Results

The results are summarized in tables 9-12 . Ttable 9-11 are descripitive tables . Table 12 is a collective comparitive table between the 3 groups .

Tables from 13-30 show the statistical differences between the 3 groups as regards every parameter . They include ANOVA tables and Duncan analysis, the interpretation of which has been disscused , previously , in the chapter of statistical analysis .

Figures from (8-25) are histograms showing the mean of each parameter of this work in all groups .

Tables from 31-36 show the correlation coefficient between the urinary albumin excretion rate and every parameter in the microalbuminuric diabetic group as compared to normoalbuminuric diabetic group .

Tables from 37-38 showed the correlation coefficient between the plasma coagulation parameters (F VII , F VIII of AT - III) and serum lipid parameters (total lipids , total cholesterol , triglycerides , HDL-ch ., LDL.ch ., phospholipid , Apo-A1 , and ApoB) in both microalbuminuric diabetic group and normoalbuminuric diabetic group .

Figure (26-36) are linear regression plot for these correlation .

The results of this work showed that , the mean of the fasting blood sugar level in group 1 was 10.54 ± 0.68 mmol/l , in group 2 it was 10.27 ± 0.48 mmol/l , in group 3 it was 4.74 ± 0.15 mmol/l .

Figure (8) showed the mean of fasting blood sugar in the 3 groups .

Table (13) showed that there is no statistical significance difference between the mean values of fasting blood sugar level of group 1 and group 2 but each mean , by itself showed a high statistical significance difference between it on one hand and the mean of the group 3 ($P<0.01$).

The mean of post -prandial blood sugar level in group 1 was 16.10 ± 0.79 mmol/l , in group 2 it was 16.36 ± 0.45 mmol/l , in group 3 it was 5.51±0.19 mmol/l .

Figure (9) showed the mean of postprandial blood sugar in the 3 groups .

Table (14) showed that there is No statistical significance difference between the mean values of postprandial suger level of group 1 and group 2 but there was a high statistical significance difference ($P <0.01$) between the mean values of each of these groups and the group 3.

The mean values of blood urea level in group 1 was 7.15 ± 0.52 mmol/l , group 2 , it was 5.14 ± 0.20 mmol/l , group 3 , it was 4.80 ± 0.19 mmol/l .

Fig(10) showed the mean values of blood urea in the 3 groups .

Table (15) showed that there is no statistical significance difference between the mean values of blood urea of group 2 and group 3 but there

was a statistical significance difference ($P < 0.05$) between the mean values of blood urea of group 1 and each group of 2 and group 3 .

The mean values of serum creatinine level in group 1 89.80±8.6 µmol/l , in group 2, it was 65.67 ± 3.41 µmol/l , in group 3 , it was 64.61 ± 3.39 µmol/l .

Figure (11) showed the mean values of serum creatinine in the 3 groups .

Table (16) showed that there is statistical significant difference ($P < 0.05$) between the mean values of serum creatinine of group 1 and mean values of each group 2 and group 3 but there was no statistical significance difference between the mean value of group 2 and group 3 .

The mean values of serum total lipids level in group 1 was 6.70 ± 0.32 g/l, group 2 , it was 6.2 ± 0.31 g/l , group 3 , it was 4.55 ± 0.12 g/l.

Figure (12) showed the mean values of total lipids level in the 3 groups .

Table (17) showed that there was no statistical significance difference between the mean values of serum total lipids level of group 1 and group2 but each mean, by itself showed a statistical significance difference between ($P < 0.05$) it on one hand and the mean of the group 3.

The mean values of serum total cholesterol level in group 1 was 6.55 ± 0.33 mmol/l , group 2 it was 6.27 ± 0.41 mmol/l , group 3 , it was 4.68 ± 0.10 mmol/l .

Figure (13) showed the mean values of serum total cholesterol in the 3 groups .

Table (18) showed that there was no statistical significance difference between the mean values of serum total cholesterol level of group 1 and group 2 but each mean , by itself showed a statistical significance difference ($P < 0.05$) between it on one hand , and the mean of group 3 .

The mean values of serum triglyceride level in group 1 was 2.06 ± 0.15 mmol/l , group 2 , it was 1.84 ± 0.14 mmol/l , group 3 , it was 1.06 ± 0.06 mmol/l .

Figure (14) showed the mean values of serum triglyceride in the 3 groups .

Table (19) showed that there was no statistical significance difference between the mean values of serum triglyceride level of group 1 and group 2 but each mean by itself showed a statistical significance difference ($P < 0.05$) between it on one hand , and the mean value of group 3 .

The mean values of serum phospholipid level in group 1 was 2.96 ± 0.12 mmol/l , group 2 was 2.70 ± 0.11 mmol/l , group 3 was 2.35 ± 0.05 mmol/l .

Figure (15) showed the mean values of serum phospholipid in the three groups .

Table (20) showed that there was no statistical significance difference between the mean values of serum phospholipid level of

group 1 and group 2 and between group 2 and group 3 . But there was a statistical significance difference ($P< 0.05$) between the mean values of group 1 and group 3 .

The mean values of serum HDL . cholesterol level in group 1 was 0.93 ± 0.09 mmol/l , group 2 was 0.96 ± 0.09 mmol/l and group 3 was 1.09 ± 0.04 mmol/l .

Figure (16) showed the mean values of serum HDL - cholesterol in the 3 groups .

Table (21) showed that there was no statistical significance difference between the mean values of serum HDL - cholesterol level of group 1 and group 2 and between the group 2 and group 3 and between the group 1 and group 3 .

The mean values of serum LDL - cholesterol level in group 1 was 4.51 ± 0.27 mmol/l in group 2 was 4.27 ± 0.39 mmol/l and group 3 was 3.09 ± 0.10 mmol/l .

Figure (17) showed the mean values of serum LDL - cholesterol in the 3 groups .

Table (22) showed that there was no statistical significant difference between the mean values of serum LDL - cholesterol level of group 1 and group 2 but each mean by itself showed a statistical significant differefnce ($P < 0.05$) between it on one hand and the mean value of group 3 .

The mean values of serum Apolipoprotein A_1 , level in group 1 was 112.04 ± 1.70 mg/dl group 2 was 124.75 ± 7.00 mg/dl , and group 3 was 176.80 ±5.21 mg/dl .

Figure (18) showed the mean values of serum Apolipoprotein A_1 , in the 3 groups .

Table (23) showed that there was no statistical significant difference between the mean values of serum Apo-A_1,level of group 1 and group 2 but each mean by itself showed a statistical significant difference ($P < 0.05$) between it on one hand and the mean value of group 3 .

The mean values of serum Apoliopoprotein B level in group 1 was 185.33 ± 11.83 mg/dl group 2 was 166.83 ± 8.92 mg/dl and group 3 was 98.70 ± 5.22 mg/dl .

Figure (19) showed the mean values of serum Apolipoprotein B in the 3 groups .

Table (24) showed that there was no statistical significant difference between the mean values of serum Apo. B level of group 1 and group 2 but each mean by itself showed a statistical significant difference ($P < 0.05$) between it on one hand and the mean value of group 3 .

The mean values of plasma factor VII in group 1 was 147.61 ± 5.42% in group 2 was 143.33 ± 4.87 % and in group 3 was 101.00 ± 3.83%.

Figure (20) showed the mean values of factor VII in the 3 groups .

Table (25) showed that there was no statistical significant difference between the mean values of plasma factor VII level of group 1 and group 2 but each mean by itself showed a statistical significant difference ($P < 0.05$) between it on one hand and the mean value of group 3 .

The mean values of plama factor VIII in group 1 was 153.81 ± 6.70 % , in group 2 was 149.16 ± 601 % and in group 3 was 109.50 ± 4.19 %.

Figure (21) showed the mean values of plasma factor VIII in the three groups .

Table (26) showed that there was no statistical significant difference between the mean values of plasma coagulation factor VIII level of group 1 and group 2 but each mean by itself showed a statistical significant difference between ($P < 0.05$) it on one hand and the mean value of group 3 on the other hand .

The mean values of plasma Anti-thrombin III in group 1 was 36.10 ± 1.82 mg/dl , in group 2 was 32.25 ± 1.64 mg/dl and in group 3 was 28.38 ± 1.49 mg/dl .

Figure (22) showed the mean values of Antithrombin III in the 3 groups .

Table (27) showed that there was no statistical significant difference between the mean values of Antithrombin III level of group 1 and group 2 and between group 2 and group 3 but there was statistically significant difference ($P< 0.05$) between the mean values of group 1 and group 3 .

The mean values of total cholesterol / HDL cholesterol (T/H) ratio in group 1 was 7.70 ± 0.61 in group 2 was 7.96 ± 0.79 and in group 3 was 3.97±0.30 .

Figure (23) showed the mean values of T/H ratio in the 3 groups .

Table (28) showed that there was no statistical significant difference between the mean values of total cholesterol /HDL - cholesterol ratio of group 1 and group 2 but each mean by itself showed a statistical significant difference ($P< 0.05$) between it and the mean value of group 3.

The mean values of HDL-cholesterol /LDL-cholesterol ratio (H/L) in group 1 was 0.23 ±0.03, in group 2 was 0.27±0.04 and in group 3 was 0.36 ± 0.03 .

Figure (24) showed the mean values of the H/L ratio in the 3 groups.

Table (29) showed that there was no statistical significance difference between the mean values of HDL-chol/LDL-chol. ratio of group 1 and group 2 and between group 2 and group 3 but there was a statistical significance difference between the mean values of group 1 and group 3 .

The mean values of $ApoA_1$/Apo B ratio in group 1 was 0.68 ± 0.06 , in group 2 was 0.78 ± 0.05 and in group 3 was 1.87 ± 0.10 .

Figure (25) showed the mean values of $ApoA_1$/Apo B ratio . in the 3 groups .

Table (30) showed that there was no statistical significance difference between the mean values of $ApoA_1$/Apo B ratio of group 1 and group 2 but each mean , by itself showed a statistical significance difference ($P< 0.05$) between it and the mean of group 3 .

Table (31) showed the correlation coefficient between the urinary albumin excertion rate and age and duration in the microalbuminaric diabetic group as compared to normoalbuminuric diabetic group .

The obtained results (in table 31) showed no significant correlation between the UAE rate and age and duration in both groups .

Table (32) showed the correlation coefficient between the urinary albumin excretion rate and fasting and post-prandial blood sugar level in the microalbuminuric diabetic group as compared to the normoalbuminuric diabetic group .

The obtained results (in table 32) showed positive significant correlation($P < 0.05$) between the UAE rate and fasting and post-prandial blood sugar in the microalbuminuric group . These represented by plot of linear regression as showen in the figures (26,27) .

Table (33) showed the correlation coefficient between urinary albumin excretion rate and urea and creatinine in the microalbuminuric diabetic group as compared to normoalbuminuric diabetic group .

