBG is present, one should argue that additional components were bound to HA. HEMA has been used as a stabilizer of HA-based fillers but it is known to induce transient macrophagic reaction, fibroblast proliferation with scarce collagen deposition and multinucleated giant cells. The morphological features of the present case are consistent with previous injection of HA+HEMA and the prolonged time interval from injection to clinical manifestations indicates the adverse reaction is slowly progressive. Also, it was postulated that macrophages would incorporate foreign

particles, thus keeping the foreign particles in a latent stage. Subsequently, additional priming events (e.g., supervening infections) would be needed to re-activate macrophages, lead to multinucleated giant cell accumulation and finally to wide granulomatous reaction. Such pathogenetic mechanism may explain the prolonged course of the disease, with only late development of clinically detectable nodular lesions.

LYMPHANGIOGENESIS MARKERS IN METASTATIC LYMPH NODES OF ORAL SQUAMOUS CELL CARCINOMA. DR. HAIZAL HUSSAINI^A, DR. NURUL RUZIANTEE IBRAHIM^B, DR. BENEDICT SEO^A, PROF. ROSNAH ZAIN^C, PROF. ALISON RICH^A. ^A UNIVERSITY OF OTAGO, ^B INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA, ^C MAHSA UNIVERSITY

Regional lymph node metastasis is a crucial negative prognostic factor in oral squamous cell carcinoma (OSCC). Whilst angiogenic and lymphangiogenic factors have been extensively investigated in primary OSCC, their expression in metastatic lymph nodes remains uncertain.

Objectives: To investigate the expression of markers associated with lymphangiogenesis [vascular endothelial growth factor (VEGF)-C, D, VEGF receptor 3 (VEGFR3) and prospero homeobox 1 protein (PROX1)] in cervical lymph nodes from OSCC patients with and without metastatic deposits. Formalin-fixed paraffin-embedded (FFPE) blocks were accessioned from the Oral Cancer Research Coordinating Centre (OCRCC), University of Malaya, Malaysia. Samples were divided into two groups; Group A comprised cervical lymph nodes with histologically confirmed metastatic deposits from primary OSCC (n=17) and Group B, cervical lymph nodes from patients with primary OSCC without metastatic deposits, (n=17). Immunohistochemistry (IHC) was undertaken with antibodies against VEGFC, VEGF-D, VEGFR3 and PROX1. Quantitative analysis using ImageJ was used to delineate the extent of positivity (proportion and intensity) and lymphatic vessel density (LVD). Three samples from each group were subsequently selected for gene expression analysis of the lymphangiogenic markers (VEGFC, VEGFD, VEGFR3 and PROX) using qPCR.

Findings: IHC showed significantly greater VEGFC expression in Group A compared with Group B (p=0.0002). Significant positive correlation was found between VEGFC and TNM stage (p=0.004). No statistically significant differences were observed in the protein and gene expression level of the other tested markers.

Conclusions: This is the first study demonstrating significant overexpression of VEGFC in positive lymph nodes and suggests that VEGFC is an important growth factor involved in OSCC lymph node metastasis.

ACTIVATING NOTCH1 MUTATION IN HIGH-GRADE EVOLUTION OF ADENOID CYSTIC CARCINOMA. DR. CHUAN-XIANG ZHOU^A, PROF. TIEJUN LI^B. ^A PEKING UNIVERSITY SCHOOL AND HOSPITAL OF STOMATOLOGY, ^B PEKING UNIVERSITY SCHOOL AND HOSPITAL OF STOMATOLOGY

Objective: Salivary adenoid cystic carcinoma (SACC) is identified as a tumor with biphasic differentiation of epithelial

and myoepithelial cells, showing tubular, cribriform and solid subtypes. The solid subtype is considered as high-grade with more aggressiveness and poorer prognosis. However, the molecular mechanism remains unknown. The aim of this study was to identify the clinicopathological characteristics of high-grade SACC, to clarify the molecular mechanism underline its distinct characteristics, and hopefully to explore potential molecular targets for SACC therapy.

Study design: Activated Notch1 (NICD) and myoepithelial cell markers were used for immunohistochemistry in 119 SACCs including 59 cribriform-tubular and 60 solid subtypes. Notch1 mutations were analyzed by DNA sequencing in all the SACC cases. The effect of activating NOTCH pathway on the biological behavior of SACC cell lines was investigated with transfection and functional studies.

