IMMUNOHISTOCHEMICAL EXPRESSION OF CYCLIN B1 IN NORMAL, HYPERPLASTIC, DYSPLASTIC ORAL EPITHELIUM AND ORAL SQUAMOUS CELL CARCINOMA

by

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Abstract:

Cyclin B1 has an important role in the G2-M phase transition of the cell cycle and is overexpressed in various tumors. Although most of the studies have focused on the controlled G1-S transition phase, which is frequently altered in tumorigenesis, the control of subsequent stages of the cell cycle is also important but less investigated.

The aim of the present study was to examine the expression of Cyclin B1 in normal, hyperplastic, dysplastic oral epithelium and oral squamous cell carcinoma immunohistochemically. The cases studied include 5 normal mucosae, 7 epithelial hyperplasias, 27 oral epithelial dysplasias and 25 oral squamous cell carcinomas.

Nuclear labeling index **(nLI)**, cytoplasmic labeling index **(cLI)** and nuclear and cytoplasmic labeling index **(n&cLI)** were obtained from the stained slides.

More than 50% of the cases from each study group showed cytoplasmic dominant expression. Not all the cases from any of the study sample selected for analysis showed cyclin B1 overexpression.

Our study showed that combined nuclear and cytoplasmic labeling index to be comparatively more useful than the other two parameters considered for assessing the type of lesion.

So we believe that cyclin B1 may not prove useful as a tumor marker and as a consequential marker. Its role as a prognostic indicator is worth investigating.

Keywords: (Cyclin B1; immunohistochemistry; epithelial hyperplasia, epithelial dysplasia; squamous cell carcinoma)