Results

The study was conducted on Thirty patients (20 patients with rheumatic heart disease and 10 patients with post-streptococcal reactive arthritis) as well as 10 age and sex matched healthy volunteers serving as controls constituted the subjects of this study. Age of patients with RHD ranged from 19 to 69 years with mean 29.6±15.1 while in patients with post-streptococcal reactive arthritis ranged from 12 to 30 years with mean 20.8±7.5.However the age of the control group was ranging from 20 to 45 years with mean 29.7±8.3.

The Results of this work were demonstrated in 19 tables from 1 to 21.

Table (1) and Figure (1) show that there was a non significant difference in age between control and RHD subjects while there was a significant difference between control and PSRA subjects and between RHD and PSRA subjects.

Table (2) shows that there was a significant difference in age between rheumatic arthritis patients and PSRA subjects.

Table (3) shows there was a significant difference between females and males with RHD. However there was a non significant difference between females and males of control or PSRA subjects.

Table (4) shows there was a non significant difference between females and males regarding CD19 assay in PSRA subjects.

Table (5) shows there was a non significant difference between females and males regarding D8/17 assay in PSRA subjects.

Table (6) shows there was a non significant difference between females and males regarding CD19&D8/17 in PSRA subjects.

Statistical analysis of CD19 assay and different variables in PSRA group, was shown in table (7), there was a non significant correlation between CD19 and age in PSRA group while there was a significant positive correlation between CD19 and ASO titre, Anti-Dnase, D8/17and CD19&D8/17 together.

Statistical analysis of D8/17 assay and different variables in PSRA group, was shown in table (8), there was a non significant correlation between D8/17 and age in PSRA group while there was a significant positive correlation between D8/17and ASO titre and with Anti-Dnase.

Statistical analysis of CD19&D8/17 assay and different variables in PSRA subjects, was shown in table (9), there was a non significant correlation between CD19& D8/17 and age.Whereas, there was a significant positive correlation between CD19&D8/17,ASO titre,Anti-Dnase and D8/17 in PSRA subjects. .

Table (10) shows that 65% of RHD patients suffered from rheumatic arthritis.

Table (11) shows the prevalence of valvular lesion among RHD patients was mitral stenosis, mitral regurge, aortic stenosis and aortic regurge, in descending order.

Table (12) as regard CD19, there was a non significant difference in pure aortic cases compared to control and pure mitral cases ,While there was a significant difference between control and pure mitral cases.

Table (13) as regard D8/17, there was a non significant difference in pure aortic cases compared to control and pure mitral cases ,While there was a significant difference between control and pure mitral cases.

Table (14) shows there was a non significant difference in cases with pure mitral or pure aortic compared to control regarding CD19&D8/17.

Table (15) and Figure (2) show there was a non significant difference of CD19 assay in RHD group that presented with or without rheumatic arthritis.

Table (16) and Figure (3) show there was a non significant difference of D8/17 assay in RHD group that presented with or without rheumatic arthritis.

Table (17) and Figure (4) show there was a non significant difference of CD19&D8/17 assay in RHD group that presented with or without rheumatic arthritis.

Statistical analysis of CD19 assay among control, PSRA and RHD groups, was shown in table (18) and Figure (5). There was a significant difference between control and RHD group, there was also a significant difference between control and PSRA group, However there was a non significant difference between PSRA and RHD group.

Statistical analysis of D8/17 assay among control, PSRA and RHD groups, was shown in table (19) and Figure (6). There was a significant difference between control and RHD group, there was also a significant difference between control and PSRA group ,However there was a non significant difference between PSRA and RHD group.

Statistical analysis of CD19&D8/17 assay among control, RHD and PSRA groups, was shown in table (20) and Figure (7). There was a significant difference between control and RHD group, there was also a significant difference between control and PSRA group, However there was a non significant difference between PSRA and RHD group.

Table (21) and Figure (8) showed a non significant difference between PSRA and rheumatic arthritis regarding the percent of expression of CD19-positive cells, D8/17 antigen in total lymphocytes. However, there was a significant difference between PSRA and rheumatic arthritis regarding the percent of expression of D8/17 antigen on B-lymphocytes.