The obtained results (in table 33) showed a significant positive correlation between the UAE rate and urea and creatinine ($P < 0.01$) in

the microalbuminuric group . These correlations represented by plot of linear regression as showen in Figure (28 , 29) .

Table (34) showed the correlation coefficient between the urinary albumin excretion rate and serum lipid parameters (total lipid , total cholesterol , triglycerides , phospholipid , HDL - choleterol , LDL-ch., Apo-A_1, and Apo-B) in the microalbuminuric group as compared to normoalbuminuric group .

The obtained results (in table 34) showed significant correlation ($P < 0.003$) between the UAE rate and Apo-B in the microalbuminuric group while no significant correlation occur between the UAE rate and other lipid parameters in both groups .

Figure (30) showed a plot of liner regression representing the significant correlation between the UAE rate and Apo-B in the microalbuminuric group .

Table (35) showed the correlation coefficient between the urinary albumin excretion rate and coagulation parameters (Factor VII , factor VIII and AT-III) in the microalbuminuric diabetic group as compared to normoalbuminuric diabetic group . The obtained results (in table 35) showed a significant negative correlation ($P < 0.05$) between the UAE rate and Antithrombin III in the microalbuminuric diabetic group . These was repreoemted by a plot of linear regression as showen in figure (31)

Table (36) showed the correlation coefficient between the urinary albumin excretion rate and the risk ratio (total cholesterol/ HDL .ch., HDL-ch/ LDL-ch and Apo-A_1/ Apo-B) in the microalbuminuric diabetic group as compared to the mormoalbuminuric diabetic group .

. The obtained redsults (in table 36) showed significant correlation ($P<0.003$) between the UAE rate and Apo-A_1/Apo-B in the microalbuminric diabetic group . These was represented by a plot of linear regression as showen in Figure (32) .

Table (37) showed the correlation coefficient between the plasma coagulation parameters (F.VII ,F.VIII and AT-III) and serum lipid parameters (total lipid , total cholesterol , tirglycerides ,phospholipid , HDL-ch, LDL-ch,Apo-A_1 and Apo-B) in the microalbuminuric diabetic group .

The obtained results (in table 37) showed no. significant correlation.

Table (38) showed the correlation coefficient between the plasma coagulation parameters(F VII , F VIII and Anti-III) and serum lipid parameters (total lipid , total cholesterol , triglyceride , phospholipid , HDL-ch , LDL-ch , Apo-A_1 and Apo-B) in the normoalbuminuric diabetic group .

The obtained results (in table 38) showed a significant correlation between Antithrombin III and total lipid ($P < 0.004$) , total cholesterol ($P < 0.001$) , LDL -cholesterol ($P< 0.001$) , phospholipids ($P<0.002$) respectively .

These correlations were represented by a plot of linear regression as showen in figures (33,34,35 & 36) .

Tabel (9) : Descriptive statistics Summary for Microalbuminuria Diabetic Group (Group No. 1) .

Field	Number	Mean	SD	SE
Age (year)	21	30.33	9.37	2.04
Duration (year)	21	5.71	3.16	0.69
Fasting blood sugar [mmol/l]	21	10.54	3.13	0.68
Postprandial blood sugar [mmol/l]	21	16.10	3.62	0.79
Urea [mmol/l]	21	7.15	2.40	0.52
creatinine [μmol/l]	21	89.80	39.69	8.66
Urinary albumin excretion rate (μg/mim)	21	58.31	35.24	7.69
Total lipid [g/l]	21	6.70	1.50	0.32
Total cholesterol [mmol/l]	21	6.55	1.76	0.38
Triglycerides [mmol/l]	21	2.66	0.71	0.15
Phospholipid [mmol/l]	21	2.96	0.59	0.12
HDL-ch [mmol/l]	21	0.93	0.43	0.09
LDL-ch [mmol/l]	21	4.51	1.23	0.27
Apo -A_1 (mg/dl)	21	112.04	7.81	1.70
Apo-B (mg/dl)	21	185.33	54.22	11.83
Anti-III (mg/dl)	21	36.10	8.35	1.82
Factor VII (%)	21	147.61	24.88	5.42
Factor VIII (%)	21	153.81	30.73	6.70
T-chol/ HDL-ch ratio	21	7.70	2.80	0.61
HDL-ch/LDL-ch ratio	21	0.23	0.12	0.03
Apo-A_1/ Apo-B ratio	21	0.68	0.26	0.06

Table (10) : Descripitive statistics Summary for Normoalbuminuric Diabetic Group (Group No.2)

Field	Numbe	Mean	SD	SE
Age (year)	24	24.70	7.65	1.56
Duration (year)	24	6.45	3.61	0.73
Fasting blood sugar [mmol/l]	24	10.27	2.39	0.48
Postprandial blood sugar [mmol/l]	24	16.36	2.24	0.45
Urea [mmol/l]	24	5.14	1.02	0.20
creatinine [µmol/l]	24	65.67	16.7	3.41
Urinary albumin excretion rate (µg/mim)	24	5.98	5.32	1.08
Total lipid [g/l]	24	6.2	1.54	0.31
Total cholesterol [mmol/l]	24	6.27	2.03	0.41
Triglycerides [mmol/l]	24	1.84	0.73	0.14
Phospholipid [mmol/l]	24	2.70	0.53	0.11
HDL-ch [mmol/l]	24	0.96	0.45	0.09
LDL-ch [mmol/l]	24	4.27	1.92	0.39
Apo -A_1 (mg/dl)	24	124.75	34.30	7.00
Apo-B (mg/dl)	24	166.83	43.70	8.92
Anti-III (mg/dl)	24	32.25	8.04	1.64
Factor VII (%)	24	143.33	23.89	4.87
Factor VIII (%)	24	149.16	29.47	6.01
T-chol/ HDL-ch ratio	24	7.96	3.87	0.79
HDL-ch/LDL-ch ratio	24	0.27	0.19	6.04
Apo-A_1/ Apo-B ratio	24	0.78	0.23	0.05

Table (11) : Descripitive statistics Summary for Reference Non Diabetic Group (Group No.3)

Field	Numbe	Mean	SD	SE
Age (year)	20	27.15	6.33	1.41
Duration (year)	20	-	-	-
Fasting blood sugar [mmol/l]	20	4.74	0.67	0.15
Postprandial blood sugar [mmol/l]	20	5.51	0.85	0.191
Urea [mmol/l]	20	4.80	0.85	0.19
creatinine [μmol/l]	20	64.01	15.17	3.39
Urinary albumin excretion rate (μg/mim)	20	8.43	8.07	1.80
Total lipid [g/l]	20	4.55	0.55	0.12
Total cholesterol [mmol/l]	20	4.68	0.46	0.10
Triglycerides [mmol/l]	20	1.06	0.27	0.06
Phospholipid [mmol/l]	20	2.35	0.24	0.05
HDL-ch [mmol/l]	20	1.09	0.21	0.04
LDL-ch [mmol/l]	20	3.09	0.48	0.10
Apo -A_1 (mg/dl)	20	176.80	23.30	5.21
Apo-B (mg/dl)	20	98.70	23.36	5.22
Anti-III (mg/dl)	20	28.38	6.67	1.49
Factor VII (%)	20	101.00	17.13	3.83
Factor VIII (%)	20	109.50	18.77	4.19
T-chol/ HDL-ch ratio	20	3.97	1.35	0.30
HDL-ch/LDL-ch ratio	20	0.36	0.11	0.03
Apo-A_1/ Apo-B ratio	20	1.87	0.45	0.10

Table (12) : Comparative statistical Summary between the three Groups.

Field	Group (1)	Group (2)	Group (3)
Age (year)	30.33±2.04	24.70±1.56	27.15±1.41
Duration (year)	5.71±0.69	6.45±0.73	-
Fasting blood sugar [mmol/l]	10.54±0.68	10.27±0.48	4.74±0.15
Postprandial blood sugar [mmol/l]	16.10±0.79	16.36±0.45	5.51±0.19
Urea [mmol/l]	7.15±0.52	5.14±0.20	4.80±0.19
creatinine [μmol/l]	89.80±8.66	65.67±3.41	64.01±3.39
Urinary albumin excretion rate (μg/mim)	58.31±7.69	5.98±1.08	8.43±1.80
Total lipid [g/l]	6.70±0.32	6.0±0.31	4.55±0.12
Total cholesterol [mmol/l]	6.55±0.38	6.27±0.41	4.68±0.10
Triglycerides [mmol/l]	2.06±0.15	1.84±0.14	1.06±0.06
Phospholipid [mmol/l]	2.96±0.12	2.70±0.11	2.35±0.05
HDL-ch [mmol/l]	0.93±0.09	0.96±0.09	1.09±0.04
LDL-ch [mmol/l]	4.51±0.27	4.27±0.39	3.09±0.10
Apo -A_1 (mg/dl)	112.04±1.7	124.75±7.0	176.80±5.2
Apo-B (mg/dl)	185.33±11.	166.83±8.9	98.70±5.22
Anti-III (mg/dl)	36.10±1.82	32.25±1.64	28.38±1.49
Factor VII (%)	147.61±5.4	143.33±4.8	101.00±3.8
Factor VIII (%)	153.81±6.7	149.16±6.0	109.50±4.1
T-chol/ HDL-ch ratio	7.70±0.61	7.96±0.79	3.97±0.30
HDL-ch/LDL-ch ratio	0.23±0.03	0.27±0.04	0.36±0.03
Apo-A_1/ Apo-B ratio	0.68±0.06	0.78±0.05	1.87±0.10

Table (13) : Comparison between the 3 groups for Fasting Blood Sugar [mmol/l] by ANOVA test .

Number of Groups	3
Number of observations	65
Total mean	8-660
Total variance	781.0160

ANOVA Table

Source of variation	DF	SS	MS	F-state
Among Groups	2	443.5901	221.795	40.7535
Within Groups	62	337.4259	5.442	
Total	64	781.0160		

$P < 0.01$: highly significant between at least 2 groups.

Duncan analysis for identification of significant groups

Field	Fasting blood sugar [mmol/l]			
Group No.	1	2	3	
Mean	10.5429	10.2750	4.7450	

DF = degree of freedom SS = sum of squares .

MS = Mean squares .

Table (14) : Comparison between the 3 groups for post-prandial blood sugar [mmol/l] by ANOVA test:

Number of Groups	3
Number of observations	65
Total mean	12.9400
Total variance	1987.976

ANOVA Table

Source of variation	DF	SS	MS	F-state
Among Groups	2	1595.6047	797.8023	126.063
Within Groups	62	392.3713	6.3286	
Total	64	1987.9760		

$P < 0.01$: highly significant between at least 2 groups.

Duncan analysis for identification of significant groups

Field	post - prandial blood sugar (mmol/l)			
Group No.	2	1	3	
Mean	16.3667	16.1000	5.5100	

Fig. (8) : Mean values of Fasting blood sugar (mmol/l) in the three groups.

