INCREASED ADENOSINE DEAMINASE, DIPEPTIDYL PEPTIDASE-IV ACTIVITIES IN THE SALIVA OF OBESE YOUNG ADULTS

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Introduction: Obesity is the hallmark of the metabolic syndrome representing a major global health problem. It is considered a state of chronic inflammation with minimal exploration of salivary biomarkers. Objectives: Thus, the intent of the present study was to assess the activities of salivary dipeptidyl peptidase IV (DPP-IV), adenosine deaminase (ADA) and lipid peroxidation in obese young and overweight young subjects.

Design and methods: ADA, DPP-IV activities and lipid peroxidation were investigated in saliva, as well as insulin, glucose, HbA1c, HOMA and anthropometric measurements in 149 young adults, including 54 with normal weight, 27 overweight and 68 obese subjects.

Results: Salivary ADA and DPP-IV activities as well as lipid peroxidation were higher in patients with obesity compared to the normal weight group. Correlations between ADA / DPP-IV activities, lipid peroxidation/ADA activity, ADA activity/ hip circumference and BMI / weight were observed. Conclusions: Our results indicate that the increase in the salivary ADA and DPP-IV activities as well as in the lipid peroxidation could be related of the regulation to various aspects of adipose tissue function and inflammatory obesity. It is possible to suggest that these biomarkers may be used as a biochemical test for rapid preliminary evaluation of obesity. Acknowledgments: The authors wish to thank the Federal University of Santa Maria (UFSM), University of West of Santa Catarina (UNOESC), SC, Brazil and Brazilian National Research Council (CNPq) for support in this study. Also, we thank all the volunteers who participated in this study.

Keywords: Adenosine deaminase; Obesity; Saliva.