Table (1): Comparison of ages between the different study groups.

Age(years) / Study group	$\bar{X} \pm SD$	t	P
• Control n = 10	29.7 ± 8.3	t_1= 0.02	> 0.05(N.S.)
• RHD n = 20	29.6 ±15.1	t_2= 2.51	< 0.05(S.)
• PSRA n= 10	20.8± 7.5	t_3= 2.13	< 0.05(S.)

t_1 = Control Vs RHD group.

t_2 = Control Vs PSRA group. .

t_3 = RHD group Vs PSRA group.

S= Significant , N. S.=Non significant.

Figure (1): Comparison of ages between the different study groups.

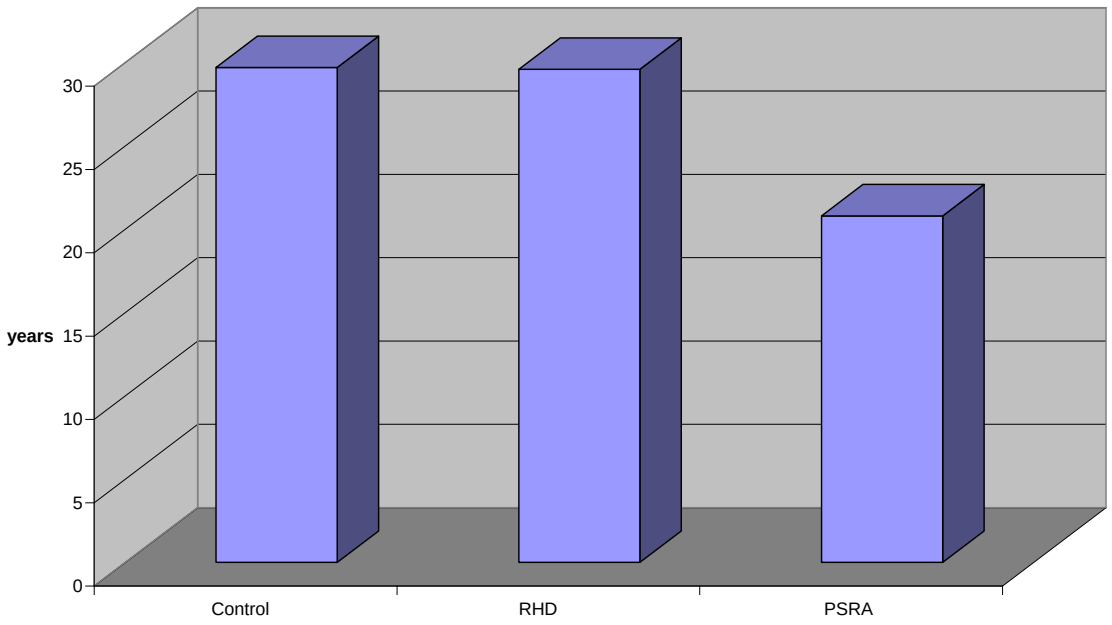

Table (2):Comparison of ages between Rh. Arthritis and PSRA.

Age(years) / Study group	$\bar{X} \pm SD$	t	P
• Rheumatic arthritis n = 13	25.84 ± 11.1	t = 2.4	< 0.05(S.)
• PSRA n= 10	20.8 ± 7.5		

Table (3): Sex distribution of the different study groups.

Sex / St. gp.	Males		Females		Total		Z	P
	No	%	No	%	No	%		
• Control	5	50.0	5	50.0	10	100.0	-	-
• RHD	5	25.0	15	75.0	20	100.0	2.58	< 0.01
• PSRA	5	50.0	5	50.0	10	100.0	-	-
• Total	15	37.5	25	62.5	40	100.0		

Table (4): Comparison of CD19 assay between males and females in PSRA group.

CD19 assay / Sex	$\bar{X} \pm SD$	t	P
• Males n = 5	10.87 ± 3.7	0.38	> 0.05(N.S)
• Females n = 5	12.1 ± 6.2		

Table (5): Comparison of D8/17 assay between males and females in PSRA group.

