

IMMUNOGLOBULIN A IN GINGIVITIS**Dr. Baha Hamdi Hakim Al- Amiedi***

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Accepted on 26 Aug 2015***Correspondence for****Author****Dr. Baha Hamdi Hakim
Al- Amiedi**Department of
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Babylon, Hillah – Iraq.**ABSTRACT**

Fifty gingivitis patients were diagnosed by dentist and ten normal subjects and controls were considered as controls. Gingivitis patients and controls were enrolled in an investigation for serum and salivary IgA determinations. In which, blood and salivary samples were collected from both of patients and controls. Sera, saliva and salivary proteins in five microliter amounts per each of which were applied into low and high level anti IgA partigens. The gingivitis patients sera have shown elevated IgA concentration means which approximate one fold increase than of controls. Male and female patients were of comparable serum IgA concentration levels. Individual variation plot were found of multipeak type. The age group 30 – 34 and 35 – 39 years were showing optimum concentration means. Saliva and salivary

concentration means were showing nullified IgA concentrations in both patients and controls. IgA may interacts with are oral available antigens (microbial) and fix complement thus forming complex gaving nullified IgA concentrations.

KEYWORDS: blood and salivary samples were collected from both of patients and controls.

INTRODUCTION

Stomium is being considered as one of the compartments of the common mucosal immune system and as the sole site for the food and drink intake.^[1] This stomial compartment is supported by efficient elements like; mucous membrane, tonsils, salivary glands , gingiva and periodontium.^[2] Such structural supports are being the corner stone for the local stomial immune defences.^[3] Gingival microbial in infections mediate antigens that stimulat both mucosal and system immune responses with characteristic IgM primary immune response then class switched to IgA or IgG.^[4] Such class switching established through genetic or

cytokine influences.^[5] The objective of the present work was aimed at determination of serum and salivary IgA concentrations among gingivitis patients.

MATERIALS AND METHODS

Patients and Controls

Fifty gingivitis patients from both males and females were diagnosed by the specialized dentist.^[6] Ten apparently normal mouth hygiene subjects were elected as control. (Table 1)

Blood sampling

Blood samples without anticoagulants in a rate of 5ml in plain tubes were collected from both of patients and controls.^[7]

Saliva and Salivary Proteins

Salivary samples were collected from both the gingivitis patients and controls as recommended salimetrics.^[8] Salivary protein was separated using poly ethylene glycol as protein precipitant.^[9,10]

Single Radial immunodiffusion

Partigen diffusion plates containing low level and high level and IgA ready made, were used in sera saliva and salivary proteins.^[7]

Biometry

Mean, median, range as well as, standard errors were calculated as Steel *et. al.*^[11]

RESULTS

1. Serum IgA

The serum IgA concentration means were 507.465, 477.531 and 492.498 mg/dl for male, female and total for gingivitis respectively. As compared to 233.8, 187.33 and 210.65mg/dl for male female and total for controls respectively. Gingivitis were showing higher levels than controls. There were comparable male / female patients for serum IgA concentrations (Table 2).

2. Age – group wise variations

On, passing from the age group 25-29 to 40-44y, there were mild variations in the concentration means of serum IgA. However the age groups 30-44 and 25-39 were showing higher concentration means than others (Table 3).

3. Individual Variations

The individual variation graph plot of serum IgA concentration levels were of multipeak type. Such finding may inflects heterogeneity of immune responses among gingivitis patients.

4. Salivary IgA

It was evident that both saliva and salivary proteins were showing negative IgA responses.

Table 1: Characteristics of gingivitis Patients

Gender		Number of Patients
A	Male	24
	Female	26
	Total	50

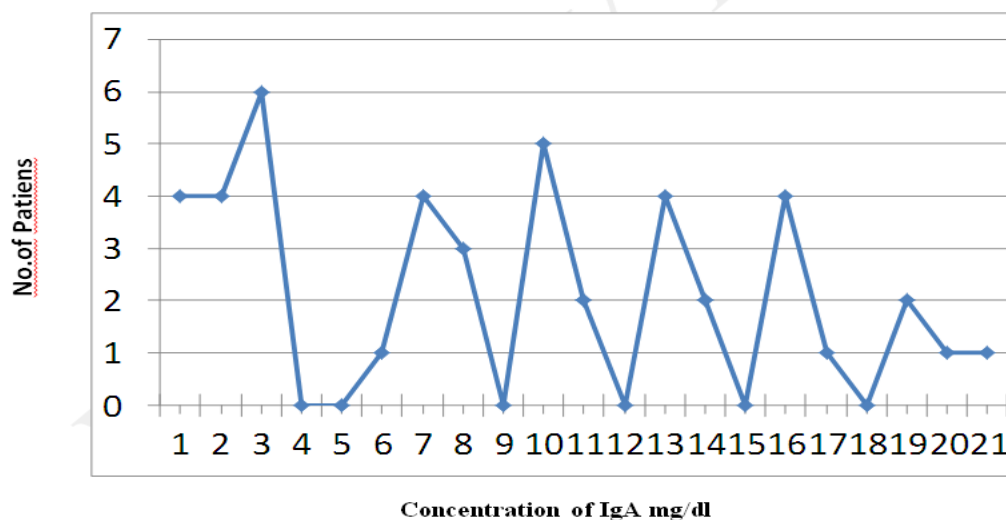
B Age Group	Gender		
	Male	Female	Total
20-24	5	3	08
25-29	4	3	07
30-34	5	7	12
35-34	5	7	12
40-44	5	5	10
45-49	-	1	01
Total	24	26	50

Table 2: Serum IgA concentration. means , median rences among gingivitis patients

Entity / Gender		Serum Concentration		
		Mean	Median	Rang
Patients	Male	501.465	413.3	399.8-574.2
	Female	477.531	498.3	399.8-589.6
	Total	492.498	427.1	399.8-589.6
Control	Male	233.8		
	Female	187.33		
	Total	210.65		

Table 3: The age Groupwise effect on serum IgA among gingivitis patients

IgA mean concentration			
Age group	Male	Female	Total
25-29	455.01	408.9	441.97
30-34	513.65	476.1	499.9
35-39	492.65	512.25	494.6
40-44	493.2	446.805	470.002
Control	233.8	187.33	210.65



Figar(1) Individual variation effects

1=340-399	6=440-449	11=490-499	16=540-549
2=400-409	7=450-459	12=500-509	17=550-559
3=410-419	8=460-469	13=510-519	18=560-569
4=420-429	9=470-479	14=520-529	19=570-579
5=430-439	10=480-489	15=530-539	20=580-589
			21=590-599.

DISCUSSION

The local infections of gingival mucosal surfaces may mediate continual chronic exposure to the various grades of antigen derive from the dental pathogens.^[2,3] Such antigens may induce local and systemic immune responses with an early response of IgM type then class switched to via gene rearrangement, gene exclusion, gene arrangement and / or cytokine influences.^[2,3] Rise up of an IgA serum responses may bear indication to a chronic state.^[1,2,3] Such IgA responses were with marked individual variation as seen from the multi peak plot due immune response heterogeneity.^[14] The nulified mucosal IgA concentration may be due to either one or more of the followings 1- oral tolerance(6),2- antigen – antibody complement complex deposition in soft gut tissue^[15] and / or 3residual daily output of mucosal IgA.^[13]

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