

ABSTRACT

BACKGROUND

Oral cancer is the most common malignancy of head and neck region its ranking 6th position of all malignancy. The most commonly occurring sites are tongue, buccal mucosa, floor of the mouth, lip and gingiva. Smoking tobacco and pan chewing are the etiological factor for the occurrence of oral squamous cell carcinoma. Inhibition or imbalance of apoptosis or programmed cell death leads to cancer. Two pathways are involved in apoptosis 1. Intrinsic or mitochondrial pathway 2. Extrinsic pathway. Caspase-3 enzymes or involved in the apoptosis.

AIM

To Study the Immunohistochemical expression of caspase-3 in oral squamous cell carcinoma.

MATERIALS AND METHODS

In our present study, totally 25 samples were included to detect immunohistochemical expression of caspase-3. Twenty, formalin fixed, paraffin embedded wax tissues histopathologically diagnosed oral squamous cell carcinoma were included as case (group I). Five normal buccal and gingival tissue formalin fixed, paraffin embedded wax tissues included as control (groupII). Tissues were sectioned 0.5micron thickness and stained with caspase-3 antibody. The results were obtained and statistically analyzed by using Mann-Whitney test.

RESULTS

Increased expression of caspase-3 was seen in epithelium and connective tissue of oral squamous cell carcinoma tissue. In most of the normal mucosa expression of caspase-3 was absent. The p value for epithelium and connective tissue was $p < 0.008$ and $p < 0.016$ respectively which was highly significant.

CONCLUSION

The results of our present study demonstrated that increased caspase-3 expression was seen in oral squamous cell carcinoma tissues than that of the normal mucosa. These findings indicate the caspase-3 expression response to prognosis of the cancer and this has to be explored in a larger sample for further studies.

KEY WORDS

Apoptosis, Caspase-3, Oral cancer.