RESULTS

The results of the present study were summarized, statistically analyzed and presented in (9) tables and (19) figures.

Table (3): Demographic clinical characteristics of the studied groups

	Group I n = 20	Group II n = 30	Group III n = 30
Smoking	n (%)	n (%)	n (%)
-ve	13 65%	22 73.3%	22 73.3%
+ve	7 35%	8 26.6%	8 26.6%
Hypertension	n (%)	n (%)	n (%)
-ve	14 70%	9 30%	7 23.3%
+ve	6 30%	21 70%	23 76.6%
Cardiovascular	n (%)	n (%)	n (%)
-ve	20 100.0%	27 90%	26 86.6%
+ve	0	3 10%	4 13.3%

Demographic characteristics as regard sex, male and female account respectively for 50% and 50% in group I, 46.6% and 53.3% in group II and 46.6%, and 53.3% in group III. No statistically significant difference was found between the three studied groups (X^2 =0.07, P=0.96).

As regard smoking (tobacco use), it is positive in 35% in the group I, 26.6% in group II and 26.6 in group III.. No statistically significant difference was found between the three studied groups (X^2 =0.51, P=0.77).

As regard hypertension, it is positive in 30% in the group I, 70% in group II and 76.6% in group III. There was statistically significant difference was found between the three studied groups (X^2 =12.3, P=0.002).

As regard cardiovascular disease, it is positive in 10% in group II and 13.3% in group III.. No statistically significant difference was found

between the three studied groups (X^2 =2.77, P=0.25).

Table (4): Comparison of clinical and demographic data in the three studied groups as regards BMI, SBP, DBP and Ankle Brachial Index

	Group I (n=20) Mean±SD	Group II (n =30) Mean±SD	Group III (n =30) Mean±SD	F	P
BMI(kg/m²)	24.5 ± 2.4	25 ± 1.8	29.6 ± 3	24.7	0.000
SBp(mmHg)	128.8 ± 14.4	143.8 ± 15.4	142.7 ± 18.6	3.8	0.028
DBp(mmHg)	76.5 ± 7.7	78.6 ± 8	81.1 ± 7.5	1.4	0.234
Ankle Brachial Index	1.29 ± 0.28	0.96 ± 0.33	0.90 ± 0.40	5.2	0.0001

There was a statistical significant difference between the three groups as regards SBP (P < 0.05).

There was a very highly statistical significant difference between the three groups as regards BMI and Ankle Brachial Index (P < 0.001).

There was non statistical significant difference between the three groups as regards DBP (P > 0.05).

Table (5): Comparison of BMI, SBP and ABI between the three groups

	G_I / G_{II}	G_I / G_{III}	G_{II} / G_{III}
BMI	> 0.05	< 0.001	< 0.001
SBP	< 0.05	< 0.05	> 0.05
ABI	< 0.001	< 0.001	> 0.05

BMI was statistically significant increased in group III compared to group I and group II (P < 0.001) but no statistical significant difference was found between group II and group I (P > 0.05).

SBP was statistically significant increased in group II and group III compared to group I (P < 0.05) with no significant difference was found between group II and group III (P > 0.05).

ABI was statistically significant lower in group II and group III compared to group I ($P < 0.001$) with no statistical significant difference was found between group II and group III ($P > 0.05$).

Table (6): Comparison of laboratory data in the three studied groups as regards HbA1c, t-PA, fibrinogen, CRP, cholesterol, triglycerides, HDL-cholesterol and LDL- cholesterol.

	Group I (n=20) Mean±SD	**Group II (n =30) Mean±SD**	**Group III (n =30) Mean±SD**	**F**	**P**
HbA1c (%)	4.46±0.4	7.2±1.1	6.9±1.1	33.9	0.000
t-PA(ng/ml)	10.0±3.7	14.5±4.0	6.4±3.4	25.9	0.000
Fibrinogen(mg/dl)	263.9±69.9	340.4±85.4	357.1±68.2	5.52	0.01
C.R.P(mg/l)	2.7±1.5	17.7±6.7	33.6±3.7	7.34	0.002
Cholesterol(mg/dl)	160.8±20.0	190.6±21.1	243.6±30.2	43.41	0.000
Triglycerides(mg/dl)	73.2±8.5	116.8±70.8	156.7±55.1	3.5	0.03
HDL-cholesterol(mg/dl)	63.0±4.0	52.6±5.1	42.6±6.1	92.6	0.000
LDL-cholesterol(mg/dl)	95.0±12	132.0±16.4	169.0±14.1	162.0	0.000

There was a statistical significant difference between the three groups as regards triglycerides ($P < 0.05$).

There was a highly statistical significant difference between the three groups as regards fibrinogen and CRP ($P < 0.01$).

There was very highly statistical significant difference between the three groups as regards HbA1c, t-PA, cholesterol, HDL-cholesterol and LDL-cholesterol ($P < 0.001$).

Table (7): Comparison of HbA1c, t-PA, fibrinogen, CRP, cholesterol, triglyceride, HDL-cholesterol and LDL- cholesterol between the three groups

	G_I / G_{II}	G_I / G_{III}	G_{II} / G_{III}
HbA1C (%)	< 0.001	< 0.001	> 0.05
t-PA (ng/ml)	< 0.001	< 0.001	< 0.001
Fibrinogen (mg/dl)	< 0.05	< 0.001	> 0.05
CRP (mg/l)	< 0.05	< 0.001	< 0.05
Cholesterol (mg/dl)	< 0.05	< 0.05	< 0.05
Triglyceride (mg/dl)	< 0.05	< 0.001	< 0.05
HDL-cholesterol (mg/dl)	< 0.001	< 0.001	< 0.001
LDL-cholesterol (mg/dl)	< 0.001	< 0.001	< 0.001

- HbA1c was statistically significantly higher in group II and group III compared to group I ($P < 0.001$) with no statistical significant difference was found between group II and group III ($P > 0.05$).

- t-PA was statistically significantly higher in group II compared to group I ($P < 0.001$),but significantly lower in group III compared to group I and group II ($P < 0.001$).

- There was a statistically significant increase of fibrinogen in group II and group III compared to group I ($P < 0.05$ and $P < 0.001$ respectively) with no statistical significant difference was found between group II and group III ($P > 0.05$).

- There was a statistically significant increase of CRP in group II and group III compared to group I ($P < 0.05$ and $P < 0.001$respectively). CRP was also statistically significantly higher in group III compared to group II ($P < 0.05$).

