Abstract. Background: Fixed orthodontic can increase salivary flow rate because of its mechanical stimuli and as the body’s physiological response that regard as a foreign in the body. The aim of this research is to know the effects of the fixed orthodontic techniques to salivary flow rate and saliva’s calcium. Material and Method: Observational analytic with cross sectional design using samples of saliva stimulated from a young subjects (18-25 years old) in 66 subjects, devided into subjects for controls, edgewise technique and straightwire technique. The subjects obtained by consecutive sampling method based on inclusion and exclusion criteria. Result: The salivary flow rate and saliva’s calcium had significantly difference (p=0.001) for all groups. Salivary flow rate and saliva’s calcium showed significant differences between subjects with fixed orthodontic of edgewise technique and straight wire technique (p <0.05). Conclusion: A fixed orthodontic with edgewise technique and straight wire technique influence the salivary flow rate and saliva’s calcium. Mechanical stimulation process in patients with edgewise technique is higher than straight wire technique.

Aceton Level and Salivary Oral Status In Patient With Type 2 Diabetes Mellitus (In Vivo)

Ameta Primasari¹, Yumi Lindawati¹, Yendriwati¹, Almida Purnama Nasution², Tulus Ikhsan Nasution³
¹Department of Oral Biology Faculty of Dentistry, Universitas Sumatera Utara Medan, Indonesia
²Undergraduate Student Faculty of Dentistry, Universitas Sumatera Utara Medan, Indonesia
³Department of Physics, Faculty of Mathematics And Natural Sciences, Universitas Sumatera Utara Medan, Indonesia
Email: ametaprimasari@yahoo.com

Abstract. Diabetes mellitus is chronic metabolic disease characterized by hyperglycemia due to lack in the production of insulin produced by isled cell of pancreas, and systemic disease associated in oral manifestations. Reduction of salivary flow is one of the oral complication in patients with diabetes mellitus that can cause dry mouth, acidic pH was also observed in diabetec subjects. Acetone is the most abundant compound in the breath, acetone concentrations increased in patients with diabetes mellitus. The objective of this study is to analyze acetone level in mouth and salivary status (salivary flow rate, and salivary pH) in diabetes mellitus type 2 patient, and to analyze the relationship between blood sugar levels and acetone levels, salivary flow rate, and salivary pH. This study is an analytical observational research with cross sectional, and the total samples in this study were 30 patients by purposive sample. Acetone level and stimulated saliva respondents has diagnose as DM was collected by spitting at Aviati Clinic Medan for 5 minutes in the saliva pot, the salivary pH measurement using GC saliva test for pH and acetone level measurement using Diasen. Data analysis using fisher’s exact test showed a significant relationship between blood sugar levels with salivary flow rate (p< 0.05) but didn’t show a significant association between blood sugar levels and acetone levels (p>0.05). Test graph to find out relationship between acetone levels and salivary pH it was found there was correlation between acetone levels and pH was significant. Blood sugar levels are associated with salivary flow rate and acetone levels are associated with salivary pH.