Abstrak :

Salivary secretory immunoglobulin A (IgA) is a critical component in the oral immune system. It inhibits microbial adherence, inactivates bacterial enzymes and toxins, and neutralizes viruses. Many oral diseases are associated with salivary secretory immunoglobulin A, such as caries and periodontal disease. The effect of ascorbic acid on salivary secretory immunoglobulin A has been studied. This research observed the chromatographical expression of salivary secretory immunoglobulin A using ELISA method. The animal model was Rattus norvegicus strain Sprague-Dawley. The number of the subjects was 30 and divided into three groups. Each group had ten rats. Group I was the placebo group. In the second and third group, the animals received ascorbic acid supplementation in the dose of 1 and 2 mg/100 g body weight per day for two weeks, respectively. After ascorbic acid supplementation, saliva collection procedure was performed. The animals were injected with pilocarpine and isoproterenol to stimulate saliva secretion. The analytical test (ANOVA) showed significant differences between all groups on the concentration of salivary secretory immunoglobulin A in the magnitude of µg/ml. This study suggests that the supplementation of α-tocopherol and ascorbic acid may stimulate the salivary secretory immunoglobulin A.

Keyword :

immunoglobulin A, saliva, ascorbic acid, ELISA