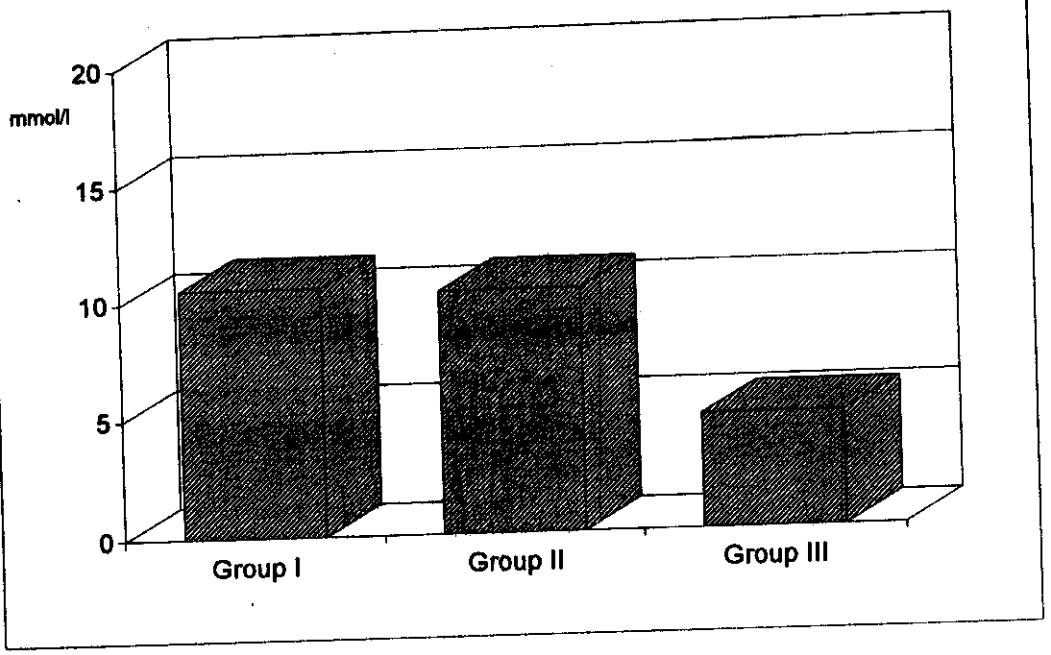
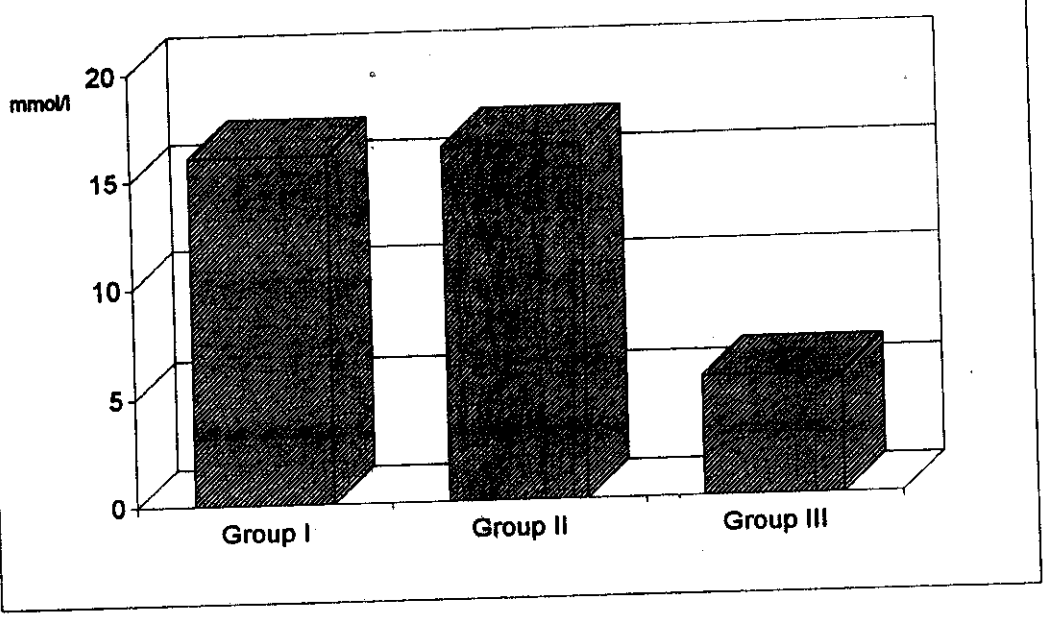


Fig. (9) : Mean values of Post-prandial blood sugar (mmol/l) in the three groups.



Group I : Microalbuminuric diabetic group.
Group II: Normoalbuminuric diabetic group.
Group III: Normal subjects.

Table (15) : Comparison between the 3 groups for blood urea (mmol/l) by ANOVA test .

Number of Groups	3
Number of observations	65
Total mean	5.6908
Total variance	221.8145

ANOVA Table

Source of variation	DF	SS	MS	F-state
Among Groups	2	67.9739	33.9870	13.6973
Within Groups	62	153.8465	2.4813	
Total	64	221.8145		

$P < 0.01$: highly significant between at least 2 groups.

Duncan analysis for identification of significant groups

Field	B1. urea [mmol/l]			
Group No.	1	2	3	
Mean	7.1571	5.1458	4.8050	

Table (16) : Comparison between the 3 groups for serum creatinine [μmol/l] by ANOVA test .

Number of Groups	3
Number of observations	65
Total mean	72.9600
Total variance	51134.6760

ANOVA Table

Source of variation	DF	SS	MS	F-state
Among Groups	2	8827.8109	4413.9055	6.4685
Within Groups	62	42306.8651	682.3688	
Total	64	51134.6760		

$P < 0.05$: There exists a significant difference between at least 2 groups.

Duncan analysis for identification of significant groups

Field	Serum creatinine [μmo/l]			
Group No.	1	2	3	
Mean	89.8000	65.6792	64.0150	

Fig. (10) : Mean values of blood Urea (mmol/l) in the three groups.

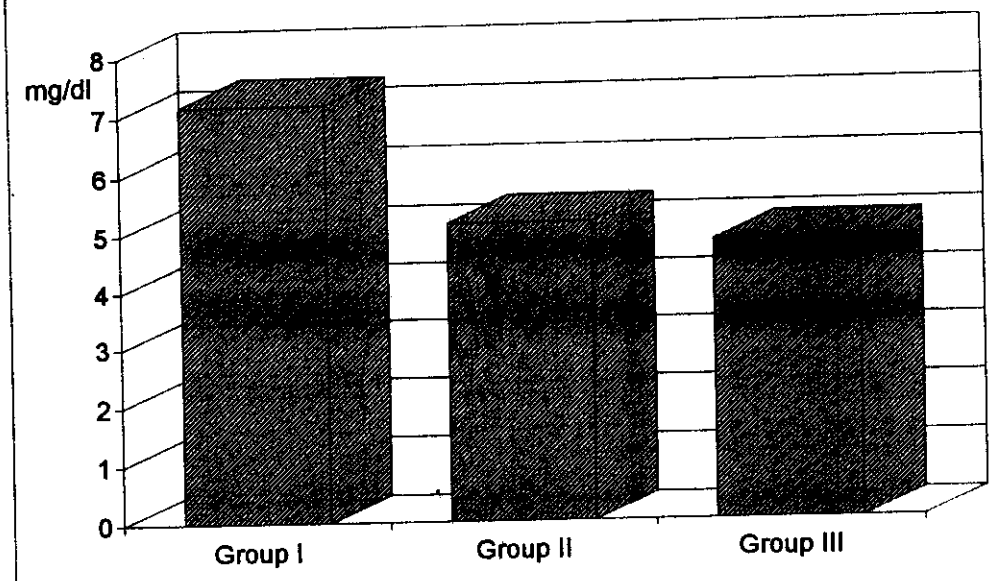


Fig. (11) : Mean values of Serum creatinine (umol/l) in the three groups.

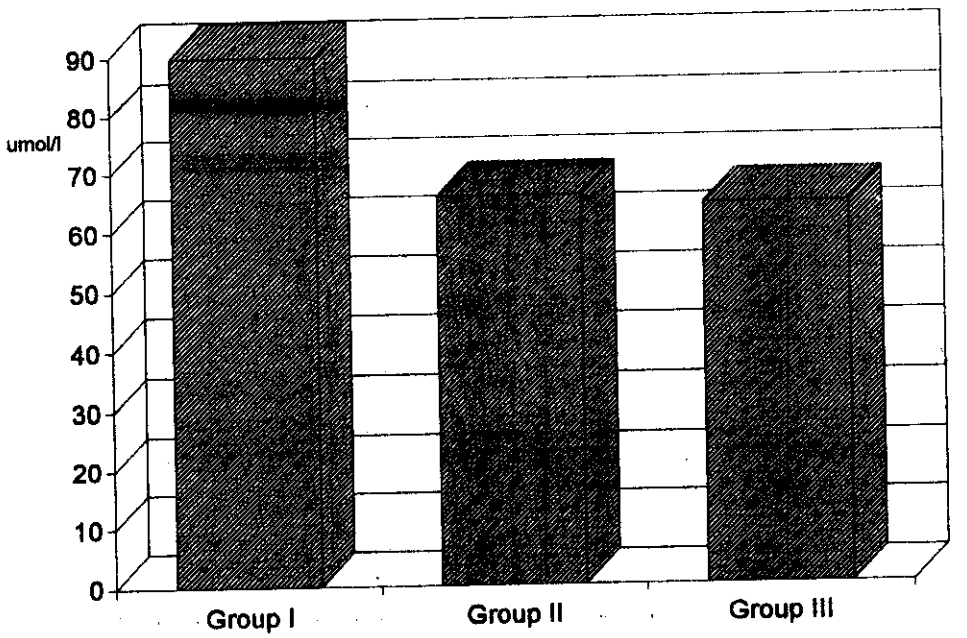


Table (17) : Comparison between the 3 groups for serum total lipids (g/l) by ANOVA test .

Number of Groups	3
Number of observations	65
Total mean	5.8631
Total variance	158.2914

ANOVA Table

Source of variation	DF	SS	MS	F-state
Among Groups	2	52.0490	26.0495	15.2089
Within Groups	62	106.1924	1.7128	
Total	64	158.2914		

$P < 0.05$: There exist a significant difference between at least 2 groups.

Duncan analysis for identification of significant groups

Field	Total lipids (g/L)			
Group No.	1	2	3	
Mean	6.7048	6.2167	4.5550	

Table (18) : Comparison between the 3 groups for serum total cholesterol [mmol/l] by ANOVA test .

