Abstracts presented at the 17th International Congress on Oral Pathology and Medicine: Joint Meeting with the British Society for Oral & Maxillofacial Pathology, May 25-30, 2014, Harbiye Military Museum and Cultural Centre, Istanbul, Turkey

**ORAL PRESENTATIONS**

**OVER EXPRESSION OF HUR AND PODOPLANIN MAY PREDICT THE DEVELOPMENT OF ORAL CANCER IN PATIENTS WITH ORAL PRENEOPLASTIC LESION** Umma Habiba, Yasunori Totsuka, Department of Oral Pathology and Biology, Hokkaido University, Sapporo, Japan

**Objective:** The risk of malignant transformation of oral preneoplastic lesion (OPL) is difficult to assess. The purpose of this study was to evaluate HuR and podoplanin expression in OPL and their role as a marker of oral cancer risk.

**Study Design:** Fifty-one OPL cases including low and high grade dysplasia were analyzed using immunohistochemistry.

**Results:** Association between the protein expression patterns and clinicopathologic parameters including oral cancer development were analyzed statistically. Out of 51 cases, 24 (47%) turned into malignancy during the follow-up period. Among the malignant cases 18 (75%) and 10 (42%) showed positive podoplanin and high HuR expression, respectively. OPL cases with high HuR (0.000) and podoplanin expression (0.029) are predicted to be more potent to transform into malignancy regardless of histopathology.

**Conclusions:** Taken together, HuR and podoplanin expression could be used as biomarkers to identify OPL patient with substantially high oral cancer risk.

**Keywords:** HuR, Podoplanin, Dysplasia, Oral cancer

**DIAGNOSTIC AND PROGNOSTIC IMPLICATIONS OF CANCER STEM CELLS IN SALIVARY GLAND NEOPLASMS** Alaä M. Shuabat, Benay Yıldırım, Gazi University Faculty of Dentistry, Department of Oral Pathology, Ankara, Turkey

**Objective:** This study aims to determine the implications of the cancer stem cell markers ALDH1, CD166, CD44 and CD24 among different benign, malignant salivary gland tumors and normal salivary glands.

**Study Design:** The study was conducted on 24 malignant, 24 benign salivary gland tumors and 7 normal salivary gland tissues.

**Results:** The highest expression of ALDH was by normal tissues followed by benign and malignant tumors. On the contrary, the highest expression of CD166 was by malignant tumors followed by benign tumors then normal tissues. There was no correlation between metastasis, recurrence, histological grade and CSC markers expression. There was significant difference in ALDH1 expression between ACC and PLGA.

**Conclusions:** CD166 and ALDH1 expression might be used as a marker to differentiate benign and malignant salivary gland tumors. Regarding the prognostic implication there was no difference in the expression of cancer stem cell markers.

**ALDH1 might be a diagnostic marker to differentiate PLGA and ACC.**

**Keywords:** Cancer stem cell, salivary gland tumors, prognosis

**A NEW PROGNOSTIC MODEL FOR EARLY STAGE ORAL TONGUE CANCER** Alhadi Almangush1, Ricardo D. Coletta2, Ibrahim O. Bello3, Carolina Bitu4, Laura K. Mäkinen5, Joonas H. Kauppila6, Jaana Haggström7, Ylemi Sointi8, Petri Koivunen9, Reidar Grénman10, Tuula Salo11, Ilmo Leivo11, 1Department of Pathology, Haartman Institute, University of Helsinki, Helsinki, Finland; 2Department of Oral Diagnosis, School of Dentistry, State University of Campinas, Piracicaba, São Paulo, Brazil; 3Department of Oral Medicine and Diagnostic Sciences, King Saud University, Riyadh, Saudi Arabia; 4Department of Diagnostics and Oral Medicine, Institute of Dentistry, University of Oulu, Oulu, Finland; 5Department of Otorhinolaryngology and Head and Neck Surgery, Helsinki University Central Hospital, Helsinki, Finland; 6Departments of Surgery and Pathology, University of Oulu and Oulu University Hospital, Oulu, Finland; 7Department of Oral Pathology, Institute of Dentistry, University of Helsinki, Helsinki, Finland; 8Department of Pathology and Forensic Medicine, University of Eastern Finland, Kuopio, Finland; 9Department of Otorhinolaryngology — Head and Neck Surgery, Oulu University Central Hospital, Oulu, Finland; 10Department of Otorhinolaryngology — Head and Neck Surgery, Turku University Hospital, University of Turku, Turku, Finland; 11Department of Pathology, University of Turku, Turku, Finland

