Association of salivary levels of Ig-A and amylase with oral-dental manifestations in type 2 diabetic patients

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Objective(s): The main objective of this present study was to evaluate the salivary immunoglobulin-A (s-IgA) and salivary amylase levels and their associations with oral-dental manifestations in patients with controlled and non-controlled Type 2 diabetes.

Materials & Methods: This case-control study was performed on 90 subjects who referred to the Diabetes Center of Shahid Bahonar Hospital, Kerman University of Medical Sciences, Kerman, Iran. Participants were divided into three groups: uncontrolled diabetic patients (n=30); controlled diabetic patients (n=30); and healthy individuals (n=30). Unstimulated salivary levels of I-A and amylase were measured. All participants underwent a dental examination to explore the oral-dental manifestations.

Results: Significant higher level of s-IgA was found in uncontrolled diabetic patients compared to controlled diabetic (P≤0.0001) and control subjects (P=0.004). Moreover, the mean levels of s-amylase in uncontrolled patients was significantly higher compared to controlled diabetic (P=0.01) and control subjects (P≤0.0001). Uncontrolled diabetic patients with oral candidiasis, erythematous candidiasis, abscesses, or xerostomia had higher s-IgA levels compared to the controlled diabetic participants.

Conclusion: In conclusion, higher s-amylase and s-IgA concentrations may reflect oral-dental manifestations in T2DM. Moreover, the current findings suggest that s-amylase and s-IgA may serve as a complementary and alternative fluid in screening for diabetes mellitus.