RESULTS

STATISTICAL ANALYSIS OF THE RESULTS

The statistical analysis of the result was done on, IBM compatible personal computer, using the following tests.

1- Student (t) test to compare between two groups.

2- One- way Anova (f) test to compare more than two means.

3- Correlation coeificient to find association between different variables.

RESULTS

This study included 35 uremic patients under regular hemadialysis and conservative treatment, they were divided into 2 groups :

- Group one, included 20 patient of end stage renal failure under regular hemodialysis twice weekly included 4 females and 16 males their ages ranged from 35-60 years with mean value (43), duration of dialysis ranged from 1 year to 3 years with mean value 2.25 ± 0.4.
- Group two, included 15 patients of end stage renal failure under conservative treatment included 3 females and 12 male their ages ranged from 36-54 years with mean value (40), duration of illness ranged from 8 months to 18 months with mean value 11.5 ± 3.74 months.
- Group three, the study also included 10 healthy control persons 3 female and 7 male their ages ranged from 30 – 55 years with mean value 31.

In each group serum urea, creatinine, calcium, phosphorus, PTH and T-cell subsets CD4 percentage, CD8 percentage, and CD4/CD8 ratio were done.

Table (1):

Show comparison between the cases of chronic renal failure and control as regard laboratory results of blood urea.

Blood urea is significantly high in both diseased group, I & II as compared with control group.

The mean = 154.7 ± 30.1, 104.7 ± 13.4 in both groups respectively compared with control group mean = 27.4 ± 4.5

Table (1): Shows blood urea among the studied groups.

Blood urea	X	± S.D.	t	P
I- Hemodialysis group (n = 20)	154.7	± 30.1	13.183	< 0.01
II- Conservative treated group (n = 15)	104.7	±13.4	17.482	P < 0.01
III- Control group (n = 10)	27.4	±4.5		

n = number of patients.

F = 144.525

P < 0.01

There is significant increase in urea in both group I & II compared with control group.

Fig. (1): Blood urea among the studied groups.

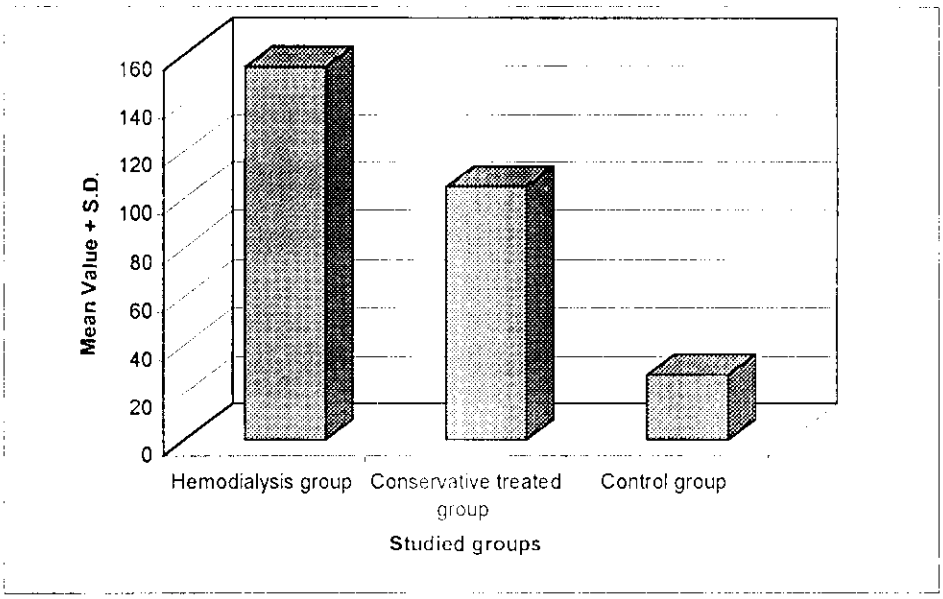


Table (2):

Shows comparison between the chronic renal failure patients and control as regard laboratory results of serum creatinine.

