



Immunohistochemical Expression of HER-2/neu in Oral Squamous Cell Carcinoma and Its Clinicopathological Correlation

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Abstract:

Oral squamous cell carcinoma (OSCC) is a common malignancy of the head and neck region, particularly in developing countries, and continues to show poor prognosis due to late diagnosis and tumor heterogeneity. The present study aimed to evaluate the immunohistochemical expression of HER-2/neu in OSCC and to analyse its association with various clinicopathological parameters. A retrospective cross-sectional study was conducted on histopathologically confirmed OSCC cases. Formalin-fixed, paraffin-embedded tissue sections were subjected to immunohistochemical staining using HER-2/neu antibody, and expression was assessed based on established scoring criteria. Clinicopathological variables including age, gender, anatomical site, tumor size, histological grade, lymph node status, TNM staging, lymphovascular invasion, and tumor-infiltrating lymphocyte density were evaluated and statistically correlated with HER-2/neu expression. The results demonstrated that HER-2/neu expression was present in a subset of cases with variable staining intensity, with the majority showing negative or low expression, and a smaller proportion exhibiting equivocal or positive immunoreactivity. No statistically significant association was found between HER-2/neu expression and most clinicopathological parameters, although relatively higher expression was noted in advanced tumor stages and poorly differentiated tumors. These findings suggest that HER-2/neu has limited prognostic significance in OSCC, highlighting the need for further large-scale studies to better define its biological and therapeutic relevance.

Keywords:

Oral squamous cell carcinoma, her-2/neu, immunohistochemistry, prognostic marker.