Results: Notch1 mutations in the negative regulatory region and Pro-Glu-Ser-Thr-rich domains were identified in 26 of 119 patients with SACC, and 24 (92%) of 26 Notch1 mutant cases were predicted to be activating with NICD positive, with 2 cases predicted to be inactivating with NICD negative. Most (23/24, 96%) cases with activating Notch1 mutations were high-grade solid SACCs. Meantime, only 17 (18%) of 93 NOTCH1 wild-type tumors stained positive, and 16 of 17 tumors with NICD positive were high-grade solid subtypes. Furthermore, high-grade solid SACCs showed dramatically decreased short-term survival, tended to suffer bone invasion and metastasis, and presented NICD positive and myoepithelial cell markers negative simultaneously. Transfection and functional studies showed forced NICD expression promoted high level of proliferation and migration in SACC cells.

Conclusions: Our findings showed activating Notch1 mutations were related to the loss of myoepithelial differentiation in high-grade SACCs and might contribute to higher proliferation and worse outcome in high-grade tumors. Targeting the Notch signaling pathway in high-grade SACCs may provide therapeutic benefits.

HISTOMORPHOLOGICAL COMPARISON OF SOLITARY KERATOCYST AND KERATOCYST ASSOCIATED WITH BASAL CELL NEVOID SYNDROME (NBCS). DR. VERONICA PALACIOS, DR. RODRIGO GOYA. PONTIFICIA UNIVERSIDAD CATÓLICA DE CHILE

Introduction: The keratocyst of the jaws is an odontogenic entity of locally aggressive biological behavior, with potential for progressive growth, with infiltrative growth, despite being a completely benign cystic lesion. However when associated with NBCS, the behavior is more aggressive, without changing its benign biological nature.

Objectives: compare the histopathological findings of solitary keratocyst v / s associated with Basal Cellular Nevoid Syndrome.

Material and method: The histology of 20 cases of solitary keratocyst is reviewed and compared with 20 keratocysts associated with SNBC. The characteristics of the epithelium and the connective tissue that make up the cystic capsule are evaluated; all stained with hematoxylin eosin.

Conclusions: There are histomorphological differences in both types of keratocyst; the most outstanding difference is the presence of a remarkable number of satellite cysts in the cystic

capsule, of those associated with the SNBC, which would explain the high recurrence rate of them.

SYNCHRONOUS EXPRESSION OF E-CADHERIN AND SYNDECAN-1 IN AMELOBLASTOMA: A PRELIMINARY STUDY. MRS.

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Objectives: This study aimed to evaluate the percentage of expression and the possibility of synchronicity between E-cadherin (Ecad) and Epithelial syndecan-1 (Syn-1E) in Unicystic ameloblastoma (UAM) and solid multicystic ameloblastoma (SMA) and the association between this synchronicity and stromal immunorexpression of Syn1 (Syn1S).

Findings: Immunohistochemical analysis of Ecad and Syn1 was performed for 30 (15 UAM, 15 SMA) cases of ameloblastoma, the percentage of expression was evaluated with the average value for expression, and intensity was evaluated with the Immunomebrane plug-in. (Image J, BioMediTech, Finland) The percentage expression of Ecad and Syn1E was high in UAM. (p<0.05 vs SMA) The stromal expression of Syn1 was high in SMA (p<0.05, vs UAM) and the intensity expression was similar in both types of ameloblastomas. (p>0.05)

Conclusions: We observed synchronicity in the expression of Ecad and Syn1E in both types of ameloblastomas. The adhesiveness of the tumoral cells is probably related to the regulation of expression of both proteins; thus, an increase or reduction of synchronicity is related to cell invasion and the capacity to migration to the stroma, which was reflected in the behavior of the ameloblastomas in the present cases. This assumption may be further supported by an increase in expression of Syn1S in the SMAs; therefore, it is possible that the low synchronicity between Ecad and Syn1E constitute an important factor for the aggressiveness of ameloblastomas.

SECRETORY CARCINOMA OF THE PAROTID GLAND IN A 9-YEAR-OLD FEMALE PATIENT: A CASE REPORT AND REVIEW OF THE LITERATURE. DR. YASER ALHAZMI^A, DR. MARK BURKE^B, DR. THOM LOREE^B, DR. ALFREDO AGUIRRE^A, DR. CHEN GAO^E. ^A SCHOOL OF DENTAL MEDICINE, UNIVERSITY AT BUFFALO, ^B DEPARTMENT OF HEAD & NECK AND PLASTIC & RECONSTRUCTIVE SURGERY, ERIE COUNTY MEDICAL CENTER, ^E SCHOOL OF MEDICINE, DEPARTMENT OF PATHOLOGY, UNIVERSITY AT BUFFALO

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