

Results

The results of the present work can be described as follow:

Table (1): comparison between the studied group regarding sex and age:

Studied group		Control	Dialysis group	C.T group	Total
<u>sex</u>					
Female	No.	5	4	14	23
	%	50.5	40.0	46.7	46.0
male	No.	5	6	16	27
	%	50.0	60.0	53.3	54.0
Total	No.	10	10	30	50
	%	100	100	100	100
Age / Ys					
$\bar{X}$		38	39.3	37.9	-
$\pm$ S.D		$\pm$ 4.8	$\pm$ 9.4	$\pm$ 7.3	-

Table (2) results of urine analysis among patients under conservative treatment.

Degree Result	Absent		+		++		+++		Total	
	NO	%	NO	%	NO	%	NO	%	NO	%
Proteinuria	0	0.0	5	16.7	16	53.3	9	30.0	30	100.0
Casts	7	23.3	8	26.7	12	40.0	3	10.0	30	100.0

This table reveal that all patients under conservative treatment have proteinuria with different degree of severity (16.7 % with mild degree, 53.3 % with moderate degree and 30 % with sever degree . this table also shows that not all patients have casts (23.3 %) while the other having casts with different degree (leucocyte - red - hyaline - granular) (26.7 %) with mild degree 40 % with moderate degree and 10 % with sever degree

Table (3) Clinical data among studied patients.

Clinical Data in patients	Present		absent		total		Adjusted χ^2	P
	NO	%	NO	%	NO	%		
Hypertension								
dialysis group	8	80.0	2	20.0	10	100.0		
C.T group	12	40.0	18	60.0	30	100.0	3.33	> 0.05
Infection								
dialysis group	6	60.0	4	40.0	10	100.0		
C.T group	16	53.3	14	46.7	30	100.0	0.135	> 0.05

This table reveals that 80% of studied patients under dialysis have hypertension meanwhile the remaining 20% are normotensive . on the other hand 40% of patients under conservative treatment have hypertension while the remaining 60% are normotensive

This table also shows that 60% of the patients under dialysis have infection meanwhile the remaining 40% have no infection on the other hand 53.3% of patients under conservative treatment have infection while the remaning 46.7% have no infection

Table (4) results of laboratory investigations of the studied groups :

Group Parameter	Controls G III		Dialysis G. G I		CT G. G II		Test of significance		
	$\bar{X}$	$\pm$ S.D	$\bar{X}$	$\pm$ S.D	$\bar{X}$	$\pm$ S.D	GP.	T	P
Hemoglobin g / dL	13.3	$\pm$ 1.06	7.4	$\pm$ 0.9	10.0	$\pm$ 1.0	I * III	10.062	<0.01
							II * III	7.915	<0.01
Urea mg / dL	21.6	$\pm$ 1.1	80.4	$\pm$ 30.8	39.9	$\pm$ 13.8	I * III	6.028	<0.01
							II * III	4.153	<0.01
creatinine mg / dL	0.80	$\pm$ 0.07	9.23	$\pm$ 0.75	2.22	$\pm$ 1.06	I * III	35.549	<0.01
							II * III	4.196	<0.01
C. clearance ml / min	120.5	$\pm$ 7.8	8.8	$\pm$ 2.2	74.9	$\pm$ 9.9	I * III	43.743	<0.01
							II * III	13.251	<0.01
Albumin g / dl	4.5	$\pm$ 0.7	2.6	$\pm$ 0.5	4.0	$\pm$ 1.1	I * III	6.979	<0.01
							II * III	1.285	<0.05
G. peroxidase unit / l	1666.8	$\pm$ 728	244	$\pm$ 37.1	270	$\pm$ 24.5	I * III	6.17	<0.001
							II * III	10.57	<0.001
SOD unit / ml	193.9	$\pm$ 17.61	42.9	$\pm$ 13.49	64.0	$\pm$ 11.97	I * III	21.52	<0.001
							II * III	26.31	<0.001
M.D.A nmol / ml	2.95	$\pm$ 0.52	12.57	$\pm$ 0.91	10.68	$\pm$ 0.90	I * III	29.055	<0.01
							II * III	25.615	<0.01

This table shows that S. urea , S. creatinine , MDA are significantly higher in G.I and G.II patients when compared with controls. whereas hemoglobin, C.clearance, S. albumin, G. peroxidase, SOD are significantly lower in G.I and G.II patients when compared with controls.

