

reddish, multilobulated and ulcerated nodule in posterior maxilla with 1 month of evolution. Computerized tomography showed an expansive tumor destroying the alveolar bone around the molars and invading the maxillary sinus. The material of the first incisional biopsy was not enough to conclude the diagnosis. Before a second biopsy was done, the patient delivered normally a healthy boy. Histologically, the tumor was composed by round cells with prominent cytoplasm and pleomorphic nuclei, sometimes multinucleated. Areas with spindle and epithelioid cells were also found, among osteoid or chondroid matrix. The lesion was extremely vascularized, with mixomatous and telangiectatic regions. The final diagnosis was conventional osteosarcoma, and the lesion was surgically removed, with clear margins. A micro-surgical flap was used for reconstruction and the patient received adjuvant radiation and chemotherapy. She has been followed up for one year, with no signs of metastasis or recurrence. The influence of pregnancy on the initiation, promotion and development of sarcomas is not well established. To the best of our knowledge, no more than 10 cases of jaw osteosarcoma in pregnant women have been reported up to now. The co-existence of malignancy and pregnancy is very uncommon, and sometimes a challenge for medical professionals, especially regarding the diagnosis, the use of ancillary examinations and the treatment.

SEROTONIN AND SEROTONIN DERIVATIVES: NEW APPLICATION FOR VARIOUS SKIN DISORDERS.

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Objectives: In the human body, serotonin is well known as a neurotransmitter that regulates mood, appetite and sleep. However, more than 90% of the serotonin in a human body is generated in gastrointestinal, stored in platelets, circulating whole body except brain, and contributes to various physiological function. Plants also produce serotonin, and this phyto-serotonin is known to be involved in plant growth, flowering, mature and senescence. The most difference between phyto-serotonin and human serotonin is phyto-serotonin turns to various serotonin derivatives to store in flowers and fruits during mature and senescence. Serotonin derivatives were dramatically increased against pathogen attack. There are 4 types of major serotonin derivatives. Among these 4 compounds, Caf-feoylserotonin (CaS), Feruloylserotonin (FS) and Coumaroyl-serotonin (CS) are major components which mainly found from some plant extracts. Almost all human diseases are accompanied by ROS generation, so we investigated the anti-oxidant ability of serotonin derivatives to make sure that they have a potential as therapeutic reagent.

Findings: As a result, serotonin and serotonin derivatives were found to have up to 16 fold higher antioxidant levels than Trolox which is the standard material of the antioxidant assay. In addition, CaS and 5-HT have been shown to inhibit protein damage and DNA damage either. Serotonin derivatives promote cell proliferation and migration and inhibit melanogenesis and cell apoptosis. Interestingly, 5-HT regulated cell proliferation and cell migration only through ERK/AP-1/MMP9 pathway while additional Akt/NF- κ B/MMP9 pathway was involved in effects of CaS.

Conclusions: These results suggest that CaS can enhance keratinocyte proliferation and migration. Overall, serotonin derivatives might have potential as reagents beneficial for wound closing, cell regeneration and anti-melanogenesis.

TERMINAL AMINE ISOTOPIC LABELING OF SUBSTRATES (TAILS) ANALYSIS REVEALS NOVEL POTENTIAL SUBSTRATES OF TUMOR SUPPRESSIVE MATRIX METALLOPROTEINASE-8 IN ORAL TONGUE CARCINOMA. MS. KRISTA JUURIKKA^A, DR. PIIRJO ÄSTRÖM^A, DR. ANTOINE DUFOUR^B, DR. MEERI SUTINEN^A, PROF. CHRISTOPHER OVERALL^B, PROF. TUULA SALO^A. ^A MEDICAL RESEARCH CENTER (MRC) OULU, OULU UNIVERSITY HOSPITAL AND UNIVERSITY OF OULU, OULU, ^B UNIVERSITY OF BRITISH COLUMBIA, VANCOUVER

Objectives: Oral tongue squamous cell carcinoma (OTSCC) is an aggressive cancer with poor survival and increasing incidence. Matrix metalloproteinase-8 (MMP-8), unlike most MMPs, provides protective effects in various human cancers including OTSCC. Yet, the mechanism behind these effects remain unclear. Knowledge of the molecular basis of disease progression is crucial for developing novel treatments. Thus our study aimed to identify novel candidate substrates of MMP-8 to examine the mechanisms behind its tumor-suppressive actions in OTSCC.

Findings: We have previously generated stably MMP-8 overexpressing oral squamous cell carcinoma cell line (HSC-3 MMP-8+ cells) and showed that overexpression of MMP-8 significantly decreased the cell migration and invasion. However, the molecular mechanisms hampering the motility of these cells remained unrevealed. The current study aimed to unravel these mechanisms by subjecting the secretomes of MMP-8+ and control HSC-3 cells to Terminal Amine Isotopic Labeling of Substrates (TAILS) analysis to find novel candidate substrates for MMP-8. The analysis revealed cleaved proteins, including dysadherin, 60S ribosomal protein L13, kallikrein-5, lipolysis-stimulated lipoprotein receptor, matrix-remodeling-associated protein 7, POTE ankyrin domain family member E, stathmin 1 and tubulin alpha-1C chain, which were enriched in MMP-8+ secretomes. Dysadherin is known to promote metastasis of various cancers and decrease cell adhesion. MMP-8+ cells showed decreased levels of dysadherin, suggesting a cleavage by MMP-8 from the cell membrane. Moreover, the adhesion of MMP-8+ cells was enhanced which might affect the migration.

Conclusions: Several novel candidate substrates of MMP-8 were revealed by TAILS analysis. The potential substrates, including dysadherin, may play crucial role in the changed behavior of MMP-8+ cells and needs to be further explored for their potential role in OTSCC. The cleavage of tumor-promoting dysadherin from the cell membrane might be one of the mechanisms by which MMP-8 increases tumor cell adhesion and thereby suppresses migration.

MEDIAN MAXILLARY ANTERIOR ALVEOLAR CLEFT ASSOCIATED WITH MEDIAN ALVEOLAR CYST: RADIOGRAPHIC AND PATHOLOGICAL CORRELATION..

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Introduction: Median maxillary anterior alveolar cleft (MAAC) is a defect presenting in 1 % of the population. MAAC was first reported by Gier and Fast in 1967. A study of 66 human