Number of Groups	3
Number of observations	65
Total mean	5.8769
Total variance	203.3354

ANOVA Table

Sourcf of variation	DF	SS	MS	F-state
Among Groups	2	41.8779	20.9390	8.0406
Within Groups	62	161.4575	2.6042	
Total	64	203.3354		

$P < 0.05$: There exist a significant difference between at least 2 groups.

Duncan analysis for identification of significant groups

Field	Total cholesterol [mmol/l]			
Group No.	1	2	3	
Mean	6.554	6.2792	4.6850	

Fig. (12) : Mean values of Total lipids (g/l) in the three groups.

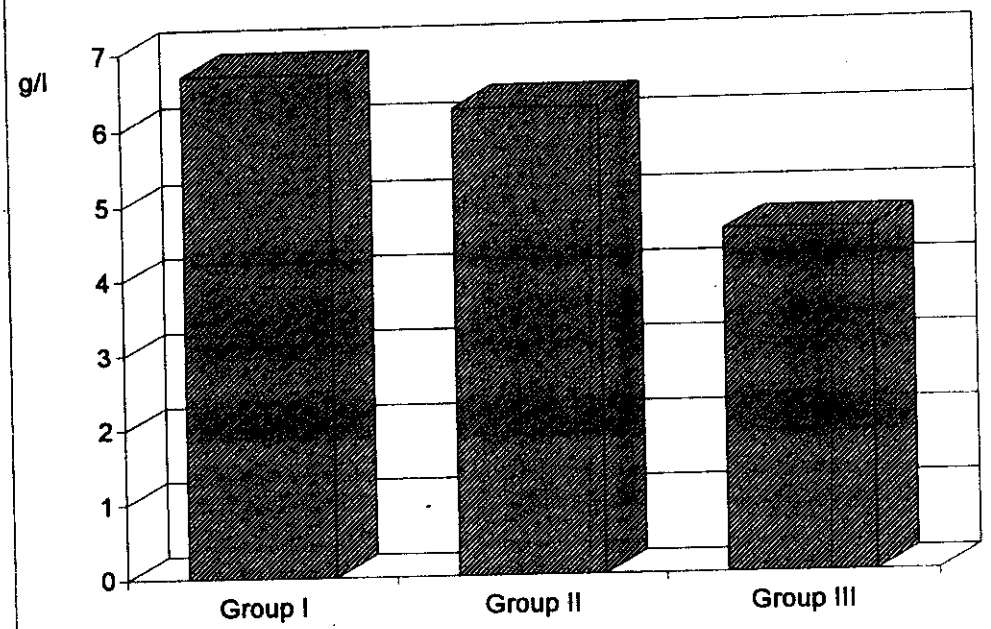


Fig. (13) : Mean values of Serum total cholesterol (mmol/l) in the three groups.

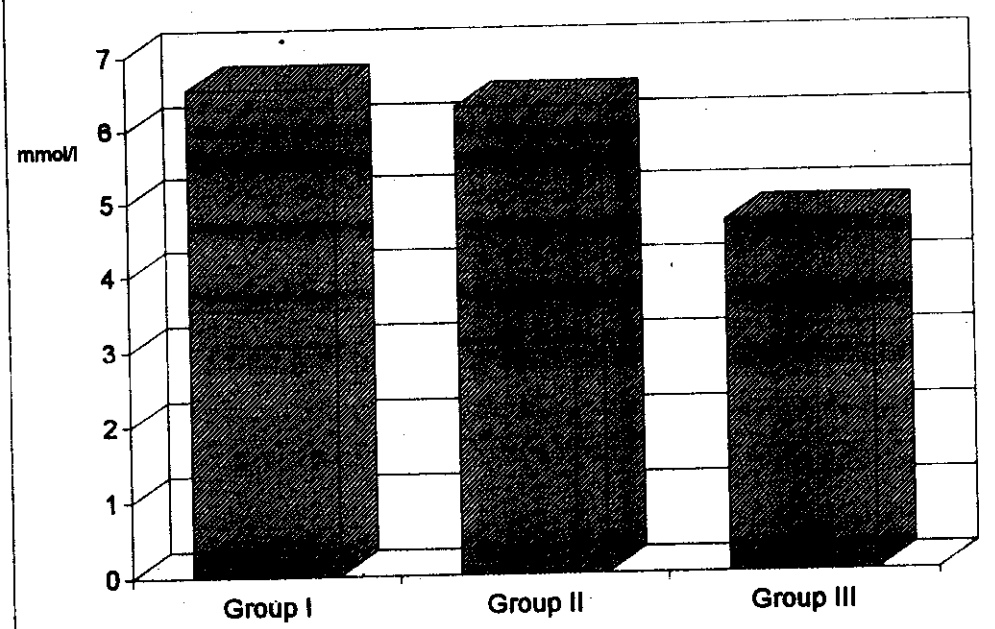


Table (19) : Comparison between the 3 groups for serum Triglycerides [mmol/l] by ANOVA test .

Number of Groups	3
Number of observations	65
Total mean	1.6723
Total variance	35.1702

ANOVA Table

Source of variation	DF	SS	MS	F-state
Among Groups	2	11.3743	5.6871	14.8178
Within Groups	62	23.7959	0.3838	
Total	64	35.1702		

$P < 0.05$:There exist a significant difference between at least 2 groups.

Duncan analysis for identification of significant groups

Field	serum Triglyceride [mmol/l]		
Group No.	1	2	3
Mean	2.0619	1.8417	1.0600
	⊢	⊢	

Table (20) : Comparison between the 3 groups for serum Phospholipid [mmol/l] by ANOVA test .

Number of Groups	3
Number of observations	65
Total mean	2.6785
Total variance	18.6298

ANOVA Table

Source of variation	DF	SS	MS	F-state
Among Groups	2	3.7908	1.8954	7.9194
Within Groups	62	14.8390	0.2343	
Total	64	18.6298		

$P < 0.05$: There exist a significant difference between at least 2 groups.

Duncan analysis for identification of significant groups

Field	serum Phospholipids [mmol/l]			
Group No.	1	2	3	
Mean	2.9619	2.7000	2.3550	

Fig. (14) : Mean values of Serum Triglycerides (mmol/l) in the three groups.

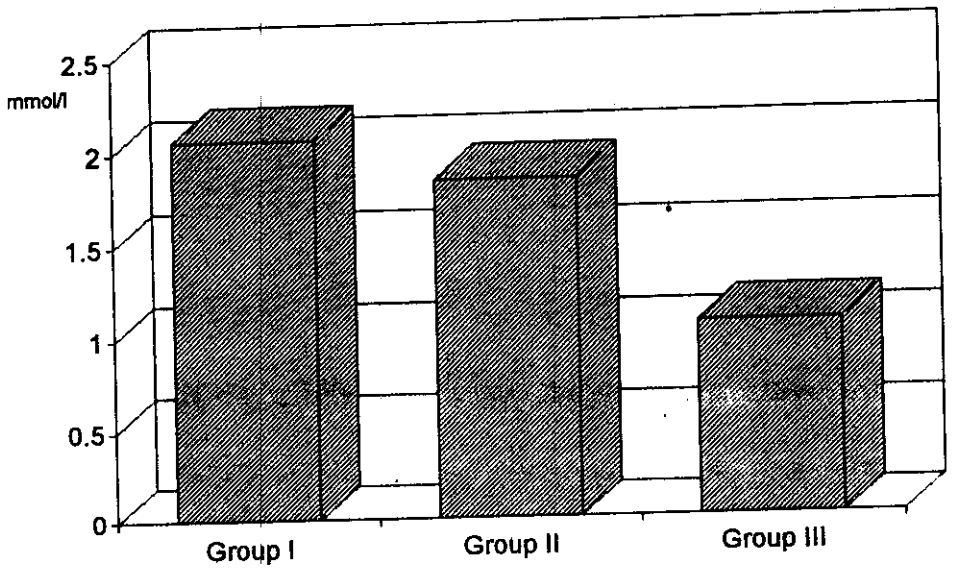


Fig. (15) : Mean values of Serum Phospholipids (mmol/l) in the three groups.

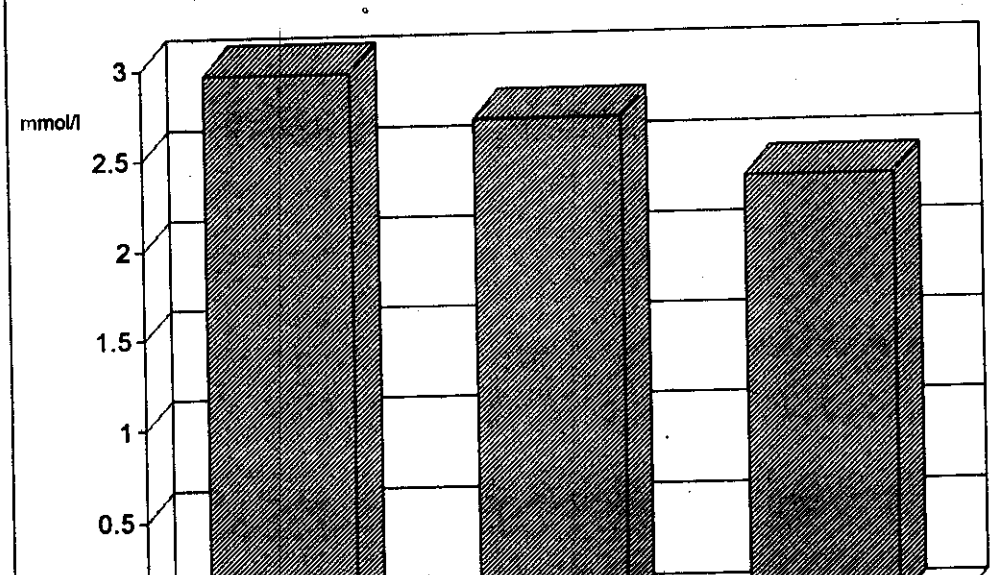


Table (21) : Comparison between the 3 groups for serum HDL-cholesterol (mmol/l) by ANOVA test .

Number of Groups	3
Number of observations	65
Total mean	0.9962
Total variance	9.6341

ANOVA Table

Source of variation	DF	SS	MS	F-state
Among Groups	2	0.2767	0.1384	0.9168
Within Groups	62	9.3574	0.1509	
Total	64	9.6341		

$P < 0.05$: No significant difference between at least 2 groups means.

Duncan analysis for identification of significant groups

Field	HDL-cholesterol [mmol/l]			
Group No.	3	2	1	
Mean	1.0925	0.9663	0.9386	

Table (22) : Comparison between the 3 groups for serum LDL-cholesterol (mmol/l) by ANOVA test .

Number of Groups	3
Number of observations	65
Total mean	3.9863
Total variance	143.9967

ANOVA Table

Source of variation	DF	SS	MS	F-state
Among Groups	2	23.7702	11.8851	6.1291
Within Groups	62	120.2266	1.9341	
Total	64	143.9967		

P < 0.05 : There exist a significant difference between at least 2 groups.

