# RESULTS

Table (8): Descriptive analysis of the studied groups according to age.

Groups	Sample size	Range of age	Mean	Standard deviation
Group A (Responders)	17	6-14	10.5294	± 2.182
Group B (poorly responders)	11	8-16	11.8182	± 2.9939
Total	28	6-16	10.8571	± 2.5198

This table reveals the distribution of age among the studied group with the mean of group (A) (responding) 10.529 ± 2.182 and that of group (B) (poorly responding) 11.818 ± 1.568.
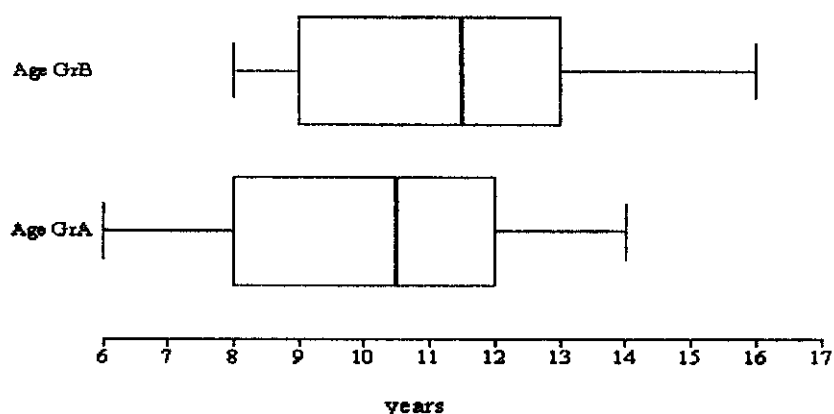
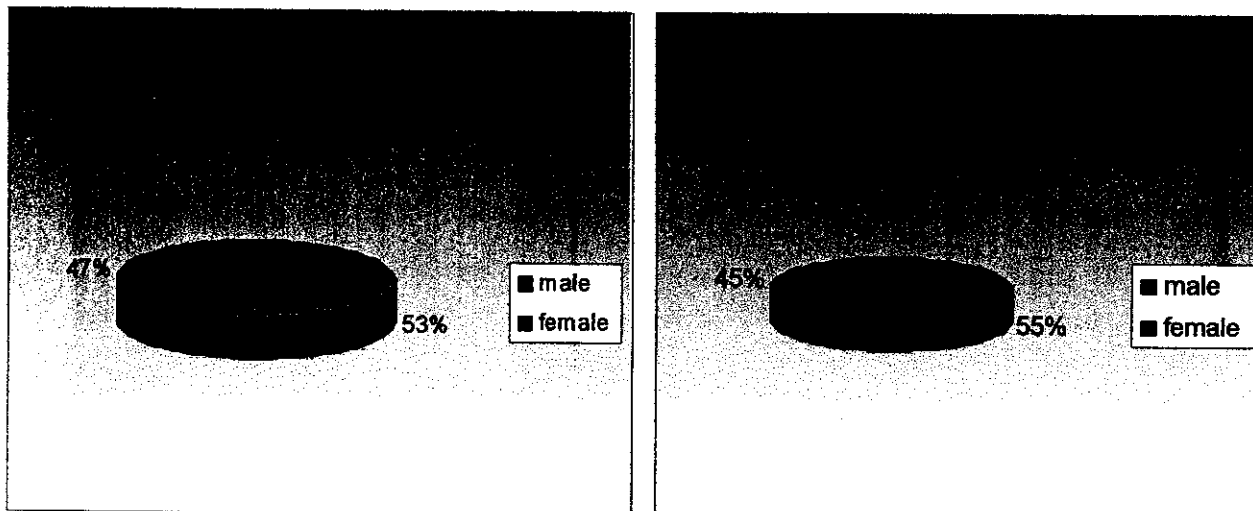*Age distribution in both groups*

Fig(4)

Table (2): Distribution of the studied group according to sex.

Groups	Group A		Group B		Total
	No	%	No.	%	
Male	9	53	6	55	15
Female	8	47	5	45	13
Total	17	100	11	100	28

The table shows the sex distribution among the studied group. No statistical difference between both groups.

Fig.(5)

Table (3): Comparison between the mean ± S.D of both patient groups regarding to routine laboratory investigation.