- Cholesterol was statistically significantly higher in group II and group III compared to group I ($P < 0.05$) and statistically significantly higher in group III compared to group II ($P < 0.05$).

- Triglyceride was statistically significantly higher in group II and group III compared to group I ($P < 0.05$ and $P < 0.001$ respectively), also Triglyceride in group III was statistically significantly higher compared to group II ($P < 0.05$).

- HDL-Cholesterol was statistically significantly lower in group II and group III compared to group I ($P < 0.001$), but statistically significantly lower in group III compared to group II ($P < 0.001$).

-LDL-cholesterol was statistically significantly higher in group II and group III compared to group I ($P < 0.001$), but statistically significantly lower in group II compared to group III ($P < 0.001$).

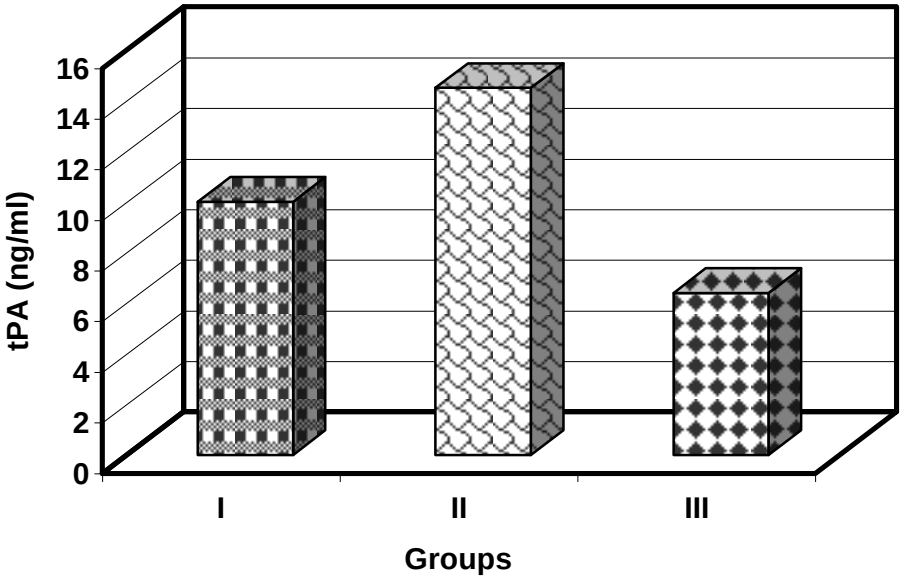

Fig. (7): t-PA distribution among the three groups.

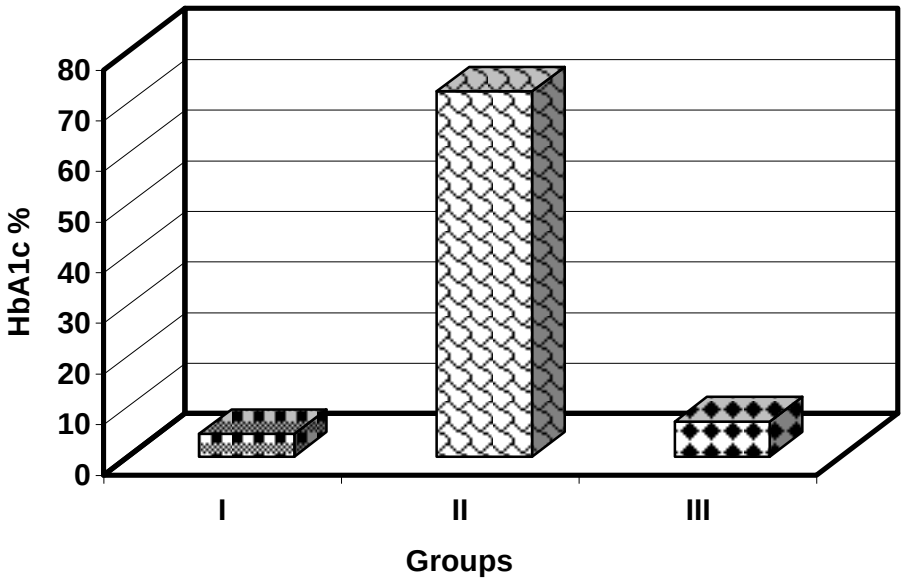

Fig. (8): HbA1c distribution among the three groups.

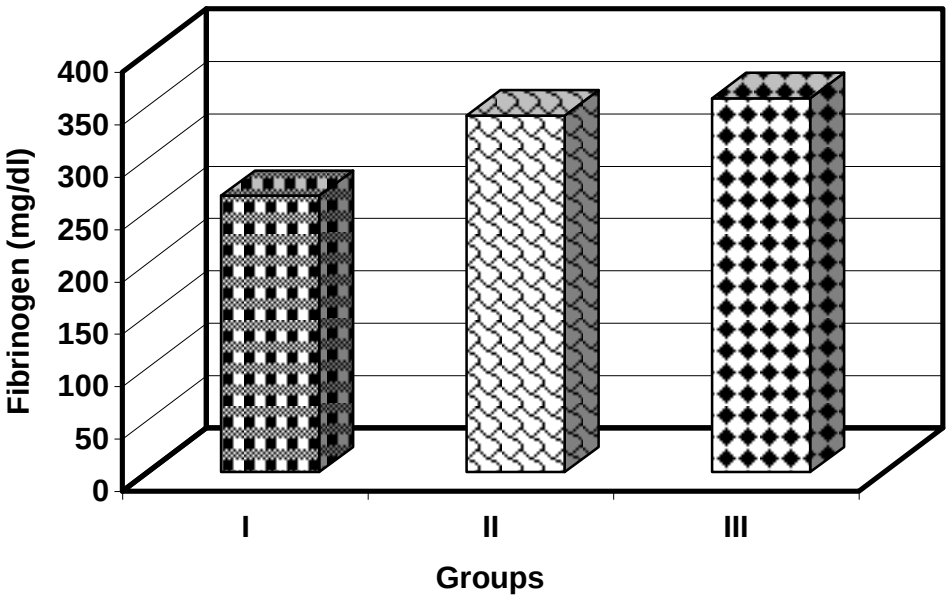

Fig. (9): Fibrinogen distribution among the three groups.

