ISSN (Paper) 1994-697X

Online 2706 -722X

https://doi.org/10.54633/2333-022-048-027

Assessment of the Lysozyme and Lactoferrin in the Saliva of Vaccinated Individuals against COVID-19

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Abstract:

To understand the impact of vaccination against the Coronavirus (Covid-19) on human immunity and systems. This study aimed to determine the concentration of Lysozyme and Lactoferrin in salivary content. The results of Lactoferrin levels in the control group was 12.81, While individuals who were vaccinated 2 doses (less than six months) ago had a lactoferrin rate of 9.65.The results of Lysozyme concentration in control group unvaccinated individuals exhibits a mean concentration of 304.03, compared with those who received one vaccine dose less than 6 months exhibited a higher mean concentration was 338.01, while those vaccinated with two doses less than 6 months was 292.74.

Keywords: innate immunity, Covid-19, lactoferrin, lysozymes, Vaccines

Introduction

Different bacterial communities may be found in saliva, which can represent dietary habits and health state as well as add to the variety of food perception through sensory analysis. The similarities and contrasts between saliva in healthy conditions have not been sufficiently discussed, with many accounts of the variety of the salivary microbiome concentrating on the alterations brought about by specific disease states (Ruan *et al*., 2022), Saliva includes several anti-infective agents, including the most prevalent lysozyme, lactoferrin, and other compounds, which may help stop the invasion of oral viruses (Hayashi *et al*., 2017). One of the most important ways to combat COVID-19 is immunization, which is becoming increasingly commonplace globally. The microbiomes in body fluid of those who have received vaccinations may have changed, but these microbiomes have not yet been examined (Hosomi & Kunisawa, 2020). Saliva is one of several physiological secretions that contain peptides that act as microbial killing agents, which are immune components. These peptides have demonstrated their antiviral capabilities, and some studies indicate that they could contribute to COVID-19 protection (Brice and Diamond, 2020; Shafqat *et al.*, 2022; Huan *et al.*, 2020). By hydrolyzing the β-glycosidic link between N-acetylglucosamine and N-acetylmuramic in the