Serum creatinine is significantly high in both group, I & II as compared with control group.

The mean = 11.3 ± 1.3, mean = 5.48 ± 0.56 in both groups respectively compared with control group mean = 0.81 ± 0.2,

Table (2): Shows creatinine among the studied groups.

Serum creatinine	X	± S.D.	t	P
I Hemodialysis group (n = 20)	11.3	± 1.3	24.6	< 0.01
II- Conservative treated group (n = 15)	5.48	± 0.56	25.05	< 0.01
III- Control group (n = 10)	0.81	± 0.2	--	--

F = 431. 222

P < 0.01

There is significant increase in S. creatinine in both group I & II compared with control.

Fig. (2): Serum creatinine among the studied groups.

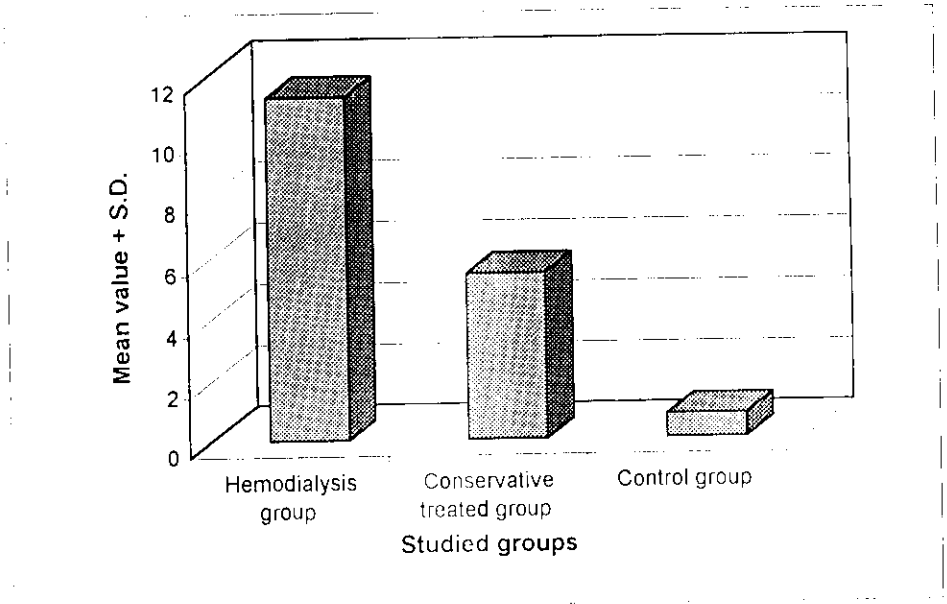


Table (3):

Show comparison between the chronic renal failure patients and control as regard laboratory results of serum calcium.

Serum calcium is significantly low in both groups, I & II as compared with control group, III.

The mean = 8.826 ± 0.22 & 7.72 ± 0.42 in both groups respectively compared with control group, mean = 9.67 ± 0.35,

Table (3): Shows serum calcium among the studied groups.

Serum calcium	X	± S.D.	t	P
I- Hemodialysis group (n = 20)	8.826	± 0.22	7.32	< 0.01
II- Conservative treated group (n = 15)	7.72	± 0.42	12.43	< 0.01
III- Control group (n = 10)	9.67	± 0.35	-	-

F = 112.349

P < 0.01

There is significant decrease in S. calcium level in group I & II compared with control.

Fig. (3): Serum calcium among the studied groups.