Table (5) : comparison between the studied patients before antioxidants treatment in different parameters :

Parameter \ St.Group	Dialysis group G I		C.T group G II		T	P
	$\bar{X}$	$\pm S.D$	$\bar{X}$	$\pm S.D$		
Hb g / dL	7.4	± 0.9	10.0	± 1.0	7.310	< 0.01
Bl . urea mg / dL	80.4	± 30.8	39	± 13.8	5.778	< 0.01
S.creatinine mg / dL	9.23	± 0.75	2.22	± 1.06	19.344	< 0.001
C. clearance ml / min	8.8	± 2.2	74.9	± 9.9	20.818	< 0.01
S. albumin g / dL	2.6	± 0.5	4.0	± 1.1	4.070	< 0.01
G. peroxidase unit / l	244	± 37.1	270	± 24.5	5.15	< 0.001
SOD unit / ml	42.9	± 13.49	64.0	± 11.97	4.68	< 0.001
MDA nmol / ml	12.57	± 0.91	10.68	± 0.90	5.716	< 0.01

The table shows that Hb level, C. clearance , S. albumin , G. peroxidase and SOD are significantly higher in GII when compared with G.I whereas S. urea S. creatinine and MDA are significantly lower in GII when compared with G.I

Fig.(1):Comparison between the studied groups regarding glutathione peroxidase

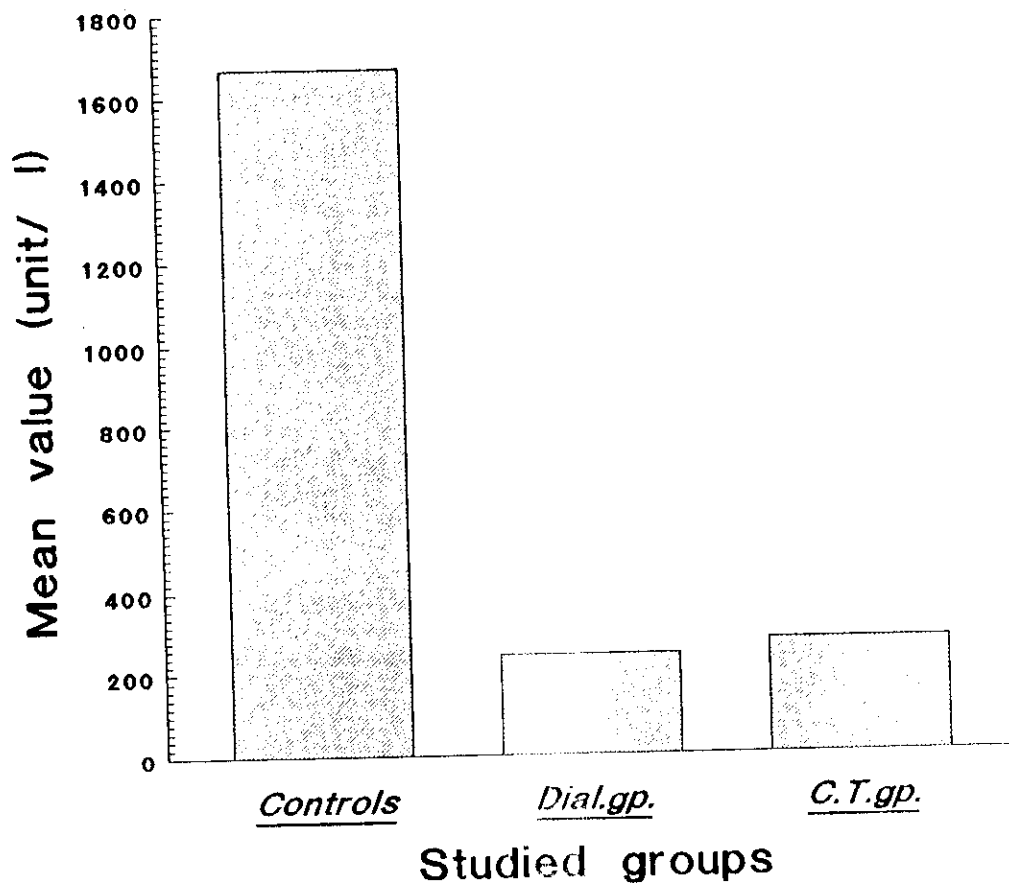


Fig.(2):Comparison between the studied groups regarding S.O.D..