Duncan analysis for identification of significant groups

Field	serum LDL-cholesterol [mmol/l]			
Group No.	1	2	3	
Mean	4.5114	4.2723	3.0915	

Fig. (16) : Mean values of Serum HDL-ch. (mmol/l) in the three groups.

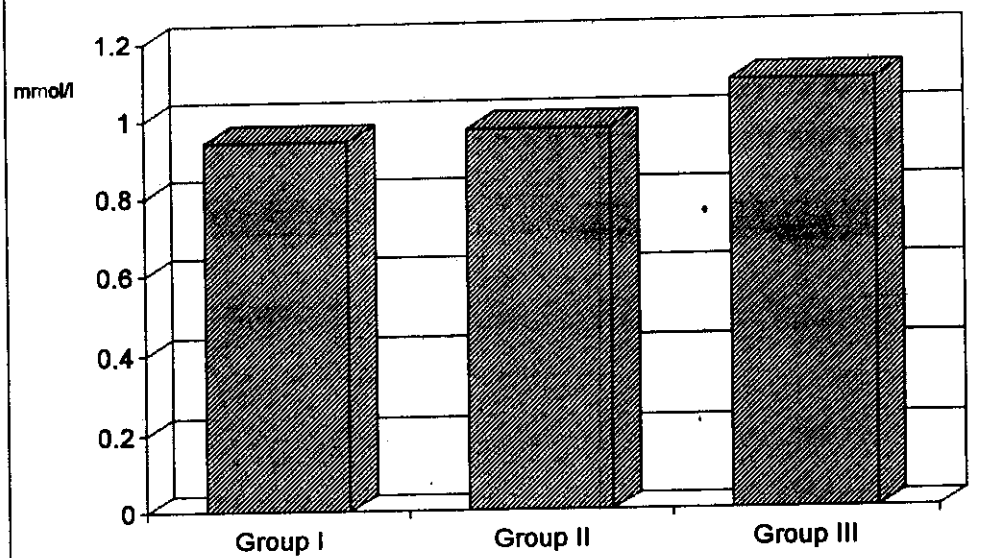


Fig. (17) : Mean values of Serum LDL-ch. (mmol/l) in the three groups.

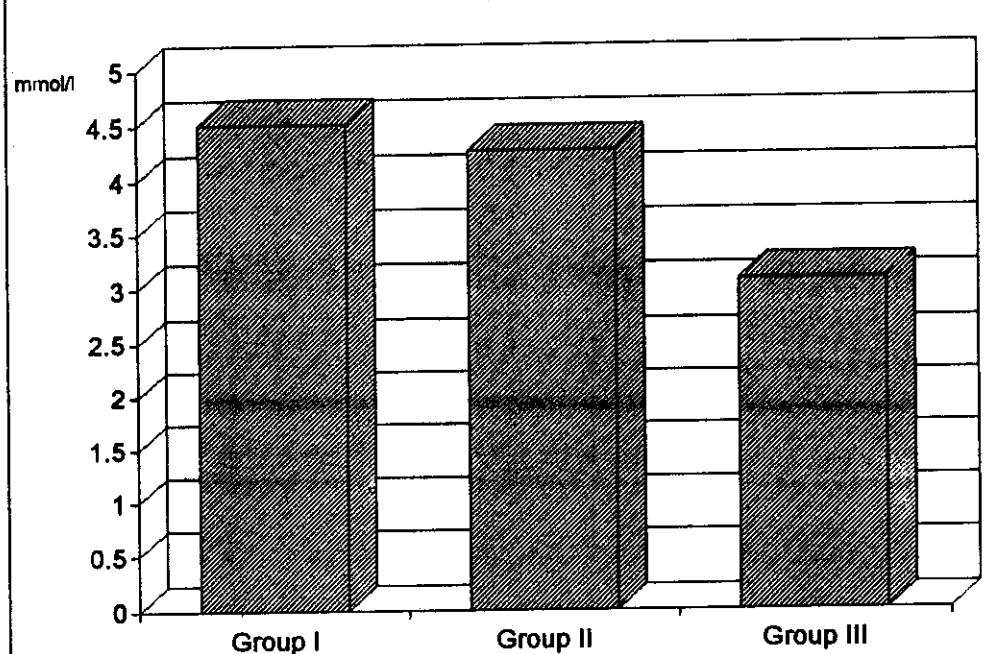


Table (23) : Comparison between the 3 groups for serum Apo-A1 [mg/dl] by ANOVA test .

Number of Groups	3
Number of observations	65
Total mean	136.6615
Total variance	86954.5538

ANOVA Table

Source of variation	DF	SS	MS	F-state
Among Groups	2	48349.9015	24174.9507	38.8256
Within Groups	62	38604.6524	622.6557	
Total	64	86954.5538		

$P < 0.05$: There exist a significant difference between at least 2 groups.

Duncan analysis for identification of significant groups

Field	Apolipoprotein A1 [mg/dl]			
Group No.	3	2	1	
Mean	176.8000	124.7500	112.0476	

Table(24): Comparison between the 3 groups for serum Apolipoprotien B [mg/dl] by ANOVA test:

Number of Groups	3
Number of observations	65
Total mean	151.8462
Total variance	198530.4615

ANOVA Table

Source of variation	DF	SS	MS	F-state
Among Groups	2	85430.2615	42715.1308	23.4159
Within Groups	62	113100.2000	1824.1968	
Total	64	198530.4615		

$P < 0.05$:There exist a significant difference between at least 2 groups.

Duncan analysis for identification of significant groups

Field	Apolipoprotein B (mg/dl)			
Group No.	1	2	3	
Mean	185.3333	166.8333	98.7000	

Fig. (18) : Mean values of Serum Apolipoprotein A1 (mg/dL) in the three groups.

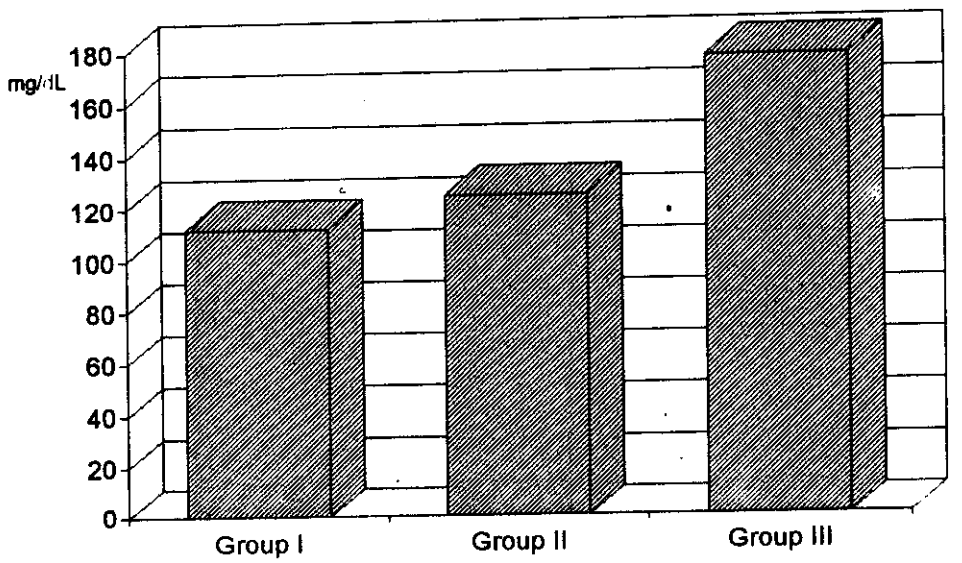


Fig. (19) : Mean values of Serum Apolipoprotein B (mg/dL) in the three groups.

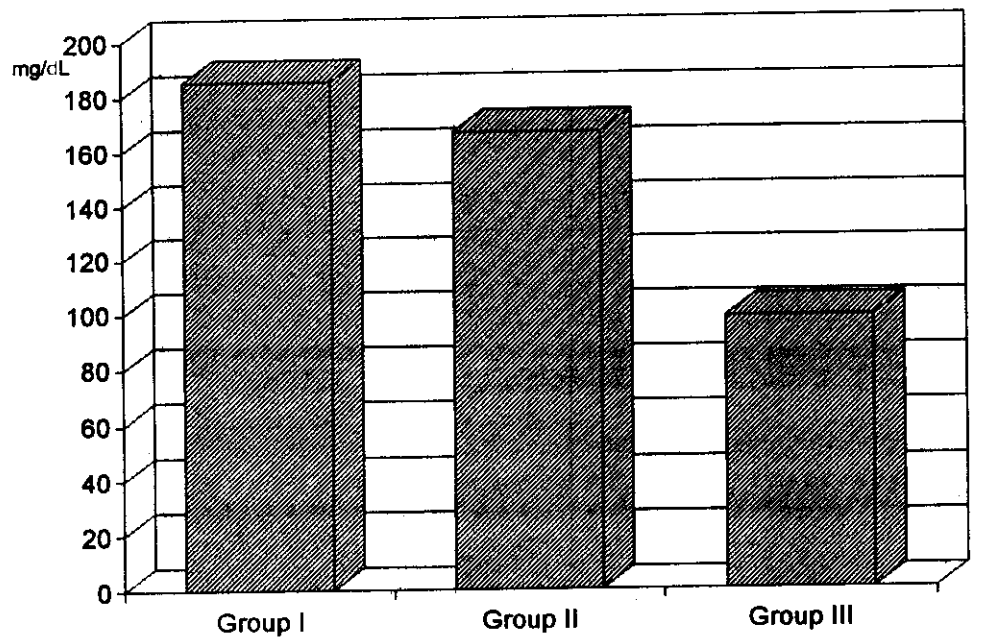


Table (25): Comparison between the 3 groups of for the plasma coagulation factor VII (%) by ANOVA test .

Number of Groups	3
Number of observations	65
Total mean	131.6923
Total variance	58513.8462

ANOVA Table

Source of variation	DF	SS	MS	F-state
Among Groups	2	27419.5604	13709.7802	27.3364
Within Groups	62	31094.2857	501.5207	
Total	64	58513.8462		

P < 0.05 : There exist a significant difference between at least 2 groups.

Duncan analysis for identification of significant groups

Field	Coagulation Factor VII (%)			
Group No.	1	2	3	
Mean	147.6190	143.3333	101.000	

Table (26) : Comparison between the 3 groups for the plasma coagulation factor VIII (%) by ANOVA test .

Number of Groups	3
Number of observations	65
Total mean	138.4615
Total variance	70046.1528

ANOVA Table

Source of variation	DF	SS	MS	F-state
Among Groups	2	24472.5824	12236.2912	16.6467
Within Groups	62	45573.5714	735.0576	
Total	64	70046.1538		

$P < 0.05$: There exist a significant difference between at least 2 groups.