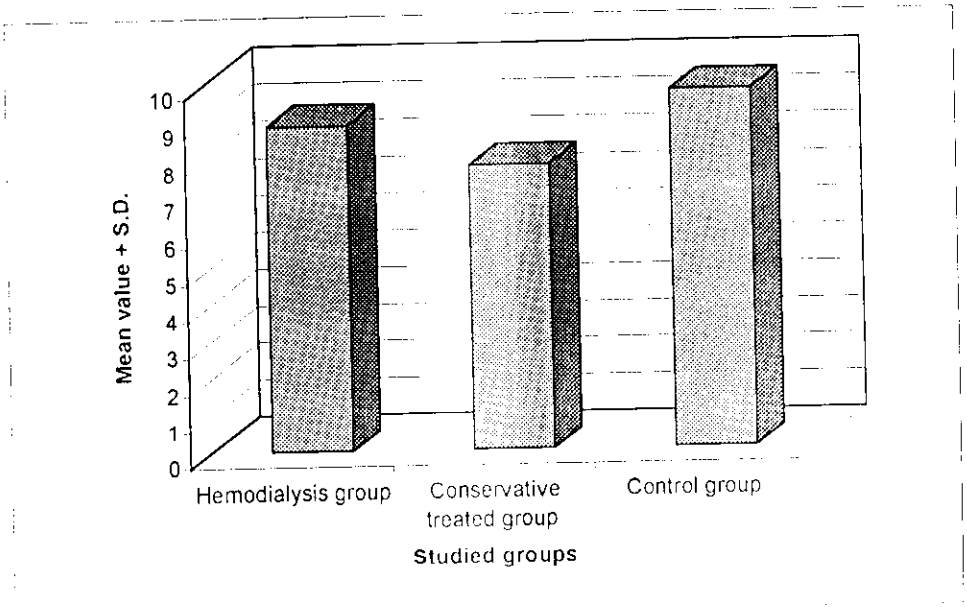


Table (4):

Show comparison between the chronic renal failure patients and control as regard laboratory results of serum phosphorus.

Serum phosphorus is significantly high in both groups, I & II as compared with control group, III.

The mean = 7.850 ± 0.426 & 7.653 ± 0.381 in both groups respectively compared with control group, mean = 4.175 ± 0.44,

Table (4): Shows serum phosphorus among the studied groups.

Serum phosphorus	X	± S.D.	t	P
I- Hemodialysis group (n = 20)	7.850	± 0.426	22.112	< 0.01
II- Conservative treated group (n = 15)	7.653	± 0.381	12.119	< 0.01
III- Control group (n = 10)	4.175	± 0.44	- -	--

F = 293.714

P < 0.01

There is significant increase in S. Ph. in both groups I & II compared with control.

Fig. (4): Serum phosphorus among the studied groups.

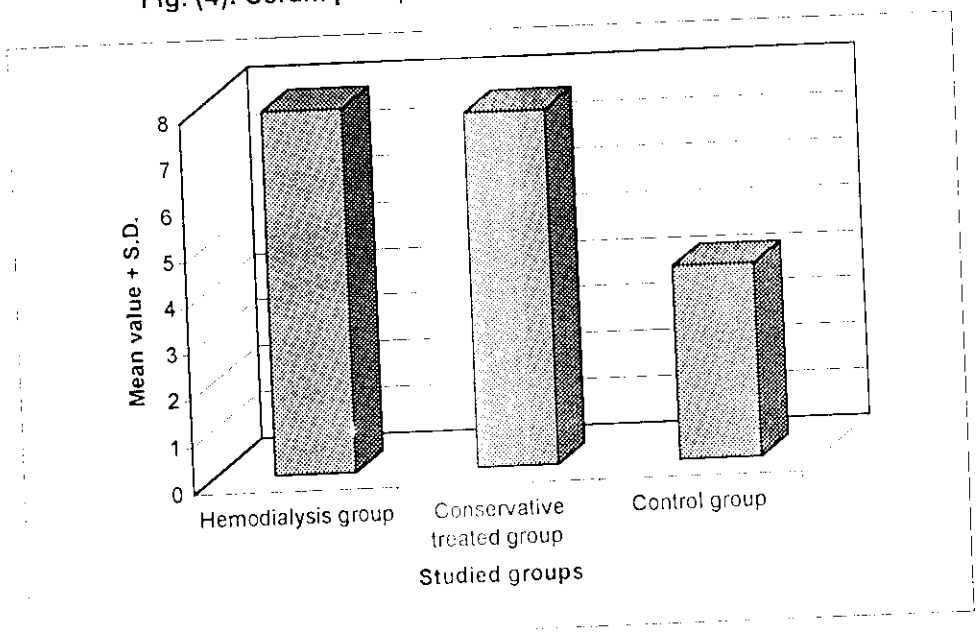


Table (5):

