

Relationship between Survival and Histopathological Grading in a Group of Patients with Mucoepidermoid Carcinoma

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Mucoepidermoid carcinoma (MEC) is defined as a malignant epithelial neoplasm of salivary gland origin showing diverse clinical behaviour. Armed Force Institute of Pathology (AFIP) grading system is based on histopathological evaluation of five features. These features; namely, intra-cystic component of less than 20%, neural invasion, necrosis, four or more mitotic figures per ten high-power fields, and cellular anaplasia; are used to divide the MECs in to three types: low, intermediate and high grade. Therefore, the objective of the present study was to analyse whether survival data obtained for the group of 34 patients affected with MEC correlates with the AFIP grading obtained for each patient.

The study sample consisted of thirty four patients with MEC. Hematoxylin and eosin stained slides were used to re-grade according to the criteria specified in AFIP grading. Follow-up data, namely, survival in months and the outcome i.e., whether the patient had died due to disease or whether the patient is living with or without disease was obtained by sending a questionnaire to the patients/ relatives.

AFIP grading revealed 73.5% (25/34) of patients with low grade tumours. Approximately, 2.94% (1/34) and 23.52% (8/34) were intermediate and high grade tumours. The overall survival of the patients ranged from 4 to 108 months (mean = 24.11, median = 13). Recurrences were significantly more common in patients who had high grade tumours (chi-square test; $p = 0.004$). Overall disease specific five year survival of the patients included in the study sample was found to be 78%. At the end of the followup period (5 - 108 months) five patients had died due to the disease. Out of these patients, four patients had high grade tumours while one patient had a low grade tumour. The mean survival time for low, intermediate and high grade tumours were 27.64, 16 and 14.12 months, respectively.

In conclusion, histopathological grade was found to carry prognostic significance for patients with MEC. As low grade tumours could also rarely behave in an aggressive manner, further studies using gene expression and molecular markers may be required to predict the behaviour of MECs with 100% accuracy.