Duncan analysis for identification of significant groups

Field	Coagulation factor VIII (%)			
Group No.	1	2	3	
Mean	153.8095	149.1667	109.5000	

Fig. (20) : Mean values of Plasma Coagulation Factor VII (%) in the three groups.

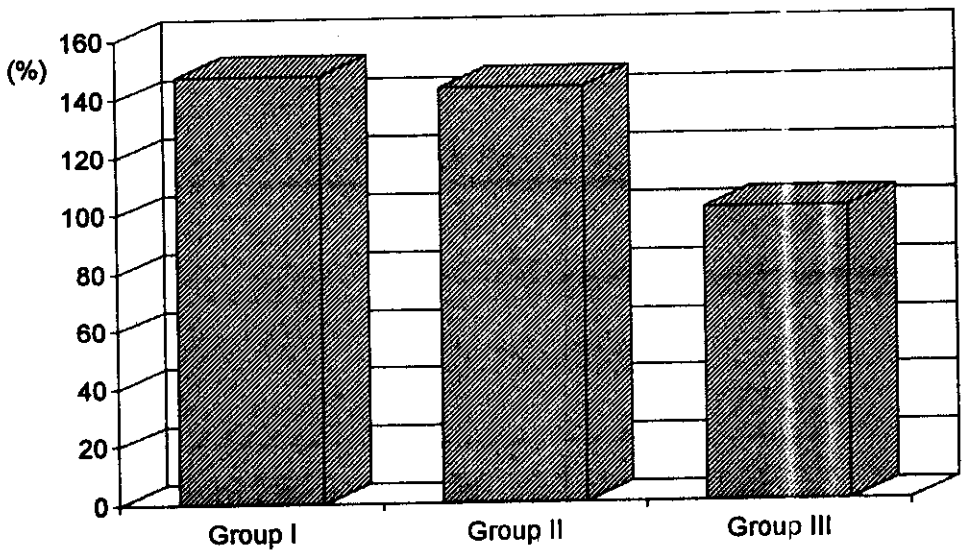


Fig. (21) : Mean values of Plasma Coagulation Factor VIII (%) in the three groups.

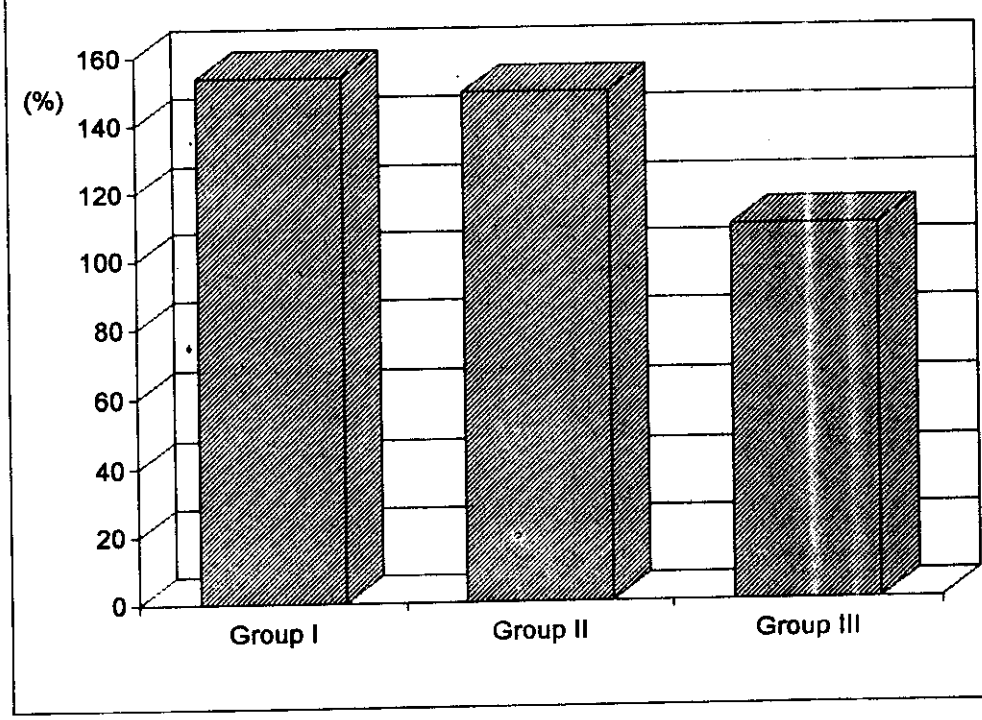


Table (28) : Comparison between the 3 groups for the total chol/HDL-chol ratio by ANOVA test .

Number of Groups	3
Number of observations	65
Total mean	6.5233
Total variance	195.334

ANOVA Table

Source of variation	DF	SS	MS	F-state
Among Groups	2	47.877	23.938	2.0735
Within Groups	62	157.456	2.539	
Total	64	205.33		

$P < 0.05$:There exist a significant difference between at least 2 groups.

Duncan analysis for identification of significant groups

Field	Total chol/ HDL-chol ratio .			
Group No.	2	1	3	
Mean	7.96	7.70	3.97	
	⟵	⟵		

Fig. (22) : Mean values of Plasma Anti-thrombin III (mg/dL) in the three groups.

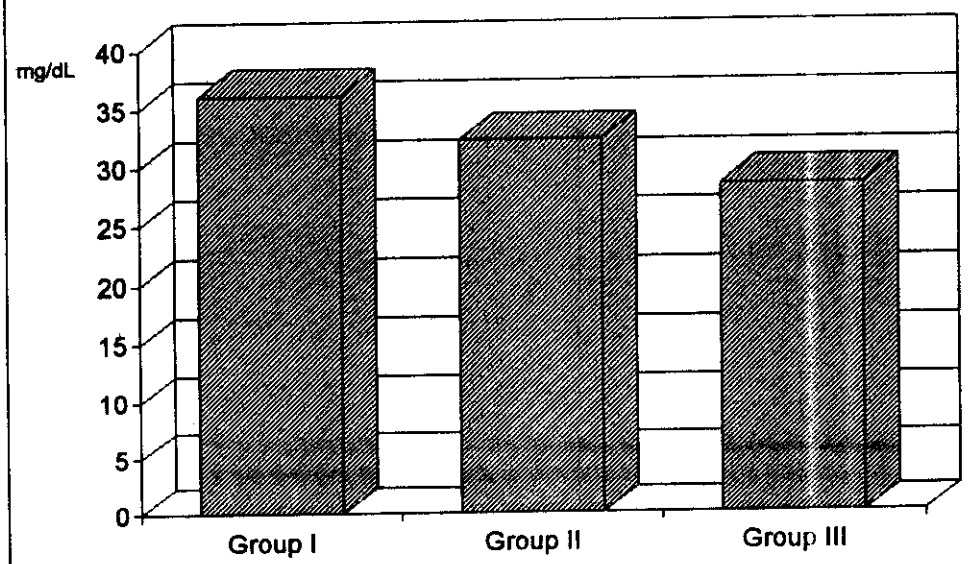


Fig. (23): Mean Values of Total Cholestrol / HDL-Ch Ratio in The Three Groups

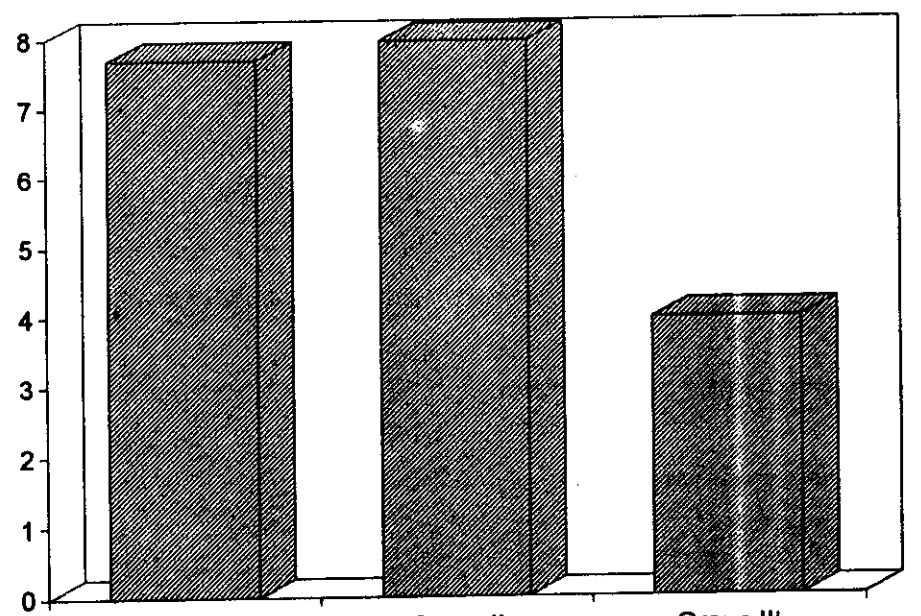


Table (29) : Comparison between the 3 groups for HDL-chol. /LDL-chol. ratio by ANOVA test .

Number of Groups	3
Number of observations	65
Total mean	0.2866
Total variance	2.5589

ANOVA Table

Source of variation	DF	SS	MS	F-state
Among Groups	2	0.1268	0.0634	0.13
Within Groups	62	2.4321	0.0392	
Total	64	2.5589		

$P < 0.05$: There exist a significant difference between at least 2 groups.

Duncan analysis for identification of significant groups

Field	HDL-ch. / LDL-ch ratio.			
Group No.	3	2	1	
Mean	0.36	0.27	0.23	

Table (30) : Comparison between the 3 groups for the Apo-A1 / Apo-B ratio by ANOVA test .

Number of Groups	3
Number of observations	65
Total mean	1.11
Total variance	

ANOVA Table

Source of variation	DF	SS	MS	F-state
Among Groups	2	0.2268	0.1134	0.43
Within Groups	62	6.4862	0.1046	
Total	64	6.7130		

$P < 0.05$:There exist a significant difference between at least 2 groups.

Duncan analysis for identification of significant groups

Field	Apo-A1 / Apo-B ratio .			
Group No.	3	2	1	
Mean	1.87	0.78	0.68	

Fig. (24): Mean Values of HDL-ch / LDL-ch Ratio in the three groups.

