

**Ministry of Higher Education
& Scientific Research
Baghdad University
College of Dentistry**



Detection of HSV-1 and HSV-2 in saliva of patients with chronic ulcerative gingivitis by PCR and ELISA

A Thesis

**Submitted to the college of dentistry Baghdad University In
partial fulfillment of the requirement for the degree of Master
Oral Microbiology**

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Abstract

Background:

Human herpes virus 1 and 2 are two members Herpesviridae family, called Herpes simplex viruses that infect humans. Both HSV-1(which produces most cold sores) and HSV-2 (which produces most genital herpes) known as ubiquitous and contagious. Now a day they isolated from each site another and infect many sites such as lips, mouth, throat, skin, eyes, brain and others. The two have latency and recurrence. When activated and triggered by an inducing factors causing severe appearance such as a chronic ulcerative gingivitis is a condition affecting the gum and have a herpetic lesion, it typically develops quickly besides smoking and other factors can increase the risk for disease.

Aims of the study:

The aims of the study are to detect HSV-1 and HSV-2 in saliva of patients with chronic ulcerative gingivitis first (HSV-1) by Enzyme linked Immunosorbant assay and then for (HSV-1and 2) by application of Polymerase Chain Reaction method to show the prevalence of disease and correlate with gender, age and clinical features of patients in comparison with healthy control.

Materials and Methods:

Collection samples from 40 patients with chronic ulcerative gingivitis and 20 healthy control subjects where included in this study. Saliva samples were taken from all the subjects (patients and healthy control) and examined by ELISA assay and DNA extraction with PCR amplification method for detection of HSV-1 and HSV-2 in saliva.

Results:

The results of study showed that chronic ulcerative gingivitis affect both genders but more in male gender, with a wide age rang but mostly in the third

and fourth decades and comprising with smokers and family history of the same disorder.

Positive ELISA result was observed presence of HSV-1(85%) in patients subjects was $P < 0.05$ (High significant) and 30 % in healthy control. While in PCR method the positive HSV result was (72.5 %) while 21 % in healthy, HSV types were: HSV-1 (85 %) $P < 0.05$ (High significant), HSV-2 (49%) and (21%) of patients have both HSV-1 and 2.

Conclusions:

C.U.G. associated with HSV-1 and HSV-2 and most prevalence at age 43 years, male, smokers and patients with positive family history.

The ELISA appear high significant with PCR , HSV-1 was the highest in presence in C.U.G. but HSV-2 appeared significantly presence in oral cavity recording new evidence in Iraq. Saliva samples can replace plasma samples with same consistency for detection HSV-1 and HSV-2 in oral infections.