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Investigation of Possible Precancerous Viral Markers in Dental Follicles of Asymptomatic Impacted Teeth

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Abstract : It has been suggested that various viruses may play a role in the pathogenesis of cancerous oral lesions in the literature. The aim of this study was to investigate the presence of both possible precancerous viral markers (HPV, HHV8, HSV1, HSV2, and EBV), and p53 and Ki-67 in the dental follicles of asymptomatic impacted teeth. A hundred healthy volunteers, older than 18 years old, included in the study. Dental follicles of extracted impacted teeth were excised and fixated in 10% formaldehyde. Histopathological and immunohistochemical examinations using HPV (containing HPV 8 and HPV 11), p16 (containing HPV 16), HHV8, HSV1, HSV2, EBV, p53 and Ki-67 antibodies were carried out. Also, the immunohistochemical results were correlated with the clinicopathological feature by Chi-square test statistically No dysplasia or neoplasm was observed. 62% of the cases were positive for p16, 32% were positive for EBV, 26% were positive for HSV1, immunohistochemically. All cases were immunonegative for HPV, HSV2, and HHV8. There was statistically significant correlation between overexpression of p53 with both EBV and p16 positivity ($p<0.05$). Direct correlation between higher expression of Ki-67 between EBV immunopositivity was detected ($p<0.05$). Thus, these viruses may be suggested to show trophism to the dental follicles acting as a reservoir. In conclusion, all dental follicles of extracted impacted teeth should be examined histopathologically in order to detect and prevent possible viral oncogenesis.

Keywords : dental follicles, Ki67, p53, precancerous markers viral markers
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