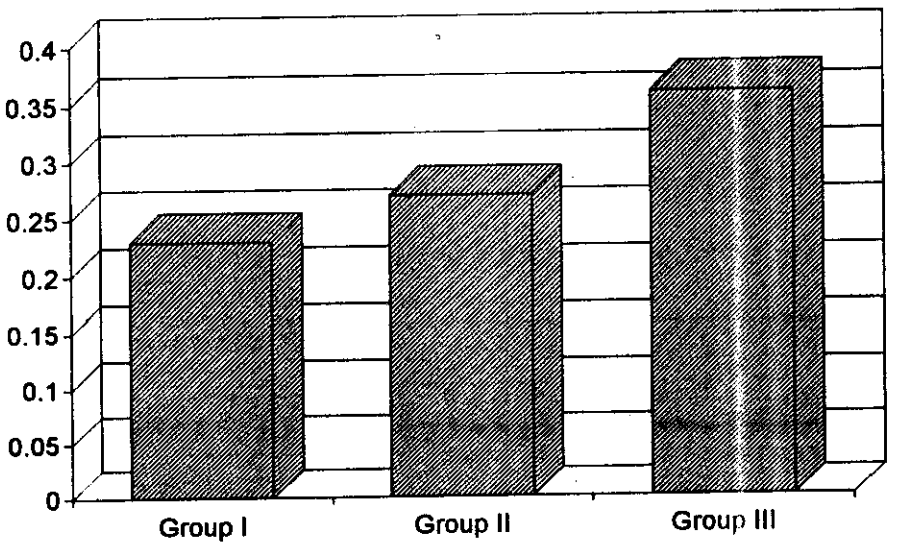


Fig. (25) : Mean Values of the Apo-A1 / Apo-B Ratio in the three groups.

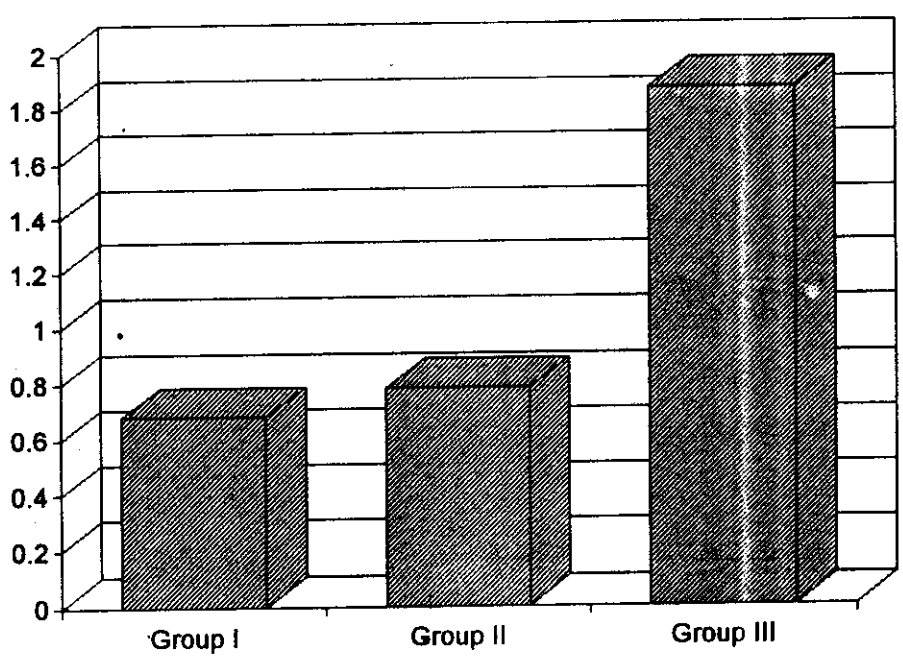


Table (31): Correlation coefficient between urinary albumin excretion rate and Age , duration in Microalbuminuric diabetic group as compared to normoalbuminuric diabetic group .

Variable	urimary albumin excretion rate (μg/min)	
	Micro - group r (p)	Normo. group r (p)
- Age	- 0.232 (0.310) *	0.1164 (0.588) *
- Duration	0.0722 (0.756) *	0.0607 (0.778) *

* Non significant

Table (32):Correlation coefficient between urinary albumin excretion rate and Fasing and Post-prandial Blood sugar in Microalbuminuric diabetic as compared to normoalbuminuric diabetic group .

Variable	**urinary albumin excretion rate (μg/min)**	
	Micro - group **r (p)**	**Normo. group** **r (p)**
- fasting blood sugar level	**0.493 (0.023)****	**0.152 (0.477) ***
- PPS.	**0.418 (0.059)****	**0.111 (0.603) ***

** statistically significant .

* Statistically non- significant .

Fig. (26) Correlation between the urinary albumin excretion rate and fasting blood sugar in the microalbuminuric group .

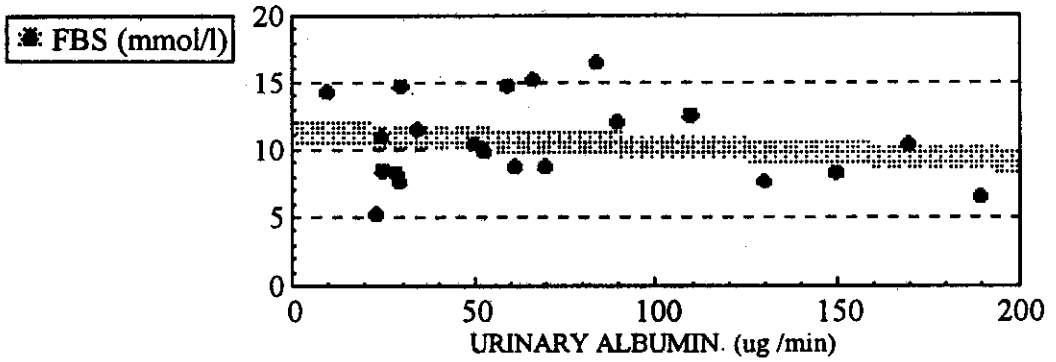


Fig. (27) : Correlation between the UAE raate and post-prandial blood-sugar in the microalbuminuric group .

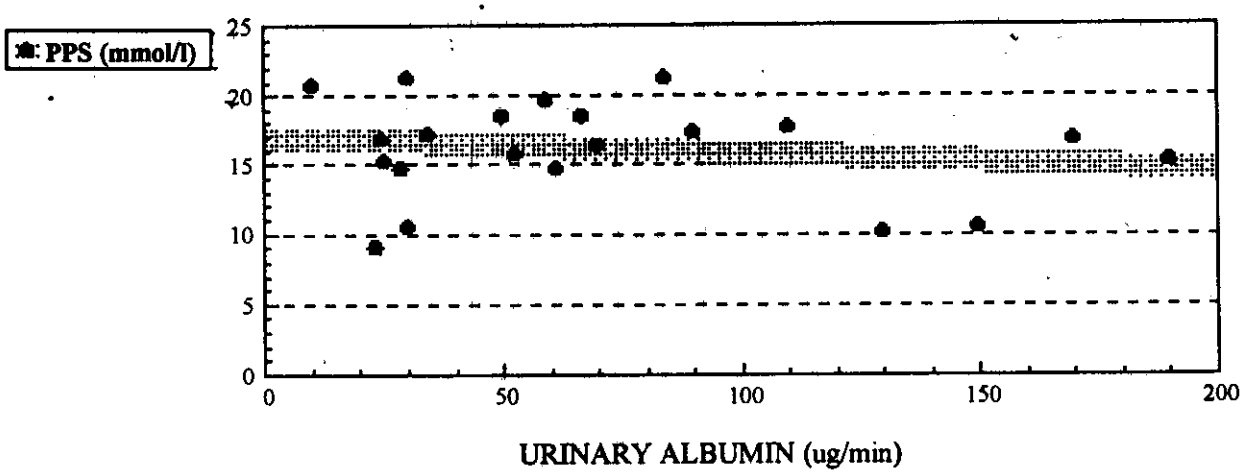


Table (33): Correlation coefficient between urinary albumin excretion rate and urea, creatinine in the microalbuminuric diabetic group as compared to normoalbuminuric diabetic group .

Variable	urinary albumin excretion rate (μg/min)	
	Micro - group r (p)	Normo. group r (p)
- urea	0.947 (0.001)**	- 0.200 (0.348) *
- creatinine	0.912 (0.001)**	- 0.186 (0.383) *

** statistically significant .

* Statistically non- significant .

Fig. (28) : Correlation between the UAE rate and urea in the microalbuminuric group .

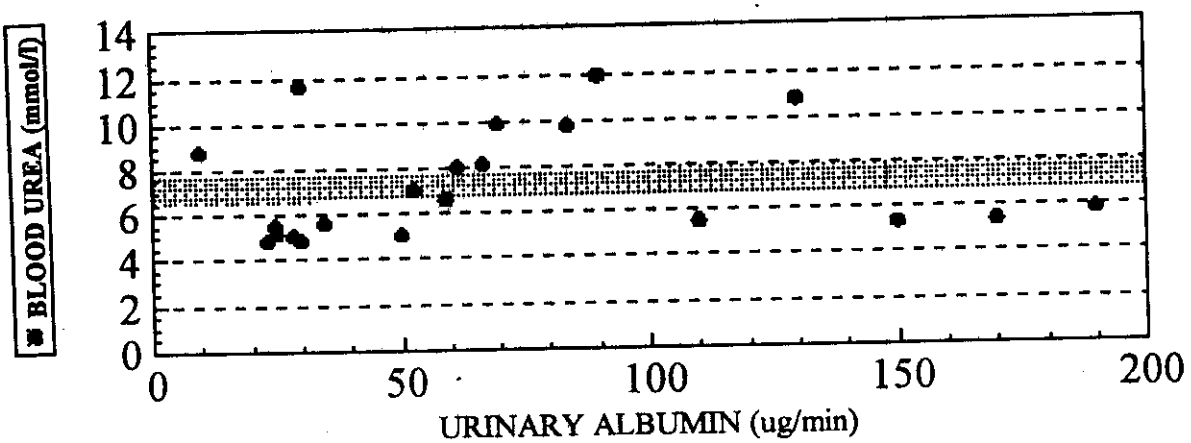


Fig. (29) : Correlation between the UAE rate and serum creatinine in the microalbuminuric diabetic group .

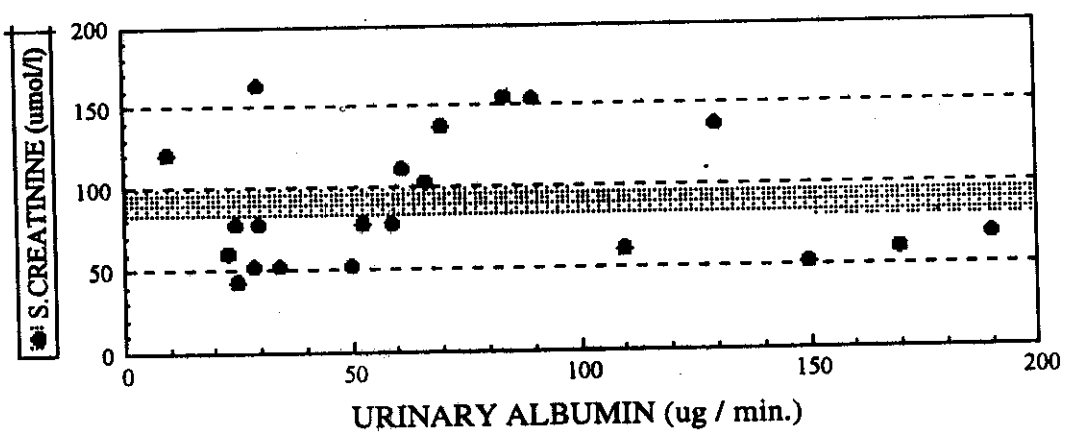


Table (34): Correlation coefficient between urinary albumin excretion rate and serum lipid parameter in the Microalbuminuric diabetic group as compared to normoalbuminuric diabetic group .