Parameter	Number	Minimum	Maximum	Mean ± S.D	P value
HB (gm/dl)					
A	17	6.1	10.8	8.37 ± 1.3	<0.05
B	11	5.3	8.1	6.45 ± 1.2	
S. creatinine (mg/dl)					
A	17	5.5	7.3	6.3± 1.4	>0.05
B	11	7.1	10.8	8.2± 1.1	
Kt/V					
A	17	0.9	1.4	1.24 ±0.17	>0.05
B	11	0.8	1.3	1.14 ±0.28	
CRP					
A	17	6	12	6.9 ± 1.4	>0.05
B	11	6	24	10.2 ±2.6	
S. Ferritin					
A	17	868	1.871	1368 ±480	>0.05
B	11	1071	1.721	1573 ±522	
S. Iron					
A	17	107	189	130 ±39	>0.05
B	11	139	207	163 ±42	
Parathormone					
A	9	104	165	136.2 ±21	>0.05
B	6	115	192	174.4 ±18	

Group A was of higher level of HB (mean 8.37 ± 1.3) than group B (6.45 ± 1.2) with P value <0.05

As regard to S. creatinine level of both groups, it was of no statistical difference (p value >0.05).

Concerning the efficacy of dialysis (determined by Kt/V) both group A & B are under adequate dialysis

The difference in serum ferritin level between both groups was not significant (p value >0.05).

Parathyroid hormone has a mean level of 136 ± 21 mg/dl in group A and a mean level of 163 ± 42 mg/dl in group B (p value >0.05)

Table (4): Comparison between the outcome of clinical examination of both patient groups.

| Parameter	Group A (17)		Group B (11)	
	No.	%	No.	%
Pallor	14	82	11	100
Short stature (< 5th centile)	14	82	9	81
Hypertension	5	29	4	36
Skeletal manifestation	10	58	7	63
Cardiomegally	3	17	3	27

Fig.(6) clinical manifestation in both groups

Table (5): Comparison between both groups according to prevalence of hepatitis B & C and HIV.

Groups	HCV		HBsAG		HBsAb		HIV		P value
	No	%	No	%	No	%	No	%	
Gr. A	7	41.1	2	11	3	17	0	0	>0.05
Gr. B	7	63	1	9	3	27	0	0	>0.05

This table shows the prevalence of hepatitis C & B and HIV among the studied group, group A was of higher percentage in patients suffering from hepatitis B, one patient in group A was suffering from both hepatitis B & C at the same time. Non of the patients were suffering from HIV in either groups.
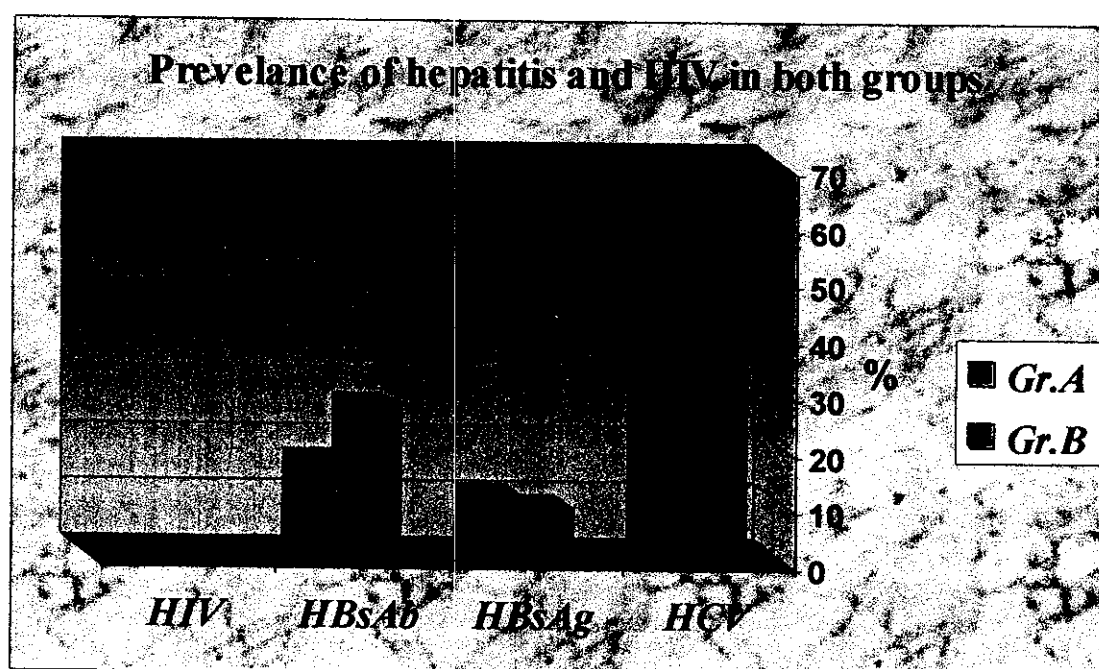
Fig (7)

Table (6): Comparison between both groups according to WBCs count and platelet count.