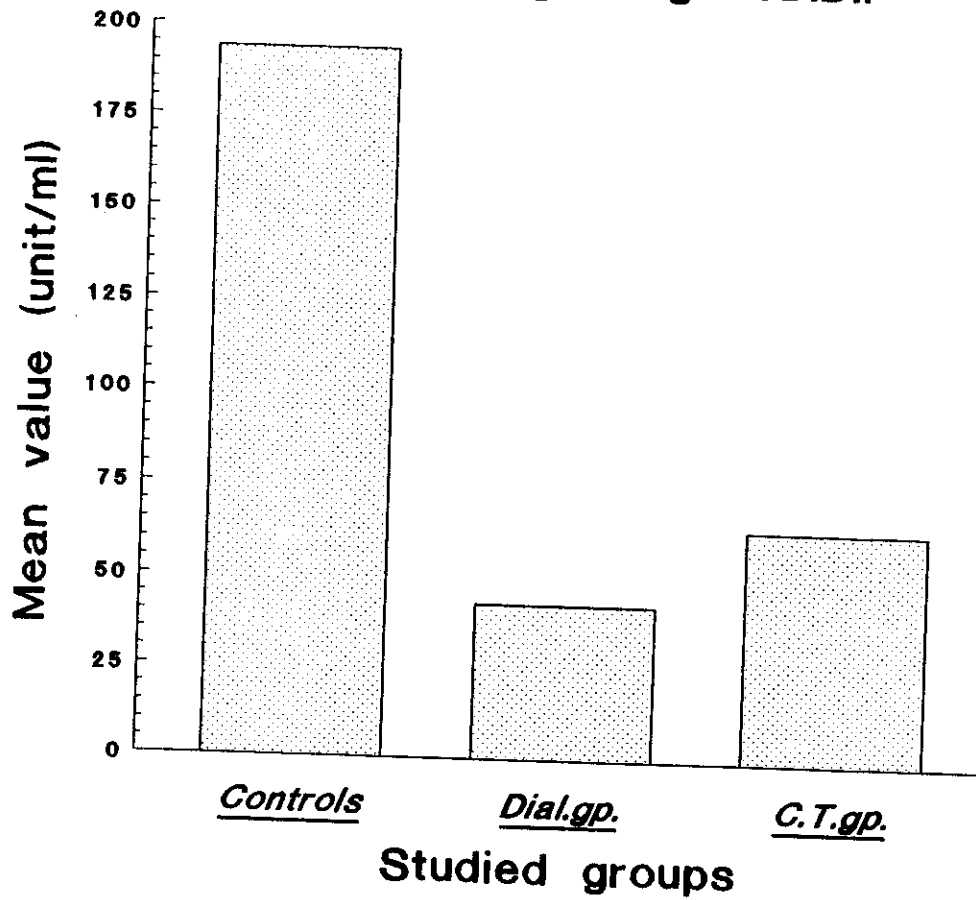
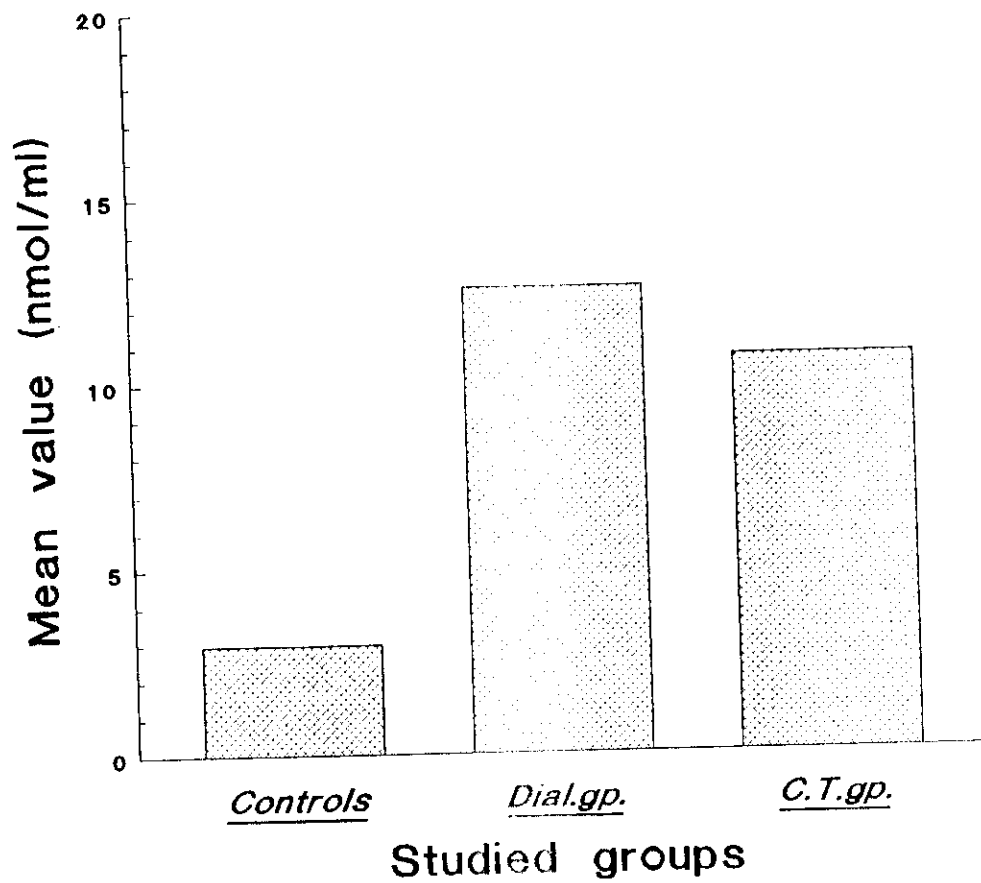