D8/17assay / Sex	$\bar{X} \pm SD$	t	P
• Male n = 5	9.45 ± 2.5	0.9	> 0.05(N.S)
• Female n = 5	11.96 ± 5.7		

Table (6): Comparison of CD19& D8/17 assay between males and females in PSRA group.

CD19&D8/17 / Sex	$\bar{X} \pm SD$	t	P
• Male	48.5 ± 19.7	1.81	> 0.05(N.S)
• Female	71. 7 ± 20.8		

Table (7): Correlation coefficient "r" between CD19 and different variables among PSRA group.

CD19 assay / Variables	"r"	P
• Age(years)	+0.243	> 0.05(N.S.)
• ASO titre(Todds U)	+0.740	< 0.01(S.)
• Antidnase(IU)	+0.714	< 0.01(S.)
• CD19 & D8/17	+0.537	< 0.05(S.)
• D8/17 assay	+0.953	< 0.001(S.)

Table (8): Correlation coefficient "r" between D8/17 and different variables among PSRA group.

D8/17 assay / Variables	"r"	P
• Age (years)	+0.097	> 0.05(N.S.)
• ASO titre(Todds U)	+0.602	< 0.05(S.)
• Antidnase (IU)	+0.774	< 0.01(S.)

Table (9): Correlation coefficient "r" between CD19 & D8/17 and different variables among PSRA group.

CD19&D8/17 / Variables	"r"	P
• Age(years)	+6.4701	> 0.05(N.S.)
• ASOT(Todds U)	+0.665	< 0.05(S.)
• Antidnase (IU)	+0.705	< 0.05(S.)
• D8/17 assay	+0.665	< 0.05(S.)

Table (10): Clinical assessment and investigations of RHD group.

Cl. Exam	No n = 20	%
• Rheumatic arthritis	13	65.0
• Carditis	9	45.0
• Tonsilitis	4	20.0
• Fever	5	25.0
• Non-significant	4	20.0
• ↑ ESR	2	10.0

Table (11): Echocardiographic exam. among RHD group.

Ecoho	**No** **n = 20**	**%**
MS	12	60.0
MR	11	55.0
A.S	3	15.0
A.R	7	35.0

Table (12): Comparison of CD19 assay among pure mitral, pure aortic and control groups.

CD19 assay / **St. group**	**$\bar{X}$ ± SD**	**t**	**P**
• Pure mitral valve dis. n =12	9.03 ± 6.1	t_1= 0.01	> 0.05(N.S.)
• Pure aortic valve dis. n = 2	8.96 ± 12.4	t_2= 3.95	< 0.001(S.)
• Control n= 10	1.89 ± 1.3	t_3= 0.81	> 0.05(N.S.)

t_1 = Pure mitral valve cases versus pure aortic cases.

t_2= Pure mitral valve cases versus control cases.

t_3= Pure aortic valve cases versus control cases.

Table (13): Comparison of D8/17 among pure mitral valve, aortic valve and control groups.

CD19/D8/17 / St. group	$\bar{X} \pm SD$	t	P
• Pure mitral valve dis. n =12	7.27 ± 5.8	t_1= 0.137	> 0.05(N.S.)
• Pure aortic valve dis. n = 2	8.47 ± 11.8	t_2= 2.53	< 0.05(S.)
• Control n= 10	2.57 ± 2.6	t_3= 0.707	> 0.05(N.S.)

Table (14): Comparison of CD19 & D8/17 among pure mitral, pure aortic and control groups.

D8/17 assay / St. group	$\bar{X} \pm SD$	t	P
• Pure mitral valve dis. n =12	41.87 ± 29.2	t_1= 0.21	> 0.05(N.S.)
• Pure aortic valve dis. n = 2	48.34 ± 43	t_2= 1.89	> 0.05(N.S.)
• Control n= 10	22.03 ± 19.77	t_3= 0.85	> 0.05(N.S.)

Table (15): Comparison of CD19 assay in RHD cases that presented with or without Rh. arthritis.