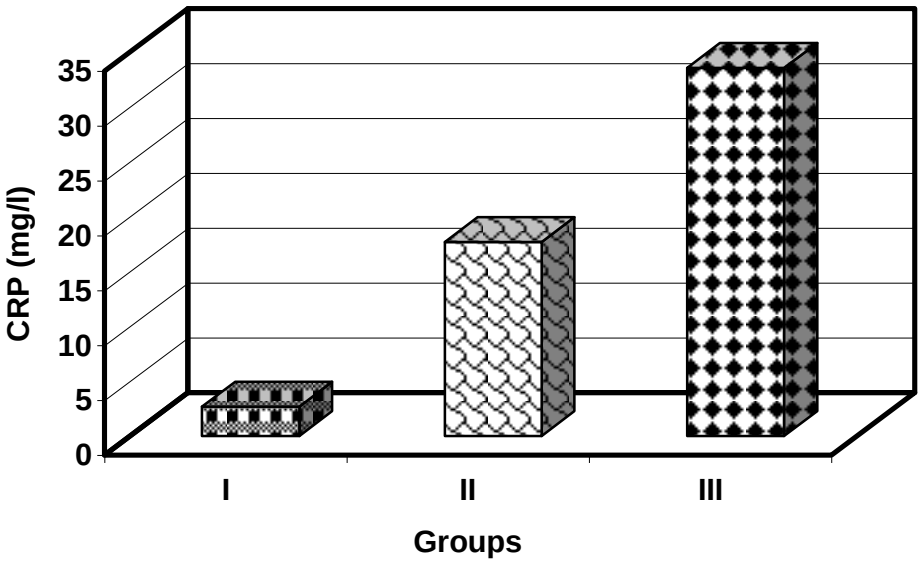

Fig. (10): CRP distribution among the three groups.

Table (8): Comparison of different parameters between NON LEAD and LEAD in group II.

Group II	Non LEAD (n=18)	LEAD (n =12)	t	P
BMI (kg/m²)	25.0±2.0	25.1±1.5	0.16	0.87
SBp (mmHg)	141.3±14.8	149.2±16.4	1.34	0.17
DBp (mmHg)	80.3±8.5	75.0±5.7	2.04	0.05
HbA1c (%)	7.0±0.92	7.8±1.4	1.74	0.16
t-PA (ng/ml)	14.3±3.0	14.9±5.8	0.33	0.74
Fibrinogen (mg/dl)	320.6±96.6	383.0±26.1	2.6	0.03
C.R.P (mg/l)	20.0±4.0	12.5±8.7	2.79	0.03
Ankle Brachial Index	1.15±0.22	0.56±0.06	10.79	0.00
Cholesterol (mg/dl)	185.4±11.1	195.8±10.0	2.68	0.03
Triglycerides (mg/dl)	133.8±80.2	80.4±15.3	2.75	0.02
HDL-cholesterol (mg/dl)	51.4±5.4	55.4±3.9	2.35	0.04
LDL-cholesterol (mg/dl)	121.1±10.2	142.3±12.5	4.9	0.001
Diabetic duration(years)	29.6±3.8	32.5±9.7	0.98	0.33
Fasting S. glucose (mg/dl)	279.1±95.2	251±68	0.44	0.4
Post prandial S. glucose(mg/dl)	310.7±94.8	275.2±65.4	1.21	0.28

There was a statistical significant difference between LEAD and NON LEAD as regards CRP, Fibrinogen, Cholesterol, Triglyceride and HDL-cholesterol ($P < 0.05$).

There was a very high statistical significant difference between LEAD and NON LEAD as regards Ankle Brachial Index and LDL-cholesterol ($P < 0.001$).

There was non-statistical significant difference between LEAD and NON LEAD as regards BMI, SBP, DBP, HbA1c, t-PA, diabetic duration, FSG and PPSG ($P > 0.05$).

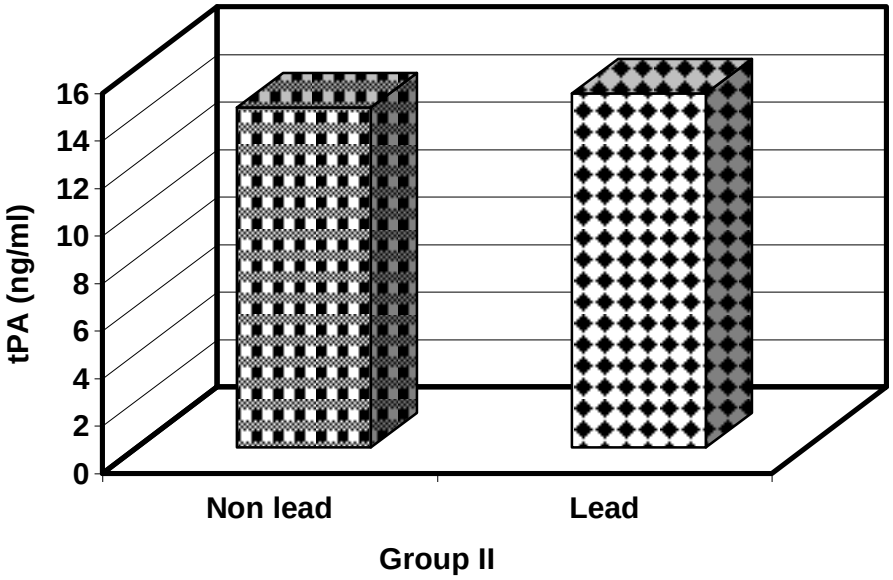

Fig. (11): t-PA distribution between NON LEAD and LEAD in group II.

