

## عنوان مقاله:

Relative Expression of SOX2 and OCT4 in Oral Squamous Cell Carcinoma and Oral Epithelial Dysplasia

## محل انتشار:

مجله گزارش های بیوشیمی و زیست شناسی مولکولی، دوره 9، شماره 2 (سال: 1399)

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## خلاصه مقاله:

Background: Over 90% of oral cancers including oral squamous cell carcinoma (OSCC), originate from the oral cavity epithelium. Early detection for this lesion is as important. Evaluating cancer stem cell markers can improve the accuracy of early diagnosis, and be used as an OSCC prognostic indicator. We aimed to evaluate SOX2 and OCT4 gene expression among different grades of OSCC and oral epithelial dysplasia (OED) lesions. Methods: Sixty samples that contains 45 OSCC and 15 OED samples were retrieved from the pathology department archives at the dental school of Mashhad. Demographic and pathological patient data including the tumor stage and tumor grade were assessed. Finally, SOX2 and OCT4 expression was examined using qRT-PCR. Results: There was a significant difference in SOX2 and OCT4 expression between OSCC and OED samples ( $p < 0.001$ ). The mean expression of SOX2 and OCT4 in OSCC samples were significantly higher than in the OED group ( $p < 0.001$ ). The mean expression of SOX2 and OCT4 was higher in grade II and grade III OSCC compared to grade I. There was no significant relationship between the gene expression of SOX2 or OCT4 to the demographic, site and stage of tumors. The correlation between SOX2 and OCT4 expression ( $p = 0.001$ ) was significant in grade III OSCC specimens compared to other grades ( $p = 0.005$ ,  $r = 0.68$ ). Conclusions: The increased expression of SOX2 and OCT4 in higher grades and the significant correlation of these genes with each other among OSCC specimens could suggest the role of SOX2 or OCT4 in oral mucosal carcinogenesis.

## کلمات کلیدی:

OCT4, Oral Epithelial Dysplasia (OED), Oral Squamous Cell Carcinoma (OSCC), SOX2

