

Salivary Gland Mucoepidermoid Carcinoma –
Comparative Study of Immunohistochemistry and
Postsurgical Radiation Therapy

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Introduction: Mucoepidermoid carcinoma is the most common salivary gland carcinoma. This research review is a comparative study on Immunohistochemical markers such as sex hormone receptors, Human epidermal growth factor receptors and gene fusions as MECT1/MAML2 and CRCTC1/3-MAML2 which are playing vital role during diagnosis and prognosis of cancer. Immunohistochemistry has limelight due to its accuracy and interpretation of suitable treatment methods. Postoperative adjuvant radiation therapy in comparative analysis from published data shows its promising results in local containment of cancer and metastatic free survival rate.

Aim: Mucoepidermoid Carcinoma is the most vigorous and common malignancy of the salivary gland. Interpretation and evaluation of major Immunohistochemical markers for better prognosis should be done accurately to save patients' health from high grade metastatic transformation.

Materials and methods: This review article is a comparative evaluation of major markers for diagnosis and prognosis to understand the grade and required treatment measures, and efficacy of post-surgical adjuvant radiation therapy.

Results: From the published data, comparative analysis was that Androgen receptor expression was evenly distributed in patients with only high-grade tumour while progesterone and oestrogen receptor expression were inconsistent and negative in the clinical results. Human epidermal growth factor receptor proved its roles in inducing malignant transformation of the tumour, hence promising markers for high grade (stained clearly) and low grade (stained poorly) MEC tumour. Gene fusions and translocations are having an important role in progression and survival of the tumour cells, in which gene CRCTC1/3-MAML2 fusions are seen in 66% cases associated with better prognosis, RAS/PIK3CA gives worst prognosis and seen in 6.9%. Promising highly specific marker of MEC for diagnosis and prognosis is MECT1/MAML2 fusion which was seen in 66%. Post-surgical radiation therapy data monitoring 44 patients showed local control and disease-free survival.

Conclusion: Androgen receptors are expressed in high grade tumours. Researchers in future sheds the parallel target of diagnoses and treatment on HER2 receptors and MECT1/MAML2 fusions.

Conflict of interests/Comments: There are no conflict of interest to declare