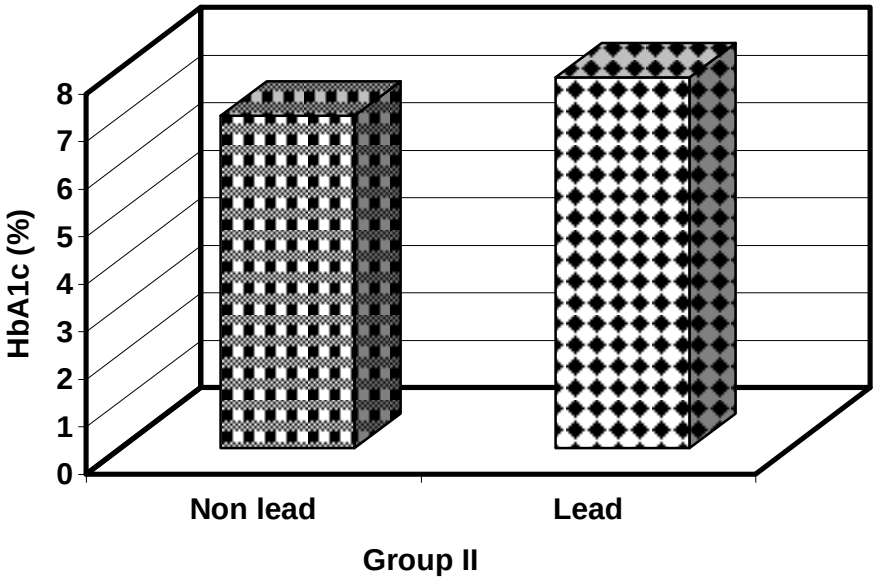

Fig. (12): HbA1c distribution between NON LEAD and LEAD in group II

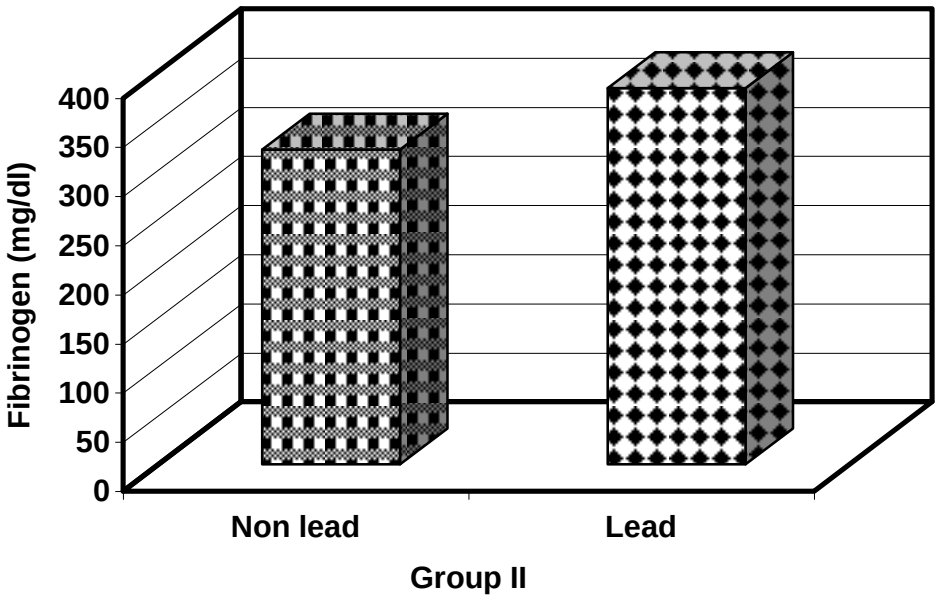

Fig. (13): Fibrinogen distribution between NON LEAD and LEAD in group II.

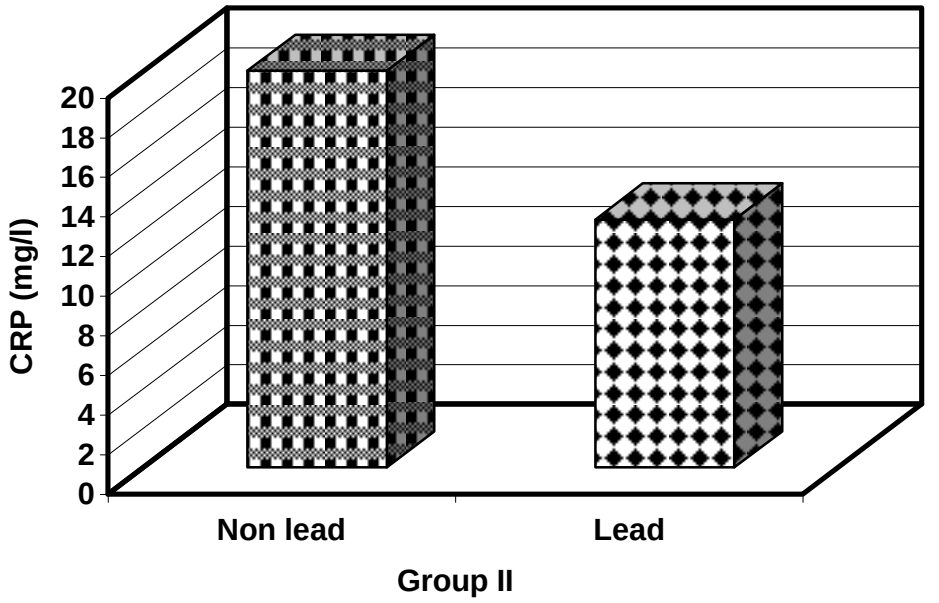

Fig. (14): CRP distribution between NON LEAD and LEAD in group II.

Table (9): Comparison of different parameters between NON LEAD and LEAD in group III

Group III	Non LEAD (n=18)	LEAD (n =12)	t	P
BMI (kg/m²)	30.0±3.3	28.8±2.2	1.14	0.4
SBp (mmHg)	138.0±18.8	152.8±14.6	2.42	0.000
DBp (mmHg)	80.8±8.4	83.5±4.7	1.0	0.3
HbA1c (%)	6.6±1.01	7.7±0.9	3.21	0.001
t-PA (ng/ml)	5.2±2.6	8.9±3.8	2.94	0.001
Fibrinogen (mg/dl)	329.3±85.6	416.7±53.2	3.44	0.001
C.R.P (mg/l)	13.1±13.2	77.5±33.0	6.42	0.000
Ankle Brachial Index	1.1±0.32	0.48±0.07	7.94	0.000
Diabetic duration(years)	8.0 ± 4.0	8.5±4.5	0.31	0.7
Fasting S. glucose (mg/dl)	159.0±69.9	200.8±69.8	1.6	0.2
Post prandial S. glucose(mg/l)	188.9±98.3	244.2±87.4	1.61	0.11
Cholesterol (mg/dl)	210.2±20.0	253.3±32.9	5.4	0.001
Triglycerides (mg/dl)	144.5±57.3	182.8±43.1	2.08	0.049
HDL-cholesterol (mg/dl)	41.2±4.1	43.7±4.4	1.56	0.2
LDL-cholesterol(mg/dl)	159.0±14.1	170.0±12.9	2.29	0.04

There was a statistical significant difference between LEAD and NON LEAD as regards Triglyceride and LDL-cholesterol ($P < 0.05$).

There was a very highly statistical significant difference between LEAD and NON LEAD as regard SBP, HbA1c, t-PA, Fibrinogen, CRP, cholesterol and Ankle Brachial Index ($P <0.001$).

There was non statistical significant difference between LEAD and NON LEAD as regards BMI, DBP, diabetic duration, HDL-cholesterol, FSG, and PPSG ($P > 0.05$).

