ABSTRACT

Background:

To study the role of epithelial mesenchymal transition in Oral squamous cell carcinoma by evaluating E-Cadherin and Vimentin expression in relation to histopathological grading and nodal metastasis.

Methods:

Biopsies/ Wide excision specimens in cases of oral squamous cell carcinoma were evaluated for the degree of differentiation using haematoxylin and eosin stained sections. Immunoreactive score for E-Cadherin and Vimentin expression were estimated and correlated with grade of the tumour and presence of nodal metastasis.

Results:

E-cadherin was expressed with high immunoreactive score in all the well differentiated (12 of 12) and most of moderately differentiated tumours (22 of 23 cases). Low immunoreactivity was observed in 4 out of 5 cases of Poorly differentiated tumour. Vimentin expression was low in majority of Well differentiated cases and high in 13 out of 23 cases of moderately differentiated grade. High immunoreactivity was noted in all the cases of Poorly differentiated tumours. In presence of nodal
metastasis, Vimentin was highly expressed, and E-cadherin also showed high immunoreactivity.

Conclusion:

There is a significant relationship between expression of E-cadherin and Vimentin with the histopathological grading of Oral squamous cell carcinoma and Vimentin expression with nodal metastasis. But no statistical significance was observed between E-cadherin expression and nodal metastasis. Thus the use of immunohistochemical stains E-cadherin and Vimentin can be used as biomarkers for predicting tumour behaviour, prognosis, survival and management of patient.

Keywords:

E-cadherin, Vimentin, Immunohistochemistry, Oral squamous cell carcinoma.