CD19 assay / Presentation	$\bar{X} \pm SD$	t	P
• Rh. arthritis n = 13	10.1 ± 8.8	0.88	> 0.05(N.S.)
• No Rh. arthritis n = 7	7.3 ± 5.4		

Figure (2): Comparison of CD19 assay in RHD cases that presented with or without Rh. arthritis.

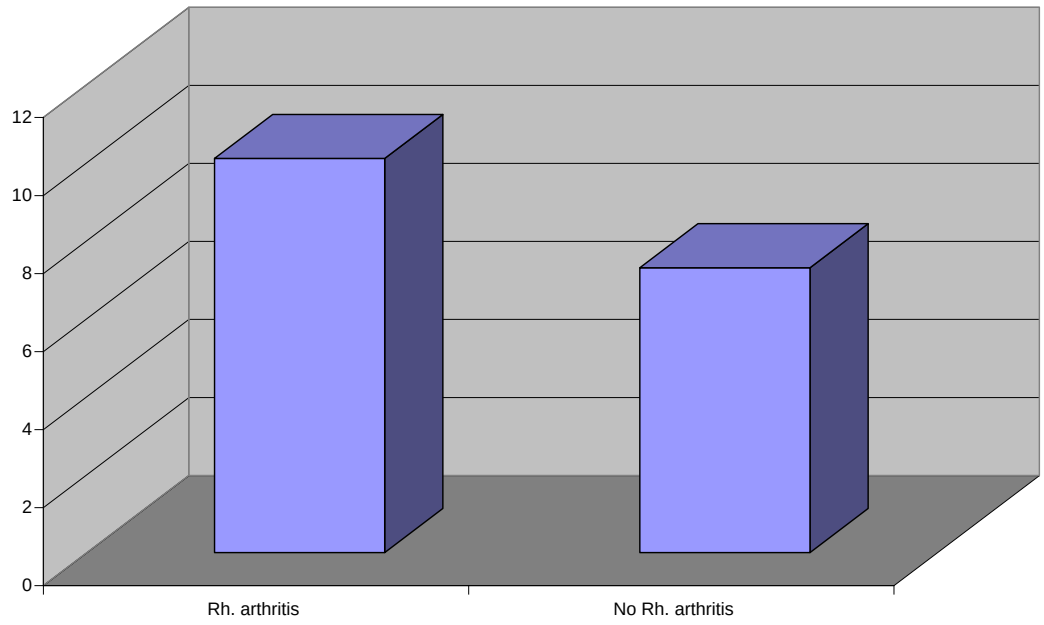

Table (16): Comparison of D8/17 assay in RHD cases that presented with or without Rh. arthritis.

D8/17 / Presentation	$\bar{X} \pm SD$	t	P
• Rh. arthritis n = 13	6.9 ± 4.4	0.12	> 0.05(N.S.)
• No Rh. arthritis n =7	6.7 ± 3.12		

Figure (3): Comparison of D8/17 assay in RHD cases that presented with or without Rh. arthritis.