Shows comparison between the chronic renal failure patients and the control as regard laboratory results of serum PTH.

Serum PTH is significantly high in both groups, I & II as compared with control group, mean = 233.0 ± 12.29 and mean = 262.33 ± 22.02 in both groups respectively compared with control group, mean = 27.0 ± 13.37.

Table (5): Shows PTH among the studied groups.

PTH	X	± S.D.	t	P
I- Hemodialysis group (n = 20)	233.0	± 12.29	42.049	< 0.001
II- Conservative treated group (n = 15)	262.33	± 22.02	30.157	< 0.001
III- Control group (n = 10)	27.0	± 13.37	--	--

F = 705.903

P < 0.001

There is a highly significant increase in S. PTH in both groups, I & II compared with control.

Fig. (5): Serum PTH among the studied groups.

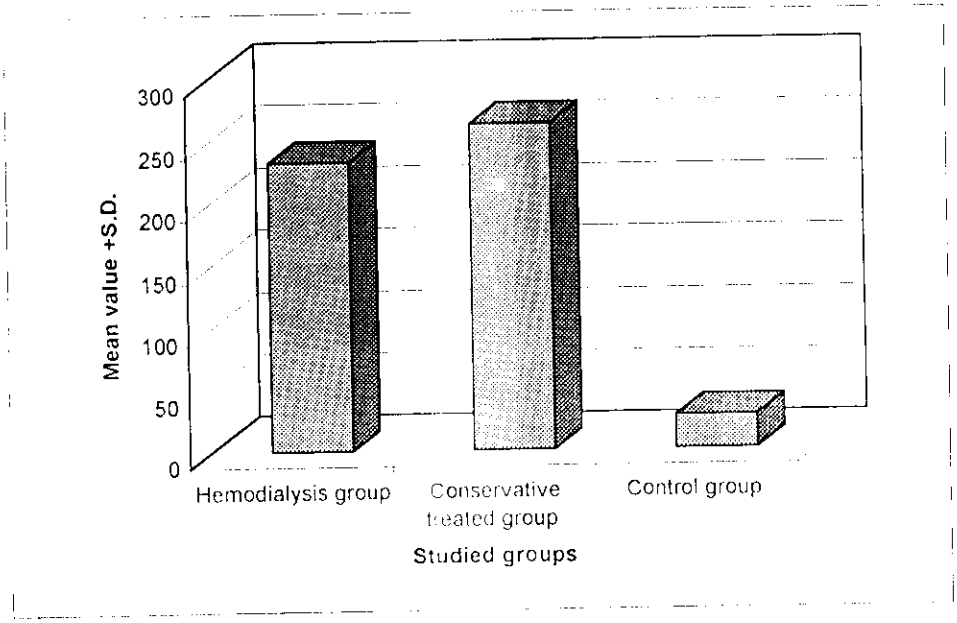


Table (6):

Shows comparison between the CRF patients and control as regard laboratory results of (CD4) ratio.

Cells was significantly decreased in both groups I & II mean = 38.86 ± 0.86 & mean = 44.9 ± 1.3 respectively as compared with control group mean = 46.5 ± 0.85.

Table (6): Shows CD4 percentage among the studied groups.