Fig.(3):Comparison between the studied groups regarding M.D.A..



Table(6) Effect of antioxidant treatment on the studied parameters in dialyzed patients (G.I)

Parameter \ St.Group	Before treatment		after treatment		Paired T	P
	$\bar{X}$	$\pm$ S.D	$\bar{X}$	$\pm$ S.D		
Hemoglobin	7.4	$\pm$ 0.9	8.6	$\pm$ 0.5	5.650	< 0.01
G.peroxidase	244	$\pm$ 37.1	267	$\pm$ 32.8	9.16	< 0.001
SOD	42.9	$\pm$ 13.49	120.6	$\pm$ 8.84	40.21	< 0.001
MDA	12.57	$\pm$ 0.91	7.68	$\pm$ 1.154	20.811	< 0.001

This table shows that treatment with antioxidant results in significance elevation of hemoglobin, G.peroxidase and SOD levels and significant decrease in MDA levels

Fig(4):Effect of treatment on hemoglobin and M.D.A. among dialysis patients.

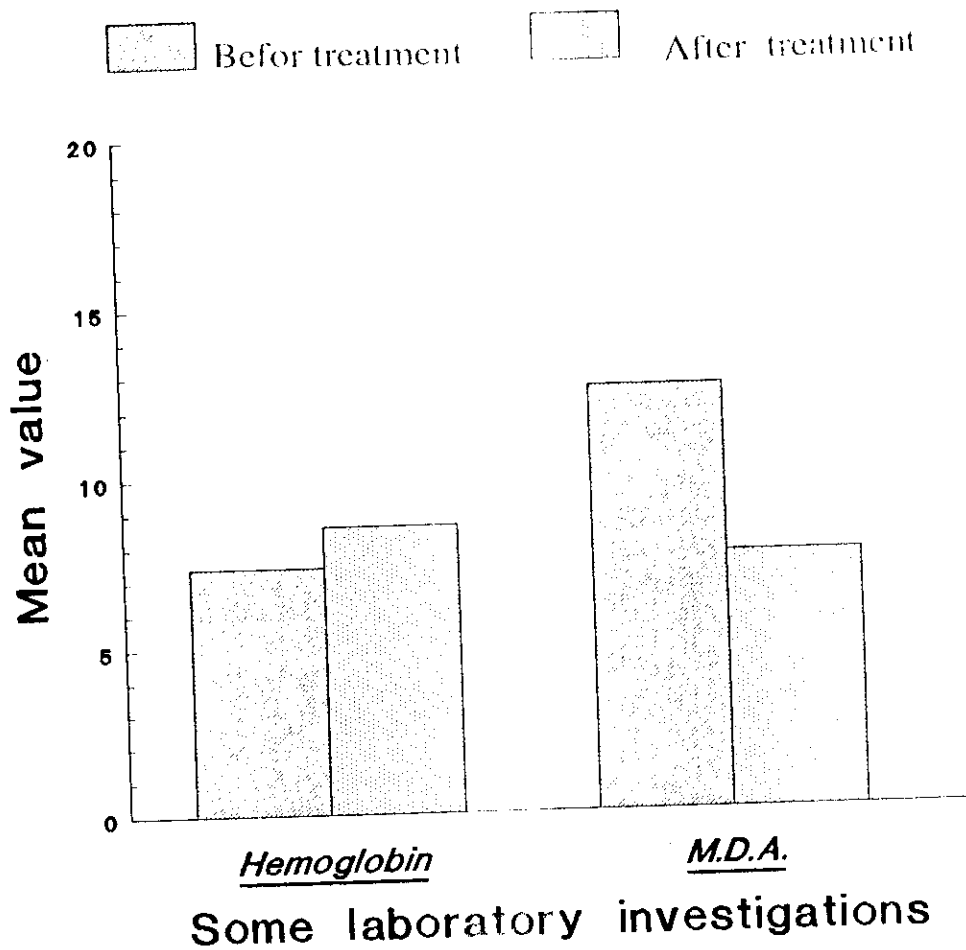


Fig 5:Effect of treatment on glutathione peroxidase & SOD among dialysis patients.

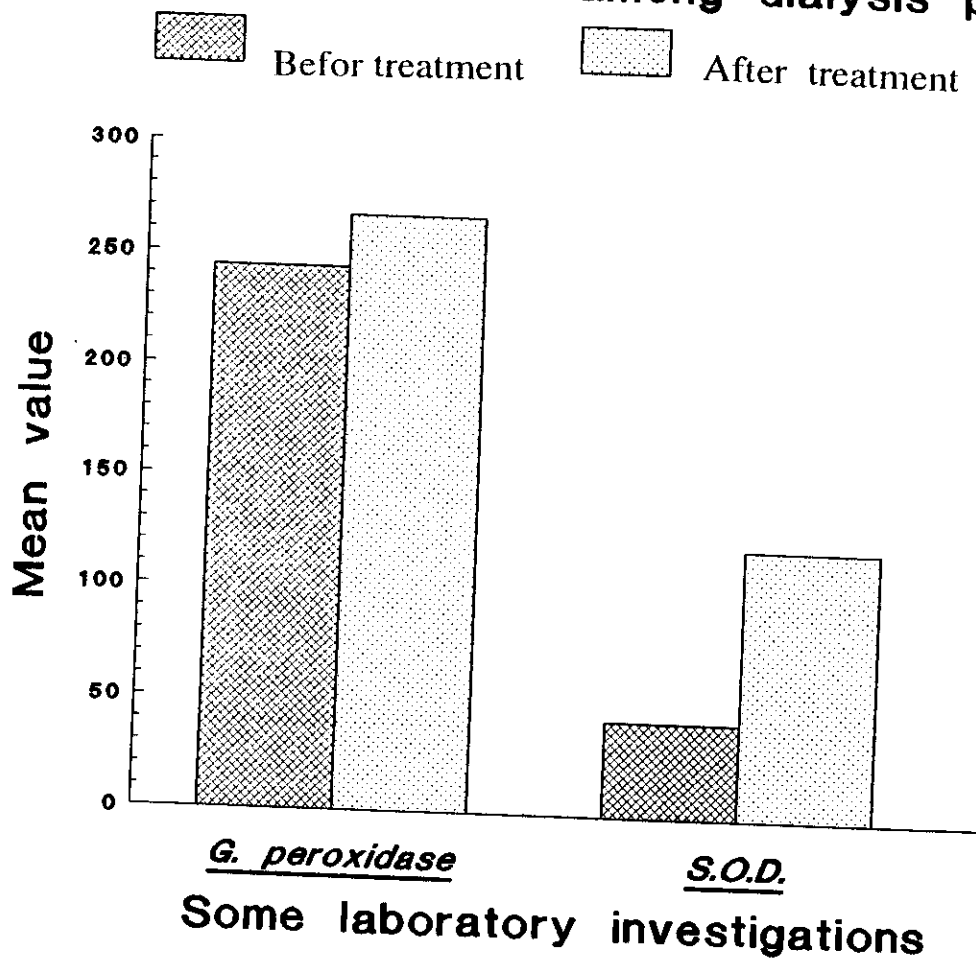


Table (7) : Effect of antioxidants treatment on the studied parameters in the renal patients under conservative treatment (G.II)