Group	Minimum (thousands)	Maximum (thousands)	Mean (thousands)	S.D.	P value
Platelet c.					
Gr.A	196	350	239,3	±32	
Gr.B	185	313	226,8	±35	> .05
WBCs					
Gr.A	3.9	8.2	5.5	±1.2	
Gr.B	2.9	9.4	5.4	±2.4	> .05

The table shows that there is no significant difference between both groups according to the platelet count or the white blood cell count. It also shows that there were no patients suffering from thrombocytopenia.

Table (7): Comparison between group A & B according to serum iron and S. ferritin level.

Groups	No.	Mean	S.D	t	P
S. Iron					
Gr A	17	128.6	± 34.5	15.4	>0.05
Gr B	11	126.5	± 51.4	8.1	>0.05
S. Ferritin					
Gr A	17	1305	± 150	10.2	>0.05
Gr B	11	1596	± 122	11.3	> 0.05

The table shows no significant difference between the studied gorups according to serum iron or ferritin level.

Table (8): Comparison between studied groups according to mean change in Hb level after erythropoietin therapy.

	No.	Mean (mg/dl)	S.D. (mg/dl)	t.	P.
Gr.A	17	1.3	± 0.2	4.9	<0.01**
Gr.B	11	0.3	± 0.15	2.6	<0.01**

There was high significance difference between both groups (p value <0.01)
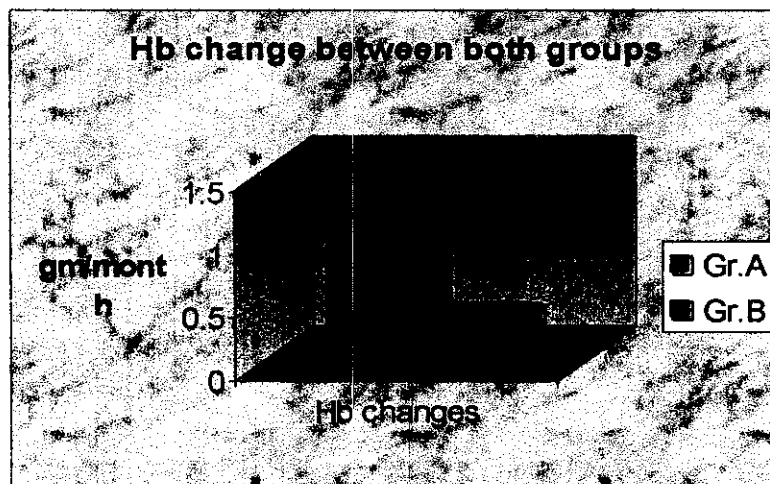
Fig(9)

Table (9): Comparison between 2 groups according to CRP level.

Group	No.	Mean	S.D	t test	P
Gr.A	17	6.3	± 1.4	2.1	>0.05
Gr.B	11	8.1	± 5.1	4.8	>0.05

This table shows that there was no statistical difference between both groups according to CRP level.
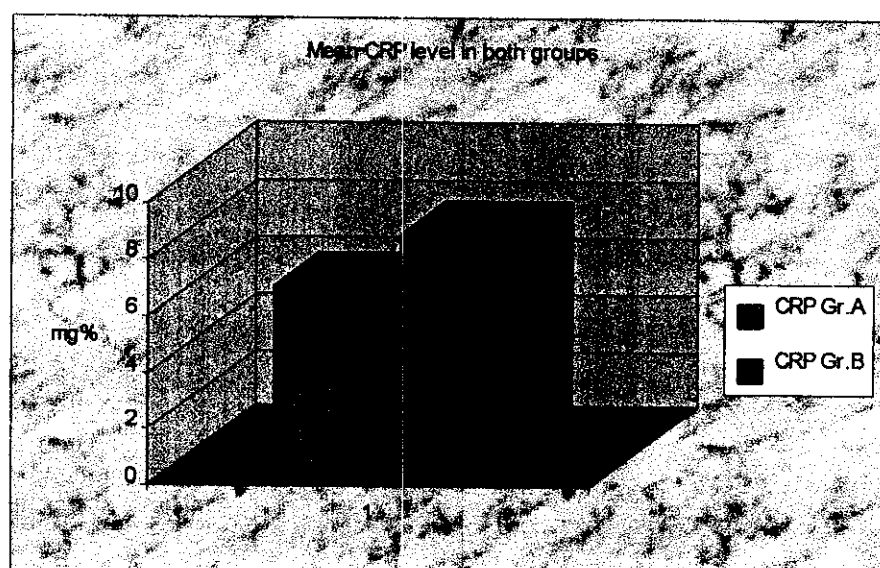
Fig.(10)

Table (10): Comparison between both groups according to IgM level.