CD4	X	± S.D.	t	P
I- Hemodialysis group (n = 20)	38.86	± 0.86	22.98	< 0.01
II- Conservative treated group (n = 15)	44.9	± 1.3	3.42	< 0.01
III- Control group (n = 10)	46.5	± 0.85	- -	--

F = 245.721

P < 0.01

There is significant decrease in CD4 cells in both group I & II compared with control.

Fig. (6): CD4 ratio among the studied groups.

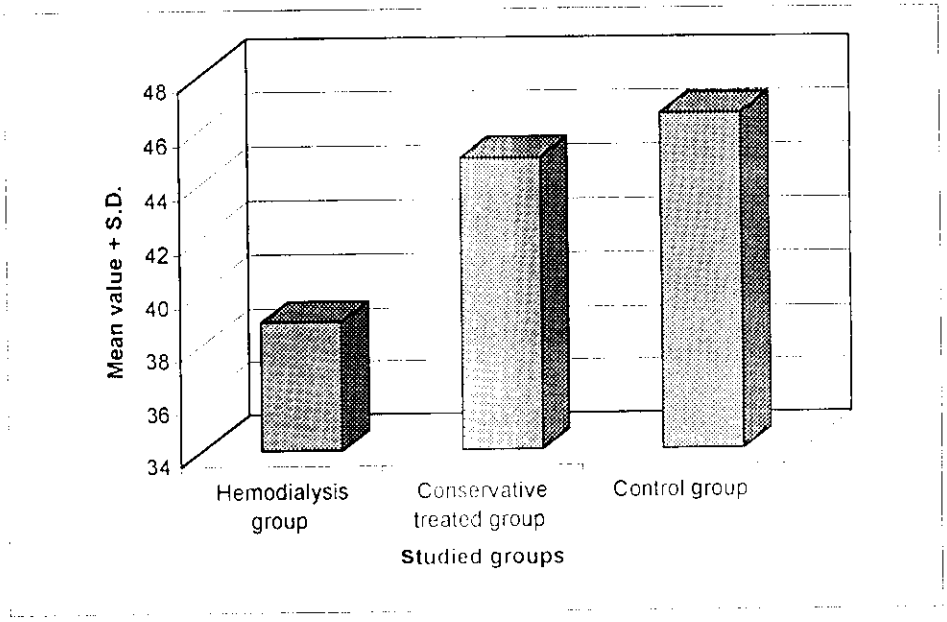


Fig. (a): T-cell subset by flourescent microscope.

Table (7):

Show comparison between the CRF patients and control as regard laboratory result of (CD8) ratio, hemodialysis group (I) show significantly decrease CD8 ratio compared with control group, mean = 16.83 ± 0.54 & mean = 23.35 ± 0.7 respectively.

While in groups II, conservatively treated patients CD8 show significant increase compared with control group, mean = 25.2 ± 0.97 & mean = 23.35 ± 0.7 respectively.

P< 0.01

Table (7): Shows CD8 percentage among the studied groups.

CD8	X	± S.D.	t	P
I- Hemodialysis group (n = 20)	16.83	± 0.54	28.13	< 0.01
II- Conservative treated group (n = 15)	25.2	± 0.97	5.16	< 0.01
III- Control group (n = 10)	23.35	± 0.7	---	---