Parameters	Before treatment		After treatment		Paired T	P
	$\bar{X}$	$\pm$ S.D	$\bar{X}$	$\pm$ S.D		
Hemoglobin g / dL	10.0	$\pm$ 1.0	10.9	$\pm$ 1.3	6.454	< 0.01
G. peroxidase unit / L	270.0	$\pm$ 24.5	334	$\pm$ 30.2	8.93	< 0.001
SOD unit / ml	64	$\pm$ 11.97	131	$\pm$ 5.58	40.51	< 0.001
MDA nmol / ml	10.68	$\pm$ 0.901	7.22	$\pm$ 0.908	46.29	< 0.001
S. creatinine mg / dL	2.2	$\pm$ 1.1	1.9	$\pm$ 1.0	18.669	< 0.01
creat. clearance ml / min	74.9	$\pm$ 9.9	83.0	$\pm$ 10.2	11.935	< 0.01
S. albumin g / dL	4.01	$\pm$ 1.02	4.22	$\pm$ 0.95	6.070	< 0.01
S. urea mg / dL	39.9	$\pm$ 13.8	37.2	$\pm$ 10.9	1.436	< 0.05

This table shows that the treatment with antioxidant leading to significant elevation of hemoglobin level, glutathione peroxidase level, superoxide dismutase level, C.clearance and S.albumin. Mean while the antioxidants therapy results in significant reduction of S. creatinine, MDA. and S.urea

Fig(6):Effect of treatment on hemoglobin & MDA among patients under C.T..