(N.B.: Reference range of IgM: 30-140 mg/dl)

| Group	No.	Mean	SD		P	95% conf. interval
Gr A	17	93.3	± 38.6	9.9	>0.05	93.3 ± 19
Gr B	11	105.3	± 37.1	9.4	>0.05	105 ± 23

This table shows that the mean value of IgM was higher in group B than in group A but of no significant difference between both groups (p value >0.05).
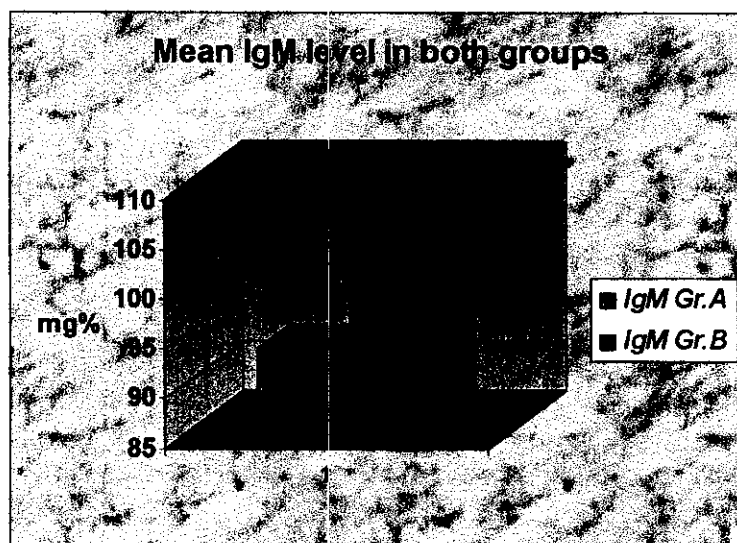
Fig (11)

Table (11): Comparison between mean and St. deviation of platelet aggregation test between studied groups.

Group	No.	Mean	S.D.	t	P
Gr.A	17	71.7	± 5.9	2.11	<0.01**
Gr.B	11	49	±8.16	24.3	<0.01**

This table shows that the mean platelet aggregation test in group A was 71.7% while that of group B was 49% (there was a significant difference between both groups).
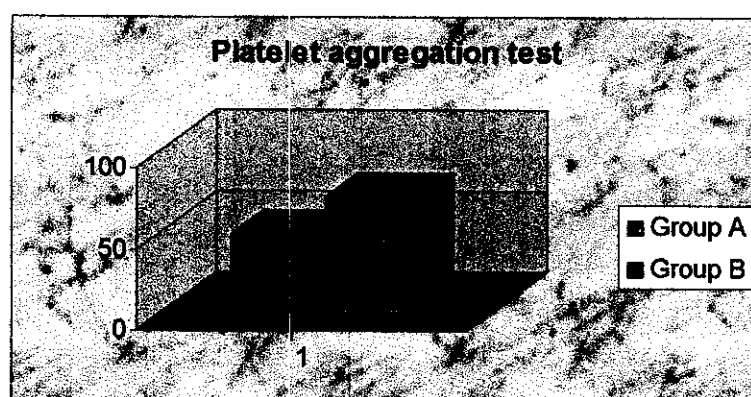
Fig (12)

Table (12): Correlation between Hb changes within one month of EPO therapy and CRP, IgM, platelet aggregation test in both groups.

Parameter (Δ)	Group A (Hb)		Group B (Hb)	
	r	p	r	p
CRP	-0.07	>0.05	-0.01	>0.05
IgM	-0.03	>0.05	-0.06	>0.05
Platelet aggregation test	0.4	<0.01**	0.08	<0.05*

The table shows no significant correlation between either Hb change and CRP, or between Hb change and IgM.

