Variations in Cemento-Enamel Junction on Different Aspects in a Sample of Egyptian Premolars

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Abstract

Several studies reviewed the morphology of cemento-enamel junction (CET) in permanent den-tition. These studies have questioned the validity of the data found in twLibooks of oral histology and have hiebliebted deficiencies in ow current understanding of the morphology and distribution of the mineralized tissues that compose the CEJ. The location and nature of the CV are more than descriptive terms used simple to descnbe some aspects of tooth morphology since they have defi-nite clinical significance. Aim: The aim of the present study was to determine the interrelationship of the mineralized tissues that compose the CET in the various surfaces of the Egyptian premolars as well as the chemical profile in each type. Materials and methods: The CEJ in a sample of 50 caries and defect-free human premolars enacted for orthodontic reasons was examined using transmitted light microscope and environmental scanning electron microscope (SEM). The different CET interrelationships were chemically analyzed to determine surface calcium (Ca). phosphorus (P) and carbon (C) wt% using energy-dispersive X-ray analyzer (EDXA). The EDXA chemical profile rest and distribution of different CHI interrelationships at different surfaces were statistically analyzed.

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