ABSTRACT

BACKGROUND:

Oral squamous cell carcinoma (OSCC) is the most frequent malignant tumour of the oral cavity. It is accepted that screening for oral squamous cell carcinomas and oral premalignant lesions may decrease the devastating morbidity and mortality associated with the disease. This has lead to widespread research for identification of molecular based bio-markers. Among them survivin is a recently characterised IAP protein which is a member of the inhibitor of apoptosis family. Further investigation of survivin during tumour growth and progression may yield important insights into its functional role in carcinogenesis.

OBJECTIVES:

To compare the expression of survivin in oral epithelial dysplasias and oral squamous cell carcinoma with that in normal mucosa.

MATERIALS AND METHODS:

Study subjects consisted of formalin fixed paraffin embedded blocks of histologically confirmed cases of oral epithelial dysplasia (n=30), oral squamous cell carcinoma (OSCC) (n=30) and normal mucosa (n=30) in the age group of 20-70 years. Immunohistochemical staining was performed on 4µm sections of paraffin embedded sections with the use of survivin rabbit monoclonal antibody (PathnSitu).
RESULTS:

There was statistical significance between the expression of survivin among oral epithelial dysplasia, oral squamous cell carcinoma and normal mucosa with a p value of 0.001 (Kruskal-Wallis test significant at 0.01 level).

INTERPRETATION AND CONCLUSION:

Results showed that there is significant up regulation of survivin expression in oral epithelial dysplasias and oral squamous cell carcinoma when compared to that in normal mucosa. It is concluded that survivin which is an inhibitor of apoptosis protein can be identified as a useful tool for the identification of precancerous lesions at higher risk for progression into invasive carcinoma.

KEYWORDS:

Squamous cell carcinoma; oral epithelial dysplasia; survivin; inhibitor of apoptosis; immunohistochemistry.