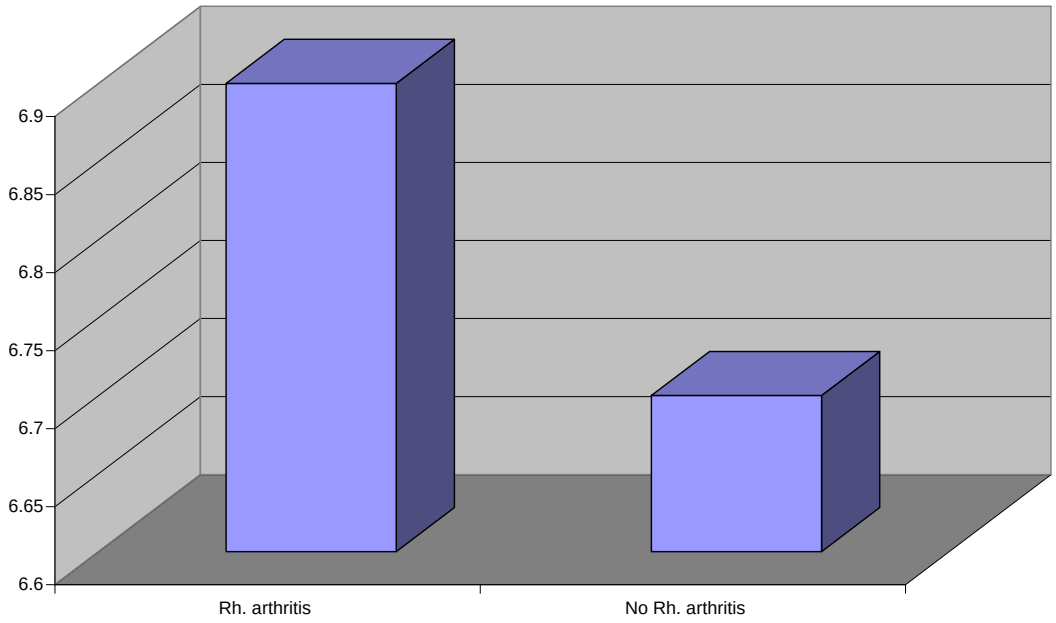

Table (17): Comparison of CD19&D8/17 assay in RHD cases that presented with or without Rh. arthritis.

CD19& D8/17 / Presentation	$\bar{X} \pm SD$	t	P
• Rh. arthritis n = 13	38.9 ± 26.3	0.62	> 0.05(N.S.)
• No Rh. arthritis n =7	32.2 ± 21.2		

Figure (4): Comparison of CD19&D8/17 assay in RHD cases that presented with or without Rh. arthritis.

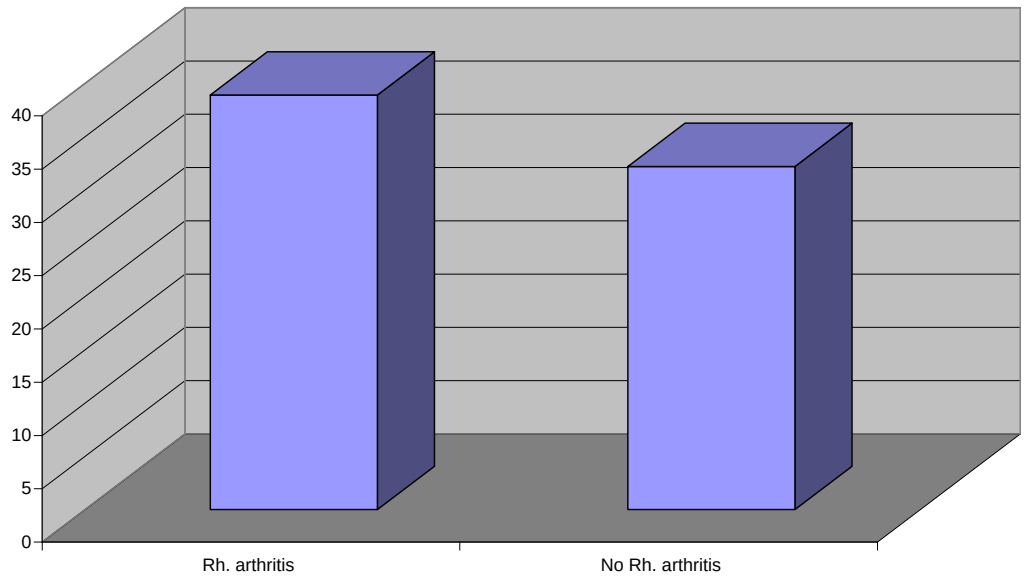

Table (18): Comparison of CD19 assay between the study and the control group.

CD19 assay / St. groups	$\bar{x} \pm SD$	t	P
• Control group	1.9 ± 1.3	t_1= 4.33	< 0.001(S.)
• RHD group	10.6 ± 8.8	t_2= 6.1	< 0.001(S.)
• PSRA group	11.5 ± 4.8	t_3 = 0.36	> 0.05(N.S)

Figure (5): Comparison of CD19 assay between the study and the control group.