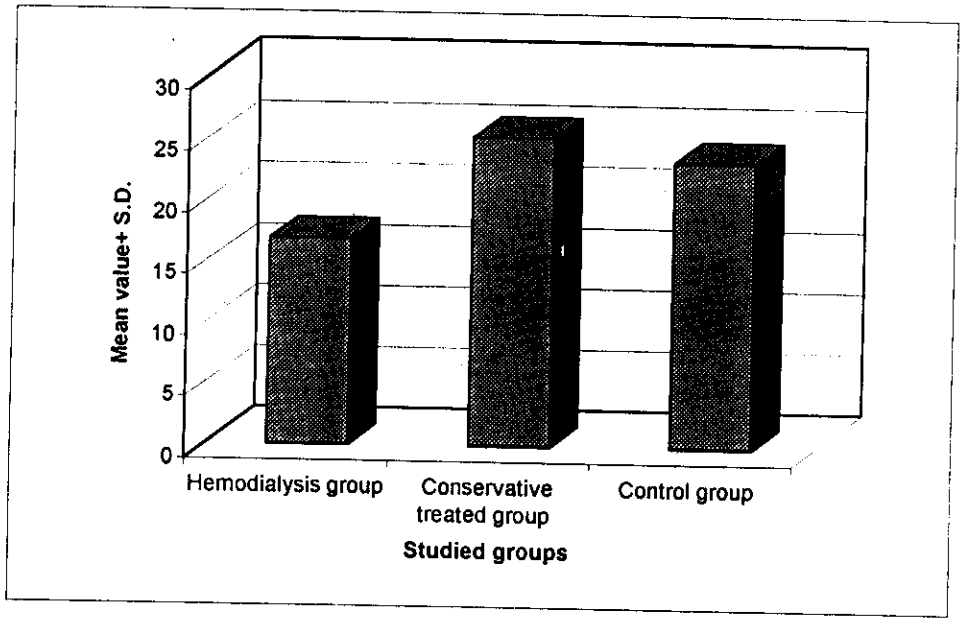
F = 601.833

P < 0.01

There is significant decrease in CD8 cells in group I compared with control.

While there is significant increase CD8 cells in group II compared with control.

Fig. (7): CD8 ratio among the studied groups.



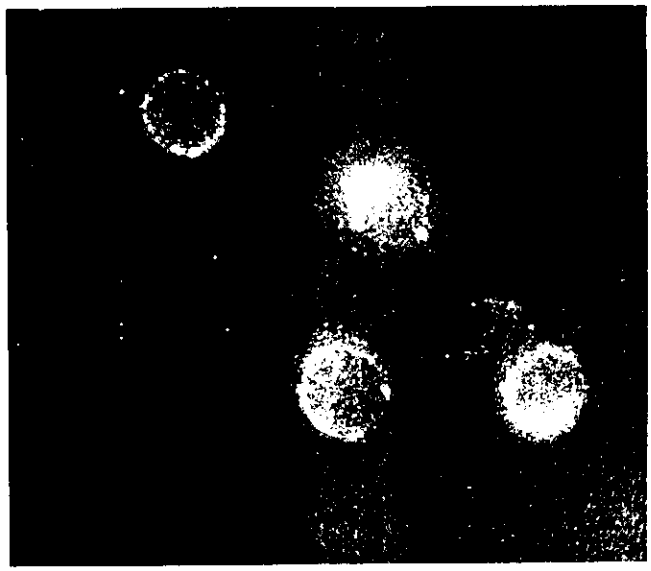


Fig. (b): T-cell subset by flourescent microscope.

Table (8):

Shows comparison between CRF patients and control as regard laboratory results of (CD4 / CD8) ratio.

Group I of hemodialysis patients shows significant increase in CD4/CD8 ratio compared with control group, with mean value = 2.3 ± 0.05 & mean value = 1.98 ± 0.03 respectively.

But group II of conservatively treated patients shows significant decrease in CD4/CD8 ratio compared with control group, with mean value = 1.8 ± 0.03 & mean value = 1.98 ± 0.03 respectively. P < 0.01.

Table (8): Shows CD4/CD8 ratio among the studied groups.

CD4/CD8 ratio	X	± S.D.	t	P
I- Hemodialysis group (n = 20)	2.3	± 0.05	16.2	< 0.01
II- Conservative treated group (n = 15)	1.8	± 0.03	12.3	< 0.01
III- Control group (n = 10)	1.98	± 0.03	--	--

F = 505.908

P < 0.01

There is significant increase in CD4/CD8 ratio in group I compared with control.

While there is significant decrease in CD4/CD8 ratio in group II compared with control.

