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SERUM AND SALIVARY ANTIOXIDANT BIOMARKERS IN PATIENTS WITH RECURRENT APHTHOUS STOMATITIS

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ABSTRACT

Background: Recurrent aphthous stomatitis (RAS) constitutes the most common oral mucosal lesion affecting approximately 20% of the population. In which painful, recurrent, oval or round ulcers of various size and location of oral mucosa Many factors thought have been involved in its etiology; these factors might have at the same time a direct or an indirect impact upon the oxidant/antioxidant system of the body that trigger free radicals which cause traumatic effect on mucosal tissue. The aim of this study was to assess the antioxidant biomarkers in patients with recurrent aphthous stomatitis (RAS).

Materials and Methods: The study included 30 patients with (RAS) as cases who attended to outpatient clinic of Oral Medicine (oral medicine clinic at the College of Dentistry, Basrah University) and 30 healthy individuals as control. Both groups were matched for age and sex, from whom saliva and blood samples were collected. The RAS patients had oral ulcer attack recurring at least three times a year and had active lesions at time of the study. Catalase (CAT) enzyme and Uric acid (UA) as antioxidant biomarkers were measured in serum and saliva of both groups.

Results: The mean of serum and salivary CAT and UA in patients with recurrent aphthous stomatitis was slightly lower than that of healthy controls, but both of them statistically was not significant ($P>0.05$). UA showed a highly statistically significant correlation ($P<0.01$) between serum and salivary of patients with RAS which had a direct (positive) linear correlation ($r= 0.516$).

Conclusions: The antioxidant defense system (enzymatic or non-enzymatic) become deficient due to consumption of antioxidants and/or by an overload of oxidant species lead to changes in the oxidative stress in biological systems which important in the inflammatory reactions observed in recurrent aphthous stomatitis.

KEYWORDS: Recurrent Aphthous Stomatitis, Antioxidant Biomarkers, Catalase Enzyme, Uric Acid