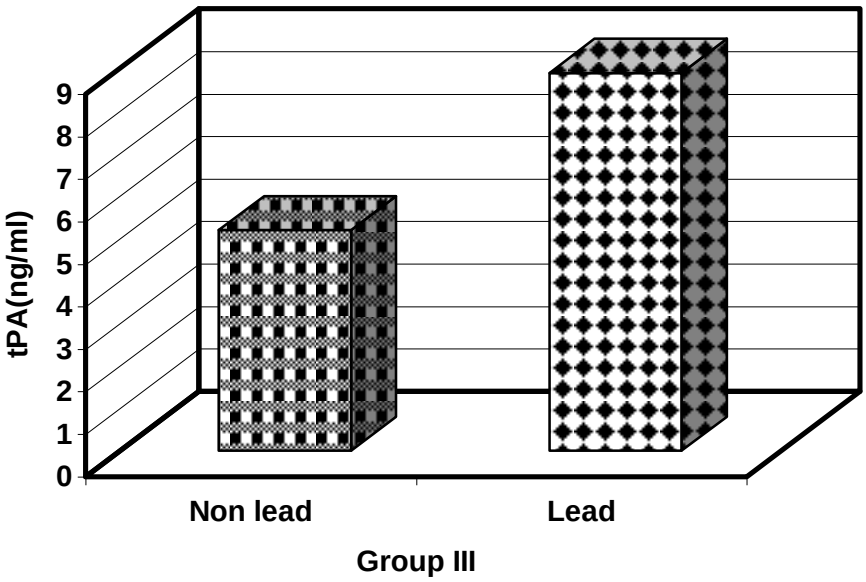

Fig. (15): t-PA distribution between NON LEAD and LEAD in group III

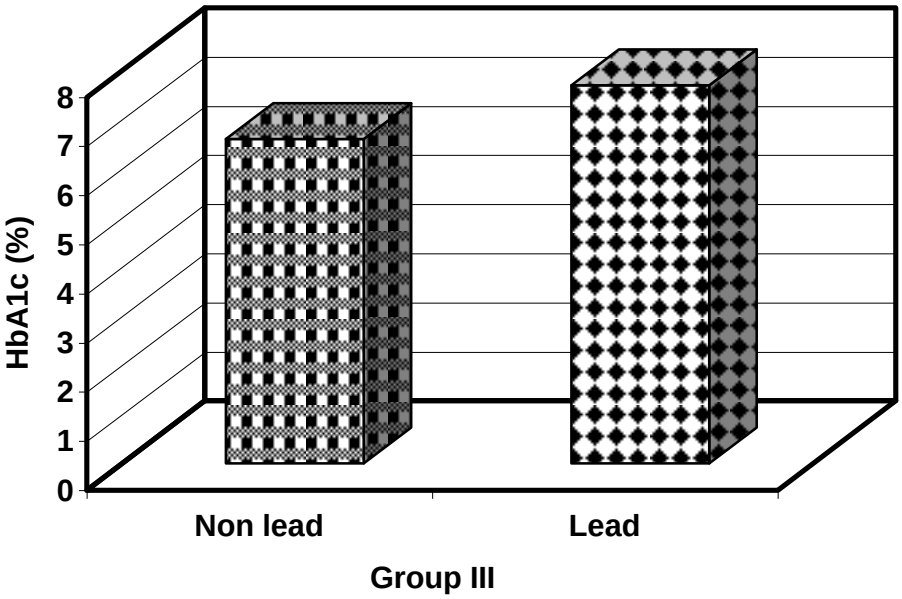

Fig. (16): HbA1c distribution between NON LEAD and LEAD in group III

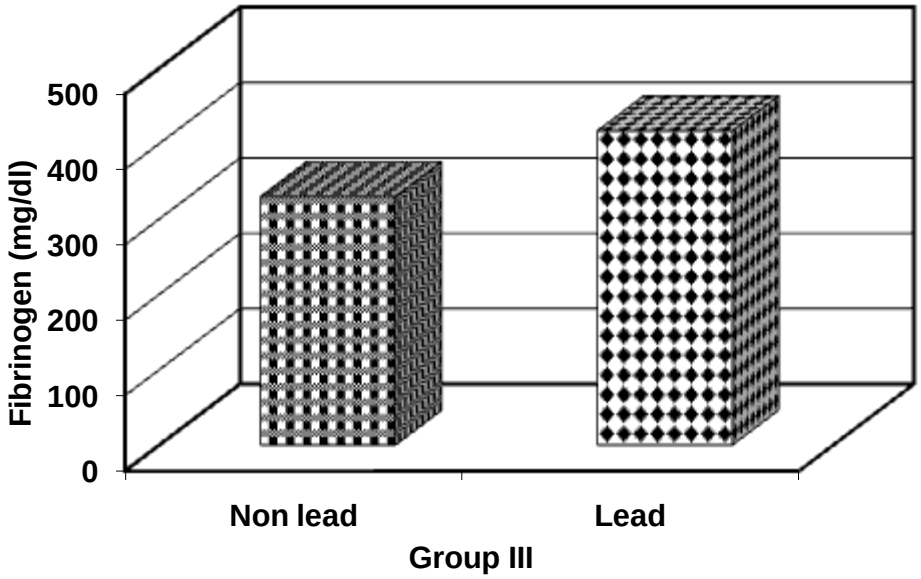

Fig. (17): Fibrinogen distribution between NON LEAD and LEAD in group III

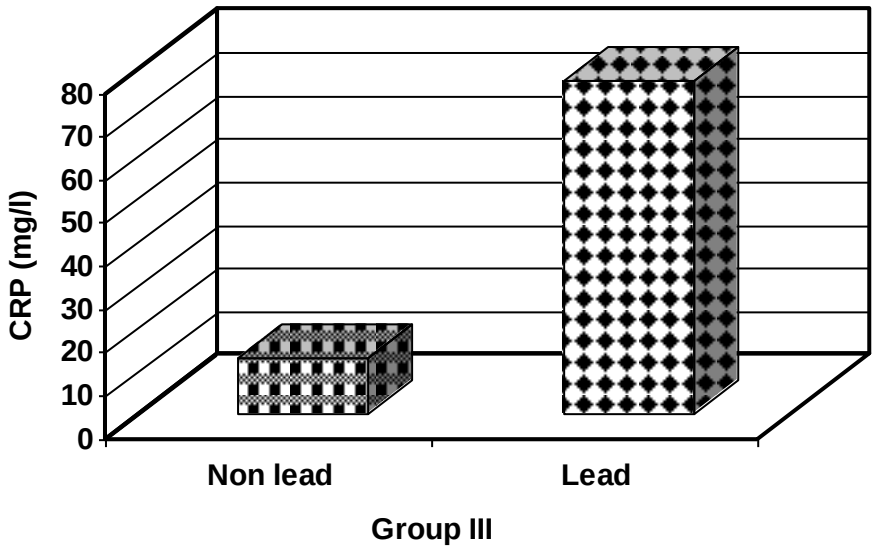

Fig. (18): CRP distribution between NON LEAD and LEAD in group III

Table (10): Correlation between t-PA and other clinical and laboratory findings in total, NON LEAD and LEAD in Group II