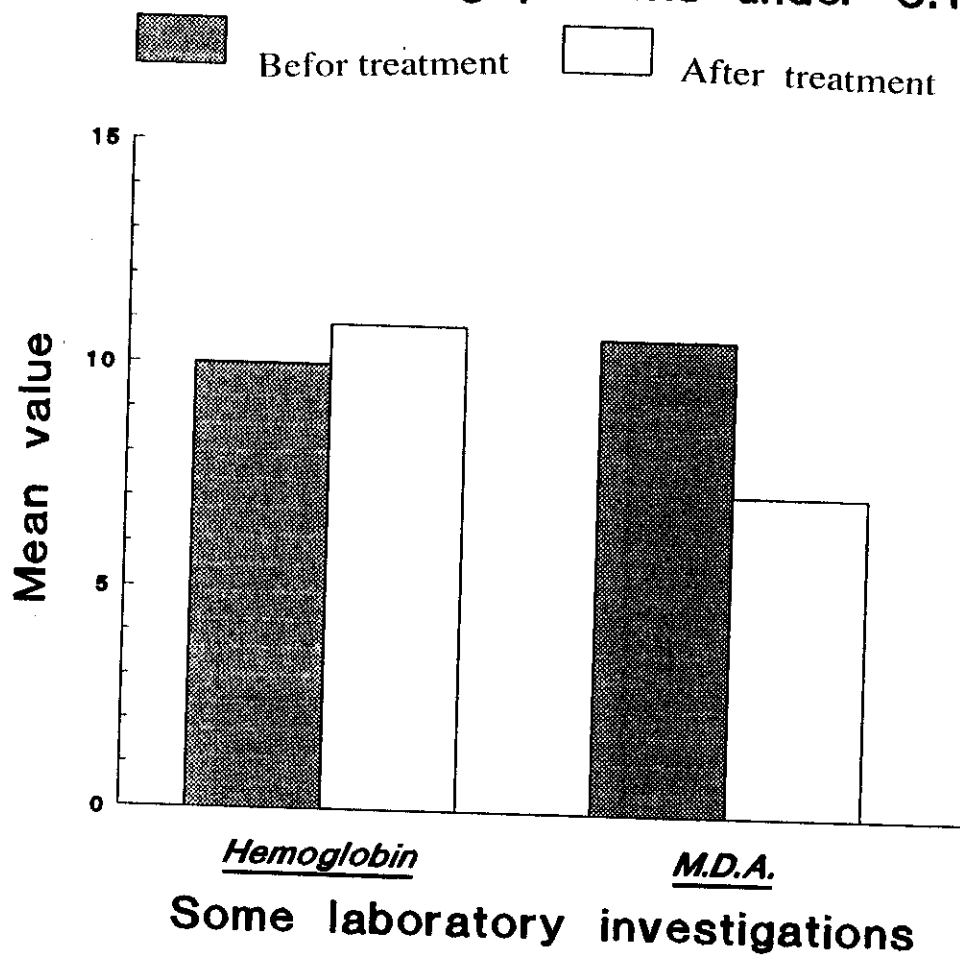


Fig 7:Effect of treatment on glutathior peroxid.&SOD among patients under C

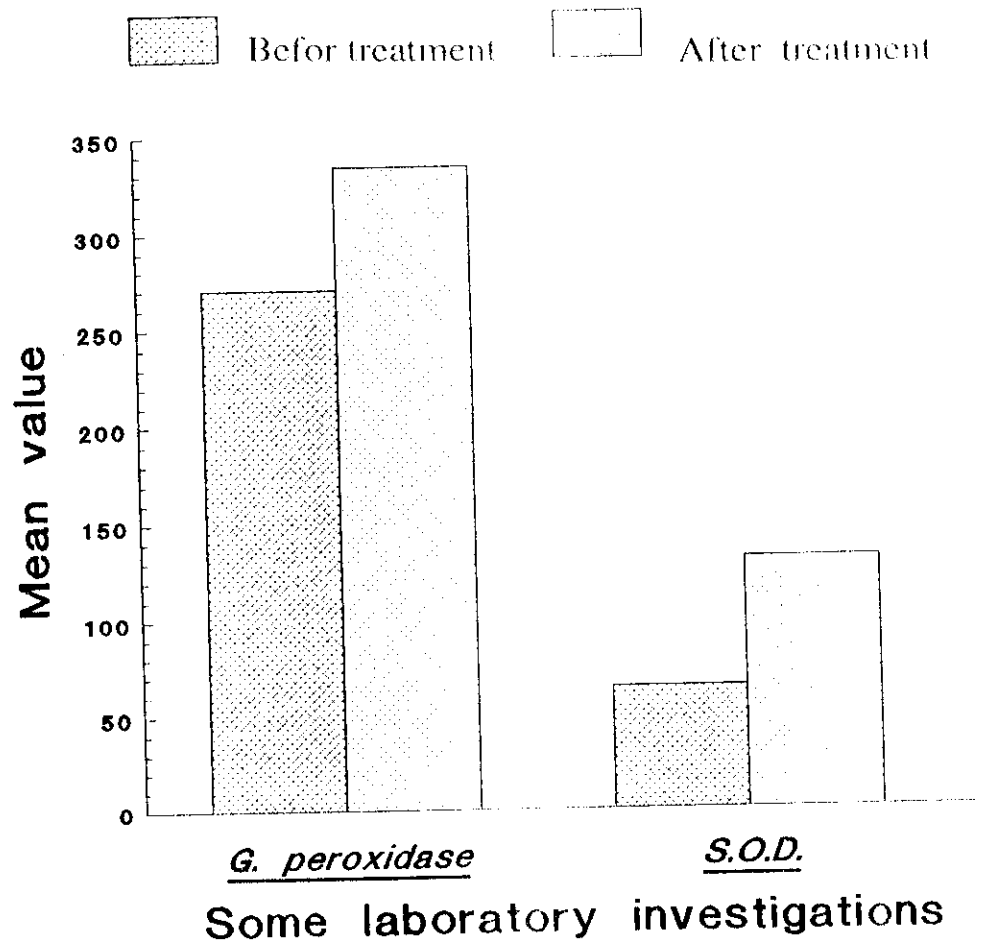


Table (8) : Correlation between G. peroxidase and other parameters:

Parameters	G. peroxidase	
	r	P
duration of disease	- 0.536	< 0.05
Hb level	+ 0.772	< 0.01
bl. urea	- 0.533	< 0.05
S.creatinine	- 0.491	< 0.05
C. clearance	+ 0.641	< 0.05
S. albumin	+ 0.303	< 0.05
SOD	+ 0.910	< 0.01
MDA	- 0.813	< 0.01
hypertension	- 0.561	< 0.05
Infection	- 0.423	< 0.05
proteinuria	- 0.459	< 0.05

This table shows a significant positive correlation between G. peroxidase and the following parameters:

Hb level, C.clearance, S. albumin and SOD, whereas a significant negative correlation exists between G. peroxidase and following parameters. duration of disease, bl, urea, S. creatinine, MDA level hypertension, infection and proteinuria

Table (9) : Correlation between SOD and other parameters:

Parameter	SOD	
	r	P
duration of disease	- 0.537	< 0.05
Hb level	+ 0.772	< 0.01
bl. urea	- 0.533	< 0.05
S.creatinine	- 0.491	< 0.05
C. clearance	+ 0.738	< 0.01
S. albumin	+ 0.345	< 0.05
G . peroxidase	+ 0.910	< 0.01
MDA	- 0.943	< 0.01
hypertension	- 0.600	< 0.05
Infection	- 0.451	< 0.05
proteinuria	- 0.422	< 0.05

This table show significant positive correlation between SOD and the following parameters:

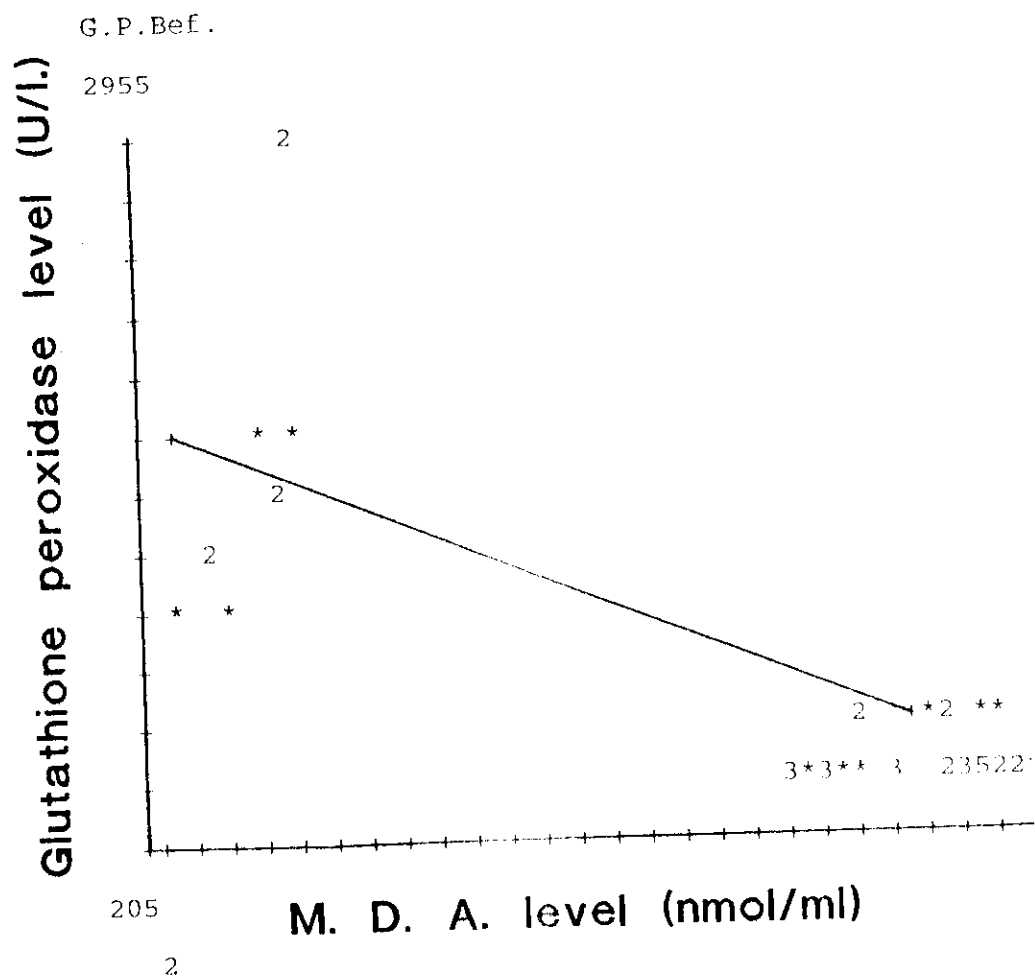
Hb level, C.clearance, S. albumin and G. peroxidase. A significant negative correlation exists between SOD and following parameters. duration of disease, Bl .urea, S. creatinine, MDA, hypertension , infection and proteinuria

Table (10) : Correlation between MDA and other parameters:

Parameter	MDA	
	r	P
duration of disease	+ 0.597	< 0.05
Hb level	- 0.777	< 0.01
bl. urea	+ 0.574	< 0.05
S.creatinine	+ 0.560	< 0.05
C. clearance	- 0.784	< 0.01
S. albumin	- 0.377	< 0.05
G . peroxidase	- 0.813	< 0.01
SOD	- 0.943	< 0.01
hypertension	+ 0.614	< 0.05
Infection	+ 0.405	< 0.05
proteinuria	+ 0.351	< 0.05

This table shows significant positive correlation between MDA and the following parameters : duration of disease, Bl .urea, S. creatinine, hypertension , infection and proteinuria . A significant negative correlation between MDA and following parameters : Hb level, C.clearance, and G. peroxidase.

Fig.(8): Correlation between M.D.A. and glutathione peroxidase levels.



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Fig.(10): Correlation between M.D.A. and S.O.D. levels.