**Objective:** Histopathological grading of surgically resected oral tongue squamous cell carcinoma (OTSCC) still an important guide of postoperative management. Several histopathological models have been introduced as prognosticators in OTSCC, but none of them were get acceptance in clinical practice. This study introduces a simple novel model for prognostication of early OTSCC.

**Study Design:** A total of 311 cases treated for early OTSCC were scored for tumor budding (B) and depth of invasion (D) and then the scored parameters were combined in a predictive model (BD model).

**Results:** Cases with high BD scores (score 2) were showed to have more loco-regional recurrence and deaths from OTSCC (p = 0.003 and p = 0.0001 respectively). No significant correlation between BD scores and other causes of death was observed.

**Conclusions:** The current prognostic model is a promising indicator for patients’ survival in early OTSCC. Further validation is recommended.

**Keywords:** Oral tongue squamous cell carcinoma, BD model, Prognosis
THE EFFECT OF CHROME-COBALT AND ACRYLIC PALATAL PLATES ON EXPERIMENTAL DENTURE STOMATITIS IN WISTAR RAT
Muhammad Ali Kashmoola1, Basma Ezzat Mustafa2, Nazih Shaaban Mustafa3, 1Department of Oral Pathology and Medicine, Kulliyyah of Dentistry, International Islamic University Malaysia; 2Department of Basic Medical Sciences, Kulliyyah of Dentistry, International Islamic University Malaysia; 3Department of Oral and Maxillofacial Surgery, Kulliyyah of Dentistry, International Islamic University Malaysia

Objective: To compare effect of acrylic and chrome-cobalt on experimental oral candidiasis.

Study Design: 72 male Wistar rats were divided into group1 and group2 experimental groups and a control group. Group 1 includes animals fitted with acrylic palatal plates, 12 of them inoculated with candida albicans, group 2 includes animals fitted with chrome-cobalt palatal plates, 12 of them inoculated with candida albicans. The control group includes animals inoculated with candida albicans on palate, and animals left without any treatment.

Results: Palatal candidiasis resulted in group 1, with alternating epithelial hyperplasia and atrophy, intra-epithelial polymorphonuclear leukocyte infiltration and chronic inflammatory cell infiltration in connective tissue, transmission of candida from yeast into mycelium was observed. Group 2 did not exhibit palatal candidiasis; but only slight hyperkeratokeratinization.

Conclusions: Presence of acute in association with Candida albicans is required for oral candidiasis, while Chrome-Cobalt inoculated with Candida albicans caused hyperkeratosis and slight epithelial hyperplasia.

Keywords: experimental, oral candidiasis, candida albicans,chrome-cobalt, acrylic, rat,

IMMUNOLOGICAL CHANGES IN SECONDARY SJOGREN SYNDROME (COMPARATIVE STUDY) Basma Ezzat Mustafa Al Ahmade1, Nazih Sh. Mustafa2, Muhammad A. Kashmool3, Raida Khalil4, 1Assistant Professor, Head of Dept. of Basic Medical Sciences, Kulliyyah of Dentistry, International Islamic University Malaysia; 2Assistant Professor, Head of Dept. of Oral and Maxillofacial Surgery, Kulliyyah of Dentistry, International Islamic University Malaysia; 3Department of Oral and Maxillofacial Surgery, Kulliyyah of Dentistry, International Islamic University Malaysia

Objective: To compare effect of acrylic and chrome-cobalt on experimental oral candidiasis.