Fig. (8): CD4/CD8 ratio among the studied groups

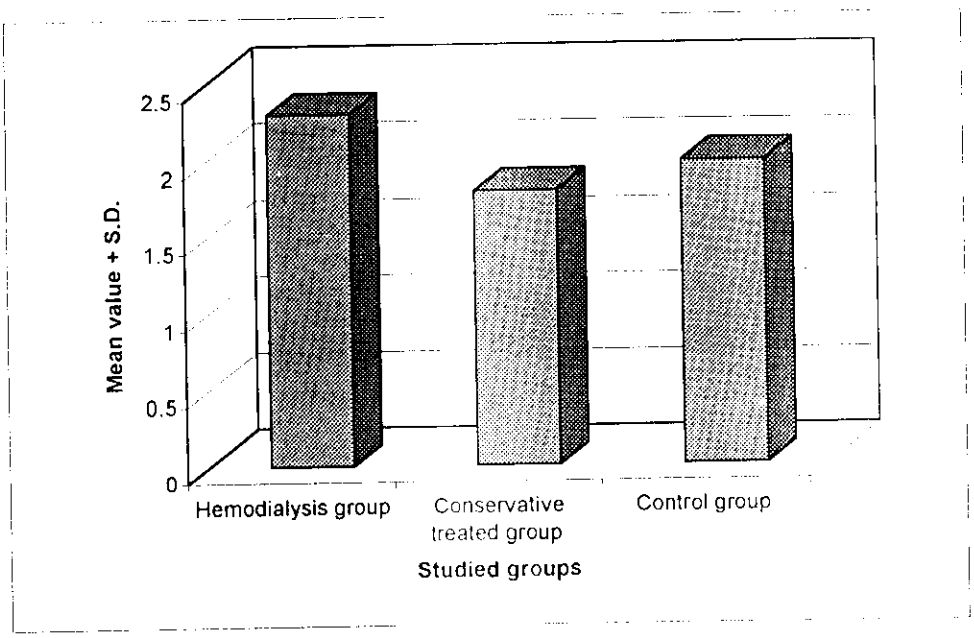


Table (9): Comparison between the studied patients regarding different parameters.

Patients parameters	I- HD group X ± S.D.	II- Const. ttt. gp X ± S.D.	t	P
Age (Years)	45.35 ± 8.1	43 ± 12	0.67	> 0.05
Duration of illness	2.25 ± 0.4 years	11.53 ± 3.74 monthes	11.06	< 0.01
Bl. Urea	154.7 ± 30	104.67 ± 13.4	5.99	< 0.01
S. Creatinine	11.29 ± 1.33	5.48 ± 0.56	15.87	< 0.01
S. Calcium	8.83 ± 0.22	7.72 ± 0.43	9.19	< 0.01
S. Phosphorus	7.850 ± 0.426	7.653 ± 0.381	1.412	< 0.01
S. PTH	233.0 ± 12.29	262.33± 22.02	5.018	< 0.01
T4 ratio	38.86 ± 0.86	44.9 ± 1.29	16.68	< 0.01
T8 percentage	16.83 ± 0.54	25.2 ± 0.97	32.5	< 0.01
T4/T8 percentage	2.3 ± 0.05	1.8 ± 0.03	29.2	< 0.01

Table (10):

Correlation coefficients (r) & probability value between the different variables among the studied groups.

- T4/T8 ratio shows negative correlation with calcium, and positive correlation with phosphorus.

- PTH shows negative correlation with calcium, T4 ratio and shows +ve correlation with T8 percentage and creatinine levels, phosphorus.

Table (10): Correlation coefficients (r) and probability value between the different parameters.

	T4		T8		T4 / T8		PTH	
	r	P	r	p	r	p	r	P
Ca					- 0686	< 0.05	- 0.618	< 0.01
Ph					0.323	< 0.05	0.928	< 0.01
Creat.							0.673	< 0.05
T8			--	--				
T4/T8					--			
PTH	- 0.483	< 0.05	+ 0.380	< 0.05			--	--