The table also reveals that there is high significant relationship between platelet aggregation test and Hb changes in the responders, but significant relationship for the non responders. In both groups r value was positive denoting that elevation of Hb was associated by elevation better platelet aggregation percent.

*Table (13):*Correlation between serum ferritin level and hemoglobin changes and platelet aggregation test.

Parameter (Δ)	Group A (ferritin)		Group B(ferritin)	
	r	p	r	p
Platelet aggregation t.	-0.4	< 0.5*	-0.1	< 0.5*
Hb changes within 2m	-0.2	< 0.5*	0.01	> 0.5

The table reveals that there is a significant relationship between platelet aggregation test and serum ferritin, so that when the serum ferritin is increasing; platelet aggregation is worsening. As regagrd to Hb change, there was a significant relationship in the responders.
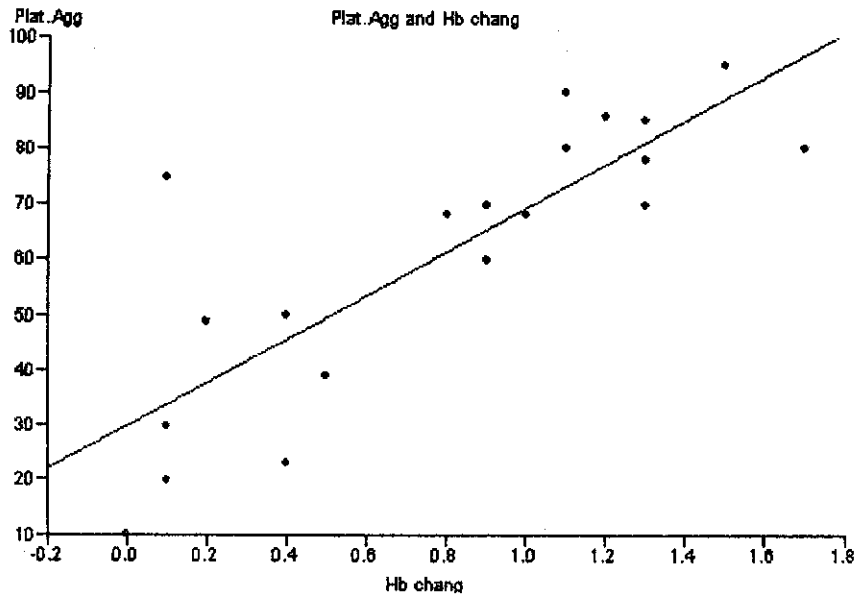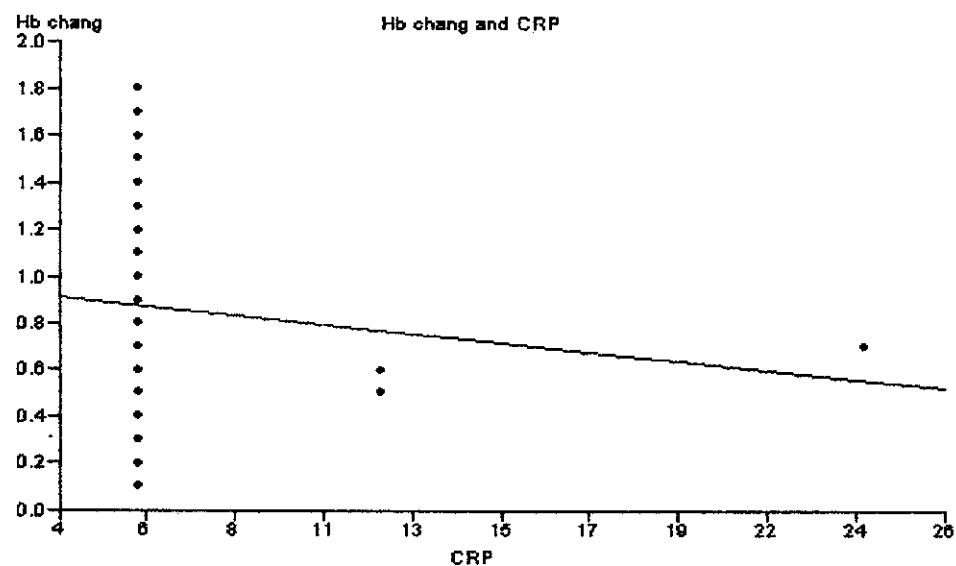
Correlation between Hb changes and Platelet aggregation test
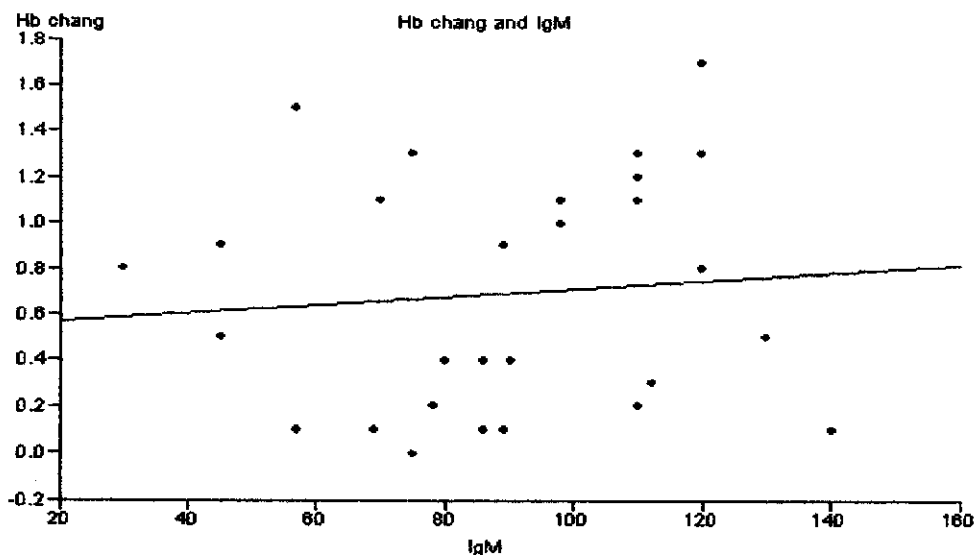
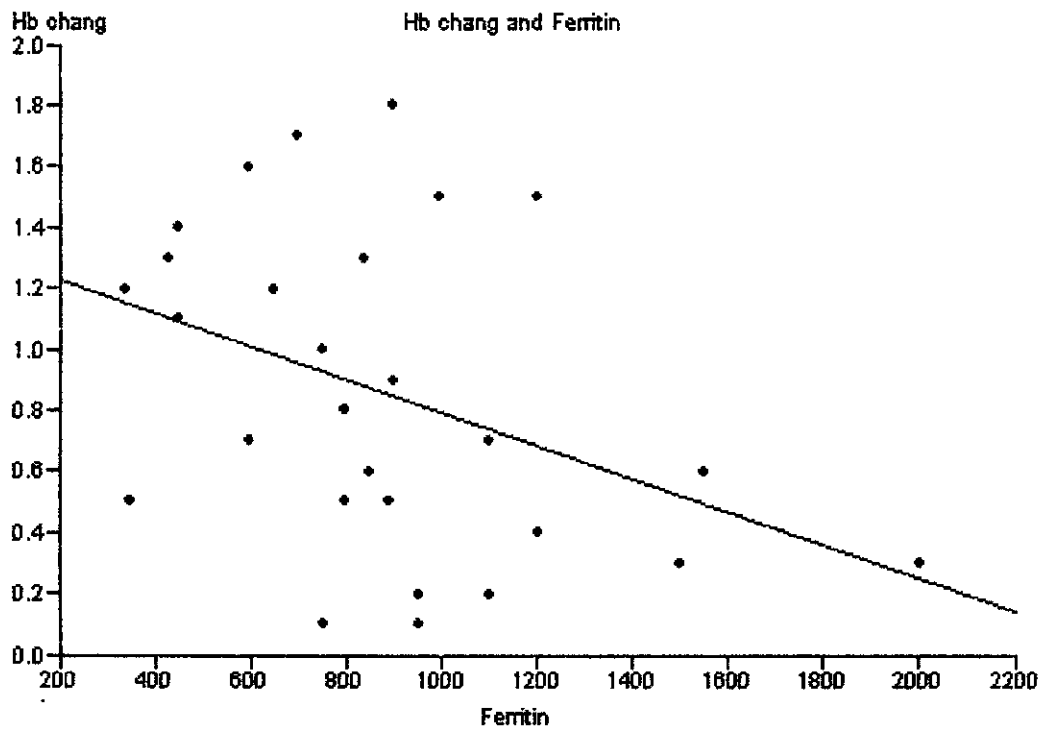*Correlation between IgM and Hb changes*

Fig (13)

Correlation between CRP and Hb changes

Fig (14)

Fig (15)

Correlation between ferritin and Hb changes.