t-PA Group II	Total (n=30)		NON LEAD (n=18)		LEAD (n =12)	
	r	p	r	p	r	p
Age (years)	83.0	0.00	0.84	0.00	0.92	0.002
BMI (kg/m²)	0.06	0.78	-0.22	0.43	0.5	0.25
SBp (mmHg)	0.03	0.87	0.26	0.33	-0.25	0.58
DBp (mmHg)	0.19	0.37	0.24	0.37	0.30	0.51
HbA1c (%)	-0.14	0.54	-0.13	0.64	-0.2	0.65
Fibrinogen (mg/dl)	-0.17	0.45	-0.25	0.36	-0.40	0.37
C.R.P (mg/l)	0.22	0.32	0.15	0.57	-0.39	0.38
Ankle Brachial Index	-0.19	0.39	-0.29	0.28	-0.49	0.26
FSG(mg/dl)	-0.06	0.80	0.24	0.37	-0.55	0.19
PPSG(mg/dl)	-0.06	0.78	0.21	0.44	0.52	0.23
Diabetic duration(years)	0.8	0.00	0.81	0.0001	0.82	0.02
HDL-cholesterol (mg/dl)	0.11	0.62	-0.27	0.33	0.72	0.06
LDL-cholesterol (mg/dl)	0.1	0.6	0.28	0.31	0.21	0.33
Cholesterol (mg/dl)	0.001	0.99	0.000	1.00	-0.07	0.87
Triglycerides (mg/dl)	-0.07	0.73	-0.21	0.43	0.8	0.03

There were statistically positive correlations with diabetic duration (r =83.0, P =0.000, r=0.81, P=0.0001, r=0.82, P=0.02) in total, NON LEAD and LEAD respectively.

Table (11): Correlation between t-PA and other clinical and laboratory findings in total, NON LEAD and LEAD in Group III

t-PA Group III	Total (n=30)		NON LEAD (n=18)		LEAD (n =12)	
	r	p	r	p	r	p
Age (years)	0.77	0.00	0.80	0.000	0.73	0.05
BMI (kg/m²)	0.007	0.97	0.33	0.22	-0.37	0.41
SBp (mmHg)	0.30	0.17	0.03	0.91	0.37	0.40
DBp (mmHg)	0.24	0.27	0.29	0.28	-0.17	0.70
HbA1c (%)	0.65	0.001	0.45	0.08	0.72	0.06
Fibrinogen (mg/dl)	0.25	0.26	0.09	0.73	-0.02	0.66
C.R.P (mg/l)	0.54	0.008	0.39	0.14	0.21	0.85
AnkleBrachial Index	-0.35	0.124	0.124	0.66	-0.08	0.86
FSG(mg/dl)	-0.06	0.80	0.24	0.37	-0.55	0.19
PPSG(mg/dl)	-0.06	0.78	0.21	0.44	0.52	0.23
Diabetic duration(years)	0.59	0.004	0.75	0.001	0.53	0.05
HDL-cholesterol (mg/dl)	-0.17	0.45	-0.5	0.04	0.39	0.38
LDL-cholesterol (mg/dl)	0.18	0.44	0.12	0.66	0.02	0.9
Cholesterol (mg/dl)	0.08	0.71	-0.29	0.28	0.19	0.68
Triglycerides (mg/dl)	0.05	0.80	-0.16	0.54	-0.09	0.84

There were statistically positive correlations with diabetic duration (r=0.59, P=0.004, r=0.75, P=0.001,r=0.53, P=0.05) in total, NON LEAD and LEAD respectively.

There was statistically positive correlations with HbA1c (r=0.65, p=0.001) in total.

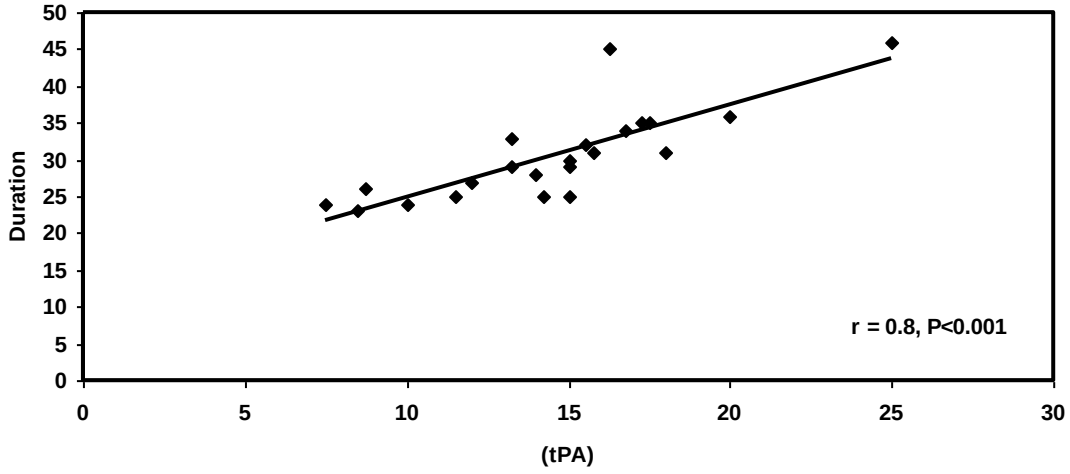

Fig. (19): Correlation between t-PA and diabetic duration in group II (total).

