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Effect Of Smoking On The Total Concentration Of Salivary Protein And Morphology Of Buccal Cells

Saliva is common biological evidence found in the crime scene. There are no ways to determine whether the saliva is of a smoker or non-smoker which would aid for the investigation. Our study is to determine the effect of smoking on the total concentration of salivary protein and morphology of buccal cell in different types of smokers. The types of smokers to be studied are occasional smokers, moderate smokers and chain smokers. The sample of 20 healthy individuals are to be collected. Total protein concentrations of saliva that are usually affected by the toxins present in cigarette smoke. The total protein concentration calculation is performed by the Bradford method in which protein concentration is quantitatively analysed. The morphological variation of the buccal cells was observed using microscopy method. Our study shows that the variations of total protein concentration between different types of smokers are less significant and there is a difference in the morphology of the buccal cells such as binucleated and bilobed cells were observed in different types of smokers. The buccal cell morphology varies in smokers and non-smokers. This difference in the morphology of buccal cells can be used in narrow down the suspect list from salivary samples.

Keywords: Saliva, salivary protein, buccal cells, smoking

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