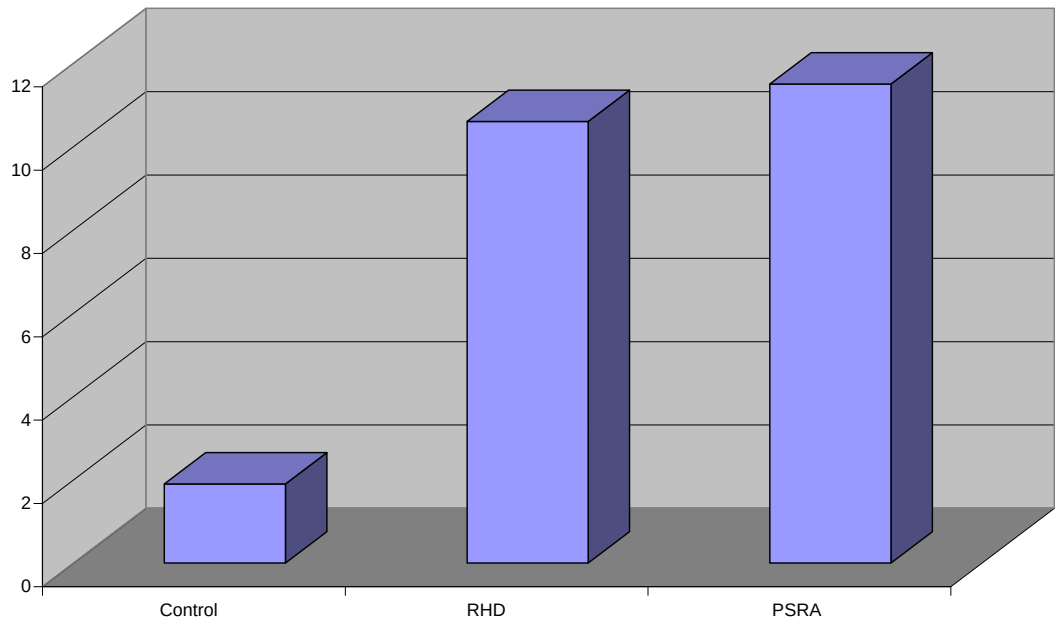

Table (19): Comparison of D8/17 assay between the study and the control group.

D8/17 assay / St. groups	$\bar{X} \pm SD$	t	P
• Control group	2.6 ± 2.6	$t_1 = 3.47$	< 0.01(S.)
• RHD group	8 ± 5.9	$t_2 = 5.1$	< 0.001(S.)
• PSRA group	10.7 ± 4.3	$t_3 = 1.43$	> 0.05(N.S.)

Figure (6): Comparison of D8/17 assay between the study and the control group.

