IMMUNOHISTOCHEMICAL EXPRESSION OF β-CATENIN IN ORAL SQUAMOUS CELL CARCINOMA AND VERRUCOUS CARCINOMA

by

Dr. Laxmidevi B.L.

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Dr. Rekha K.

DEPARTMENT OF ORAL PATHOLOGY
S.D.M. COLLEGE OF DENTAL SCIENCES & HOSPITAL,
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ABSTRACT

β –catenin has a critical role in E-cadherin-mediated cell adhesion and it also function as a downstream signaling molecule in Wnt pathway. The subcellular localization and activity of β-catenin are tightly regulated with in the cell. Dysregulation of β-catenin play an important role in invasion and metastasis of cancer cells through loss of cell-cell adhesion. Abnormal accumalation of β-catenin in the cytoplasm and nucleus occurs as result of activation of Wnt pathway, is characteristics of various types of carcinomas.

This study was aimed to evaluate the expression of β-catenin in total of 60 cases of oral carcinomas, which included histopathologically diagnosed 30 cases of oral squamous cell carcinomas(WDSCC-10 cases,MDSCC-10 cases, PDSCC- 10 cases) and 30 cases of verrucous carcinomas by immunohistochemistry.

β-catenin showed intense membranous expression in the normal epithelium was used as control. In 30 cases of OSCCs 17 cases expressed β-catenin(9 cases-intense stain,4-cases moderate stain,4-cases mild stain),In WDSCC 100% positivity was seen with 40% in MDSCC and 30% in PDSCC. Verrucous carcinoma showed 83.33% positivity with β-catenin. Predominant membranous staining of β-catenin was observed in majority of the cases except poorly differentiated SCC which showed predominant cytoplasmic staining.

Prominent down regulation of β-catenin expression and absence of membranous staining in less differentiated tumours compared to well differentiated ones indicate an aggressive biological behaviour of these tumors.

(**Key words** – β-catenin, squamous cell carcinoma, verrucous carcinoma, cell adhesion, immunohistochemistry).