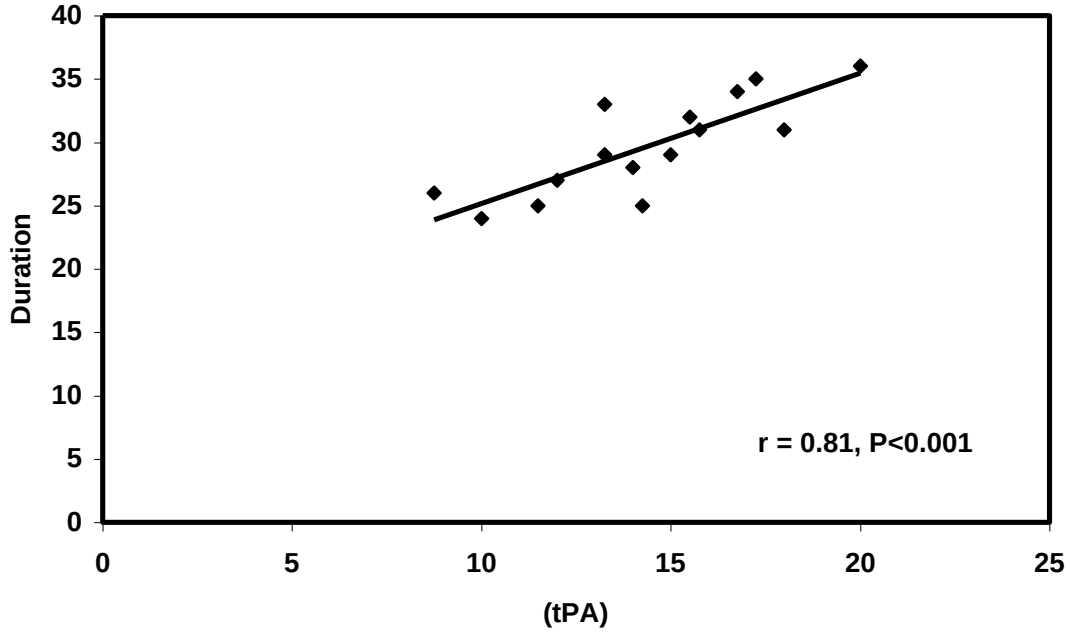

Fig. (20): Correlation between t-PA and diabetic duration in group II (NON LEAD)

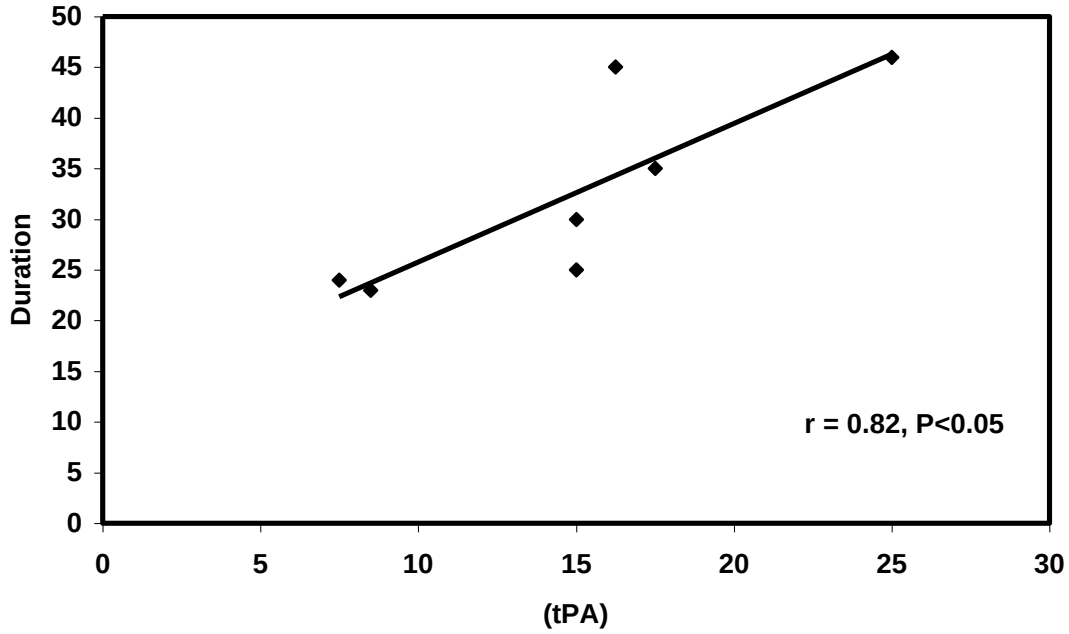

Fig. (21): Correlation between t-PA and diabetic duration in group II (LEAD)

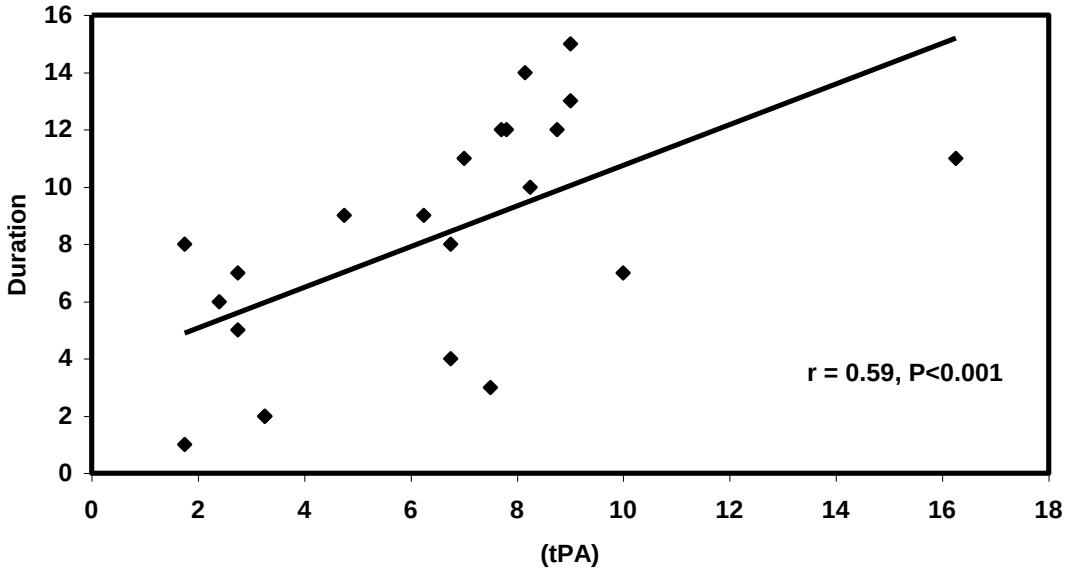

Fig. (22): Correlation between t-PA and diabetic duration in group III (total)