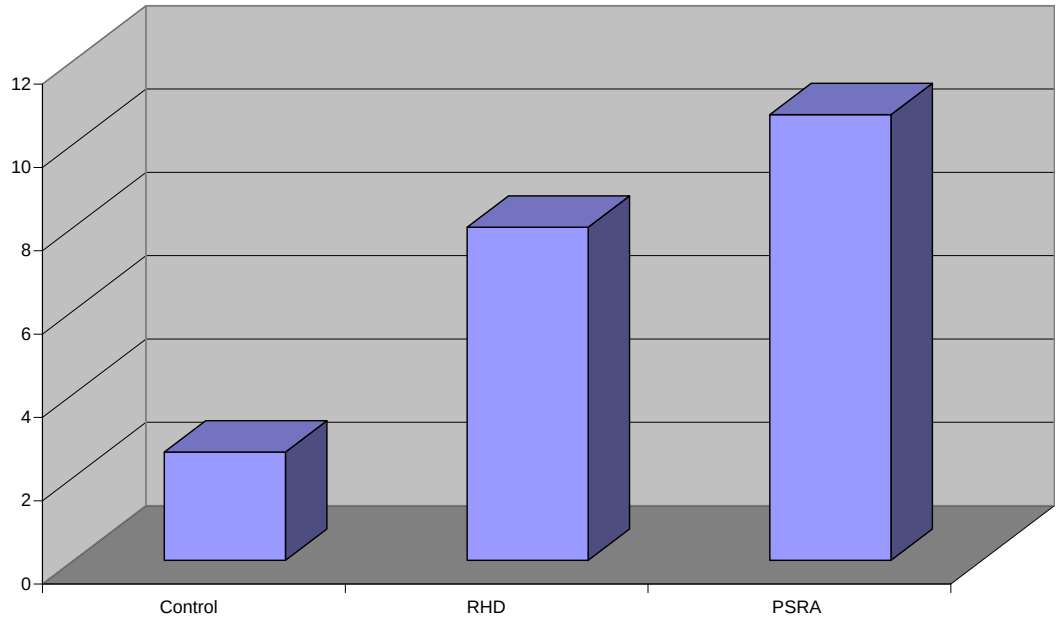

Table (20): Comparison of CD19&D8/17 assay between the study and the control group.

CD19&D8/17 / St. groups	$\bar{X} \pm SD$	t	P
• Control group	22.03 ± 19.8	t_1= 2.39	< 0.005(S.)
• RHD group	43.01 ± 27.4	t_2= 4.01	< 0.001(S.)
• PSRA group	60.0 ± 22.6	t_3 = 1.82	> 0.05(N.S.)

Figure (7): Comparison of CD19&D8/17 assay between the study and the control group.

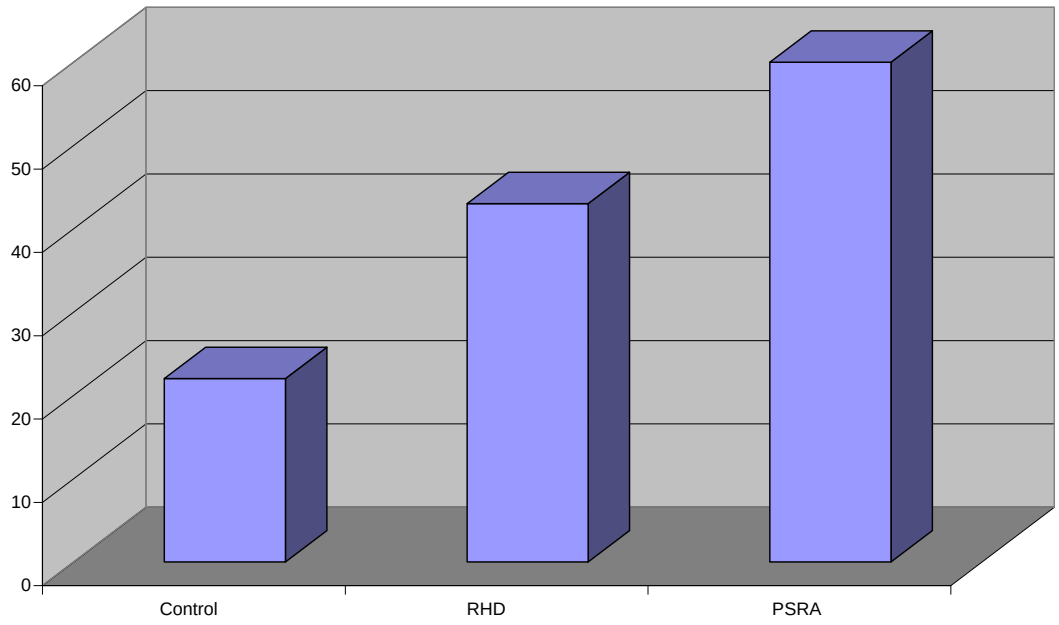

Table (21): Comparison of CD19, D8/17 and CD19&D8/17 assay between Rh. Arthritis and PSRA.

	CD19	**D8/17**	**CD19 & D8/17**
Rh. Arthritis n=13	12.53±9.8	11.49±4.8	38.68±29.9
PSRA n=10	11.49±4.8	10.7±4.3	60.09±22.7
	t = 0.33	t = 0.42	t = 2.08
	P > 0.05(N.S.)	P > 0.05(N.S.)	P < 0.05(N.)

Figure (8): Comparison of CD19, D8/17 and CD19&D8/17 assay between Rh. Arthritis and PSRA.