Study Design: 72 male Wistar rats were divided into group 1 and group 2 experimental groups and a control group. Group 1 includes animals fitted with acrylic palatal plates, 12 of them inoculated with candida albicans, group 2 includes animals fitted with chrome-cobalt palatal plates, 12 of them inoculated with candida albicans. The control group includes animals inoculated with candida albicans on palate, and animals left without any treatment.

Results: Palatal candidiasis resulted in group 1, with alternating epithelial hyperplasia and atrophy, intra-epithelial polymorphonuclear leukocyte infiltration and chronic inflammatory cell infiltration in connective tissue, transmission of candida from yeast into mycelium was observed. Group 2 did not exhibit palatal candidiasis; but only slight hyperkeratokeratinization.

Conclusions: Presence of acute in association with Candida albicans is required for oral candidiasis, while Chrome-Cobalt inoculated with Candida albicans caused hyperkeratosis and slight epithelial hyperplasia.

Keywords: experimental, oral candidiasis, candida albicans,chrome-cobalt, acrylic, rat,

THE EFFECT OF NOVEL FLAX OIL-BASED IMPLANT COATING ON BONE HEALING PROCESS (IN VIVO ANIMAL STUDY) Nazih Shaaban Mustafa1, Basma E. Mustafa Al Ahmad2, Ammar A. Mustafa3, Muhammad A. Kashmool3, 1Assistant Professor, Head of Dept. of Oral and Maxillofacial Surgery, Kulliyyah of Dentistry, International Islamic University Malaysia; 2Assistant Professor, Head of Dept. of Basic Medical Sciences, Kulliyyah of Dentistry, International Islamic University Malaysia; 3Assistant Professor, Kulliyyah of Dentistry, International Islamic University Malaysia

Objective: This pilot study was designed to investigate the effect of new implant coating material on postoperative bone healing process.

Study Design: Experimental formula of flax oil-based implant coating was prepared. Twelve (12) white New Zealand male rabbits were randomly distributed into four groups (n=3). Surgery was performed to prepare 2mm hole in the zygomatic bone. The right side was filled with the test material (test group), whereas the hole in the left side of the same animal was left material free. Bone healing process was investigated after 3, 7, 14, and 21 days.

Results: New growth of normal bone explained by active bone apposition was observed in the test operation area in the narrow space after three days, less postoperative inflammation was observed explained by less inflammatory cells in the operation area.

Conclusions: The new formula could represent a promising implant coating material for better bone healing process and hence faster osseointegration.

Keywords: Flax seed, coating, implant, Bone, Rabbit

CASTLEMAN DISEASE: A DIAGNOSTIC DILEMMA Rabia Bozdogan Arpacı1, Cetin Kocak2, Yasemin Yüyüş Karabuldu1, Ebru Serinsoz Linke1, Tuba Kara2, Çengiz Ozcak2, 1Department of Pathology, Mersin University, Mersin, Turkey; 2Department of Otorhinolaryngology, Mersin University, Mersin, Turkey

Castleman Disease (CD) is a benign lymphoproliferative disease. The etiology is still unknown. It was first described by Castleman et al. in 1956. Clinically it is rare and is always a diagnostic dilemma. It mostly seems in adults and it is rare in children. Mediastinum is the most common location and followed by neck, abdomen and axilla. It might be also found in lymph nodes in any region of the body. There are two pathological subtypes such as hyalen vascular type (%90) and plasma cell type (%10). In the parotid region it is also rare and very difficult to reach the correct diagnosis particularly with fine needle aspiration (FNA) and also by histologically.

Here we present a rare case of CD in parotid gland region findings of FNA and histological features.