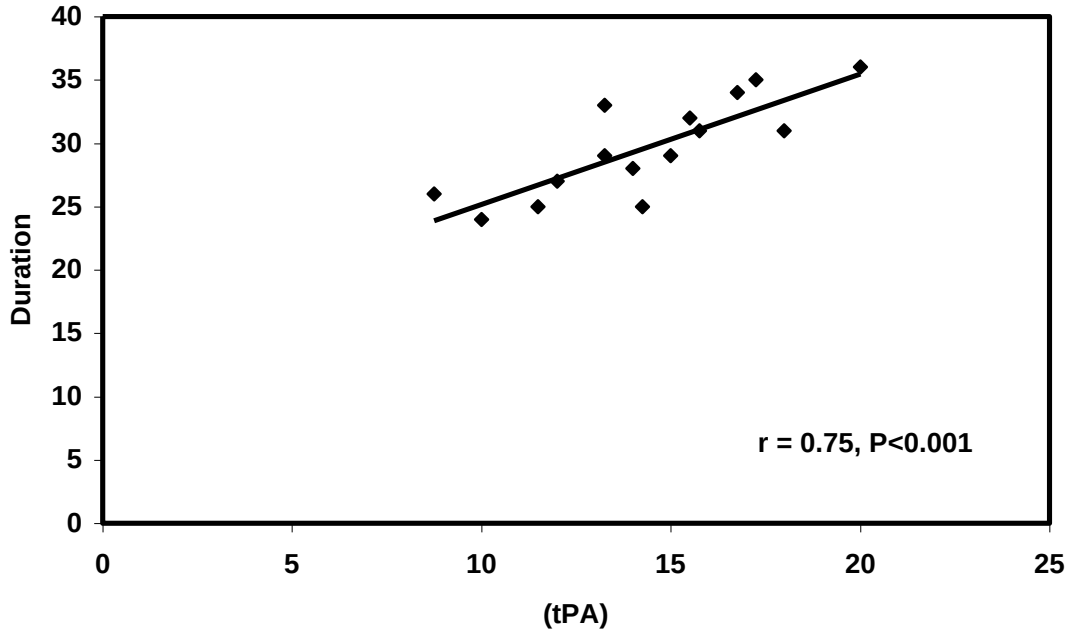

Fig. (23): Correlation between t-PA and diabetic duration in group III (NON LEAD)

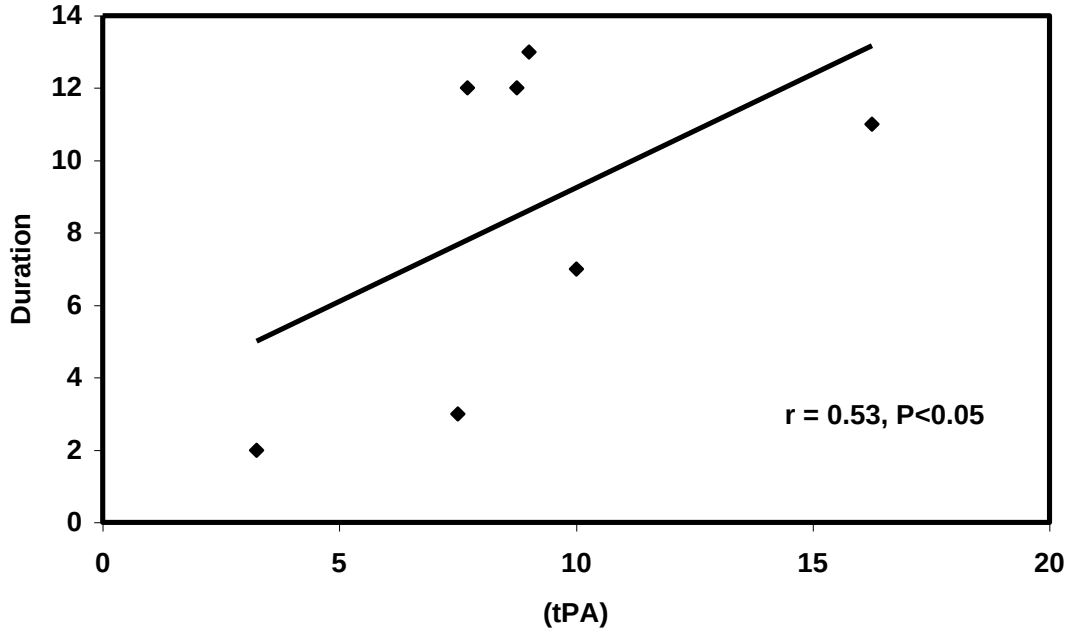

Fig. (24): Correlation between t-PA and diabetic duration in group III (LEAD)

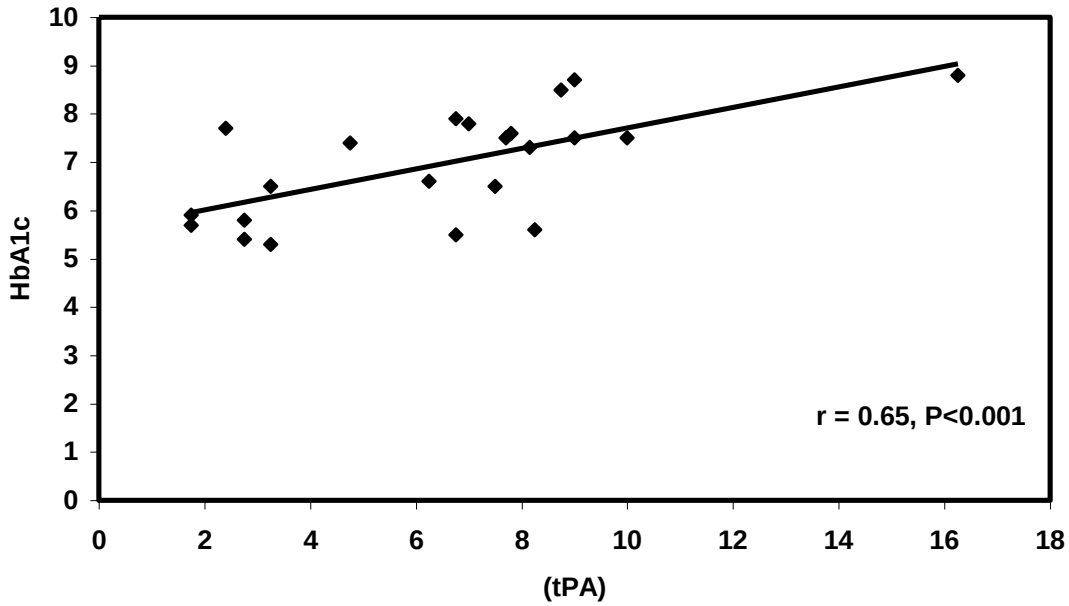

Fig. (25): Correlation between t-PA and HbA1c in group III (total).