Association between oral and dental hygiene and metabolic syndrome in Azar cohort population

Abstract

Background: The prevalence of metabolic syndrome (MetS) is rapidly rising. According to the relationship of dietary pattern with MetS and its relation with oral and dental health, we designed this study to investigate the association between oral and dental health parameters with each component of MetS in the adult population of the Azar cohort.

Method: This cross-sectional study was carried out on the 15006 participants of the Azar Cohort. Participants were instructed to refer to the cohort center while fasting, and after taking fasting blood samples, biochemical factors were measured. Then, demographic and oral health information was collected by appropriate questionnaires. Participants were categorized by the presence of MetS, and an appropriate comparative analysis was conducted to determine the differences. P value <0.05 was considered as statisrically significant.

Results: The prevalence of MetS in this study was 34.06%. DMFT in MetS group (22.15±8.89) was higher (P<0.001) than control group (20.81±8.94). People who met the MetS criteria had fewer teeth (13.35±11.17), fewer decayed teeth, more missing teeth, and fewer filled teeth (P in all <0.001). Not brushing at all was predictive of an increased odds of MetS, high blood pressure and hyperglycemia. Flossing less than once a day increased the odds of abdominal and hyperglycemia.

Conclusions: Our findings suggest that in people who do not practice oral hygiene, there is an increased risk of metabolic syndrome and its components.

Keywords: Metabolic Syndrome, Dental Caries, Diabetes, Obesity