Variable	urinary albumin excretion rate (µg/min)	
	Micro-group r (p)	Normo-group r (p)
- Total lipid	0.083 (0.718) *	- 0.077 (0.718) *
- Total cholesterol	0.274 (0.229) *	0.065 (0.761) *
- Triglycerides	- 0.158 (0.493) *	- 0.224 (0.261) *
- phospholipid	0.2120 (0.356) *	- 0.104 (0.627) *
- HDL-ch.	0.325 (0.150) *	0.096 (0.655) *
- LDL-ch.	0.161 (0.484) *	0.058 (0.788) *
- Apo-A1	0.312 (0.168) *	- 0.067 (0.754) *
- Apo-B	0.612 (0.003) **	- 0.350 (0.093) *

** statistically significant .

* Statistically non- significant .

Table (35):Correlation coefficient between urinary albumin excretion rate and coagulation parameter in the Microalbuminuric diabetic group as compared to normoalbuminuric diabetic group .

Variable	urinary albumin excretion rate (μg/min)	
	Micro-group r (p)	Normo-group r (p)
-Coagulation factor VI	- 0.286 (0.208) *	- 0.289 (0.170) *
-Coagulation factor VII	- 0.050 (0.828) *	- 0.184 (0.387) *
-Antithrombin III	- 0.426 (0.054) **	- 0.072 (0.735) *

** statistically significant .

* Statistically non- significant .

Fig. (30) Correlation between the UAE rate and Apolipoprotein B in the microalbuminuric group .

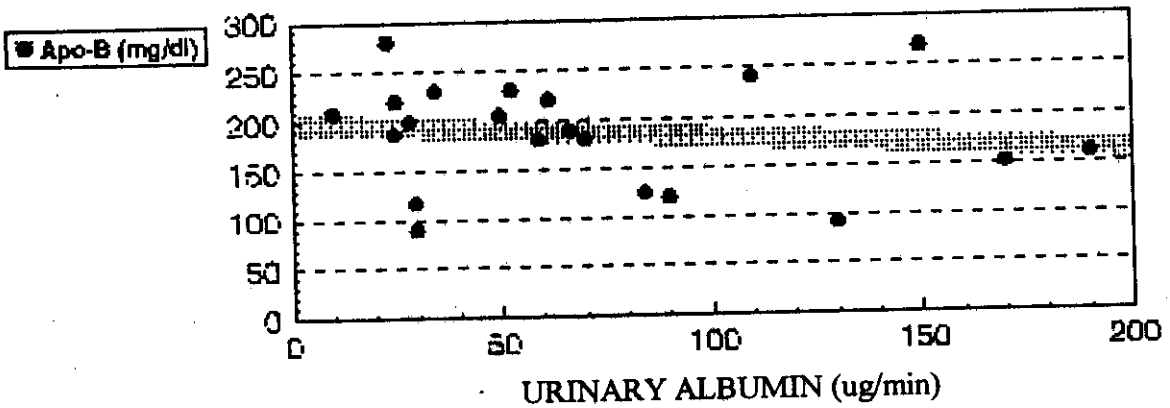


Fig. (31) : Correlation between the UAE rate and Antithrombin III in the microalbuminuric group .

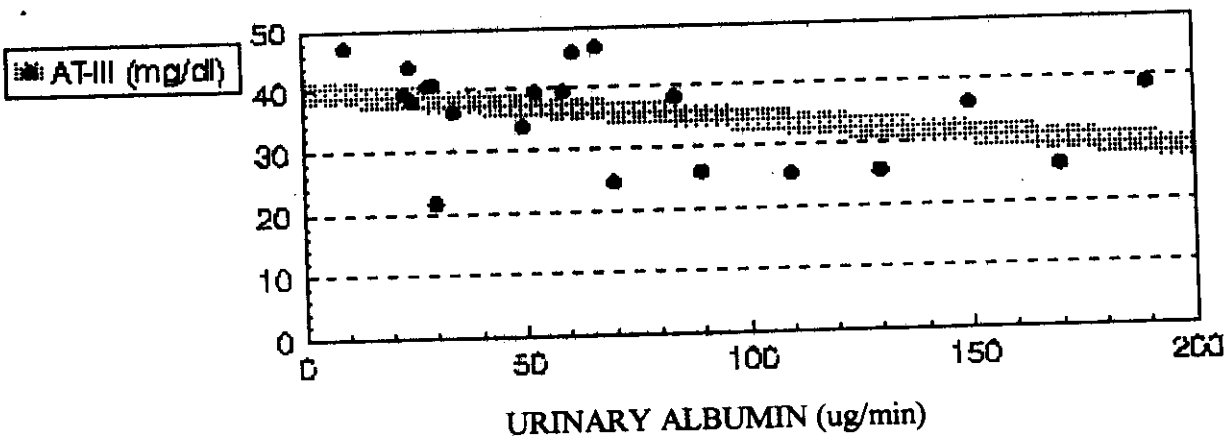


Table (36): Correlation coefficient between urinary albumin excretion rate and risk ratio in Microalbuminuric diabetic group as compared to normoalbuminuric diabetic group .

Variable	urinary albumin excretion rate (μg/min)	
	Micro-group r (p)	Normo-group r (p)
* Total chol./HDL.chol	- 0.190 (0.590) *	0.180 (0.580) *
*HDLchol./LDL.chol.	0.102 (0.654) *	0.192 (0.590) *
* Apo-A1/Apo-B	0.675 (0.003) **	0.206 (0.521) *

** statistically significant .

* Statistically non- significant .

Figure (32) : Correlation between the UAE rate Apo-Al / Apo-B ratio in the microalbuminuric group .

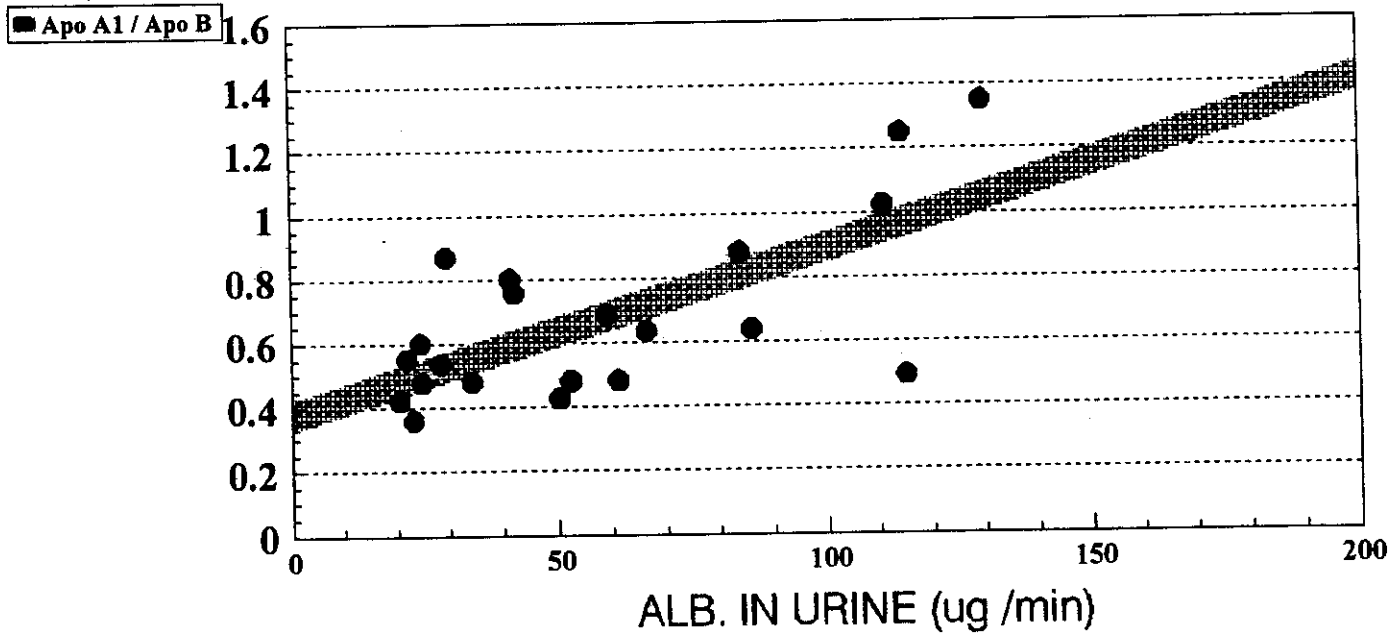


Table (37): Correlation coefficient between the plasma coagulation parameters and serum lipid parameters in the microalbuminuric diabetic group .

Variable	F.VII r (p)	F.VIII r (p)	AT-III r (p)
-Total lipid	-0.3297(0.144)*	-0.1907(0.408)*	0.0320(0.891)*
-Total chol	-0.2622(0.251)*	-0.0333(0.884)*	0.0694(0.765)*
-Triglycerides	-0.3361(0.136)*	-0.3934(0.078)*	0.0440(0.850)*
-HDL-chol.	-0.2704(0.236)*	0.0821(0.723)*	-0.2582(0.258)*
-LDL-chol.	-0.0777(0.738)*	0.0539(0.817)*	0.1034(0.655)*
-Phospholipids	-0.2746(0.228)*	-0.0548(0.813)*	0.0672(0.772)*
-Apo-A1	-0.1897(0.410)*	-0.2866(0.2009)	-0.3413(0.130)*
-Apo-B	0.1422(0.529)*	0.0100(0.966)*	0.3493(0.121)*

* Statistically non- significant .

Table (38):Correlation coefficient between the coagulation parameters and serum lipid parameters in the normoalbuminuric diabetic group .

Variable	F.VII r (p)	F.VIII r (p)	AT-III r(p)
-Total lipid	0.2251(0.290)*	-0.0501(0.816)*	0.5623(0.064)**
-Total cholesterol	0.1457(0.497)*	0.0825(0.702)*	0.6218(0.001)**
-Triglycerides	0.3157(0.133)*	-0.1458(0.497)*	0.2695(0.203)*
-HDL-chol.	-0.0780(00717)*	0.0086(0.968)*	-0.0506(0.814)
-LDL-chol.	0.2247(0.291)*	0.1814(0.396)*	0.6316(0.001)**
- Phospholipids	0.0845(0.695)*	-0.1234(0.566)*	0.4665(0.002)**
-Apo-A1	-0.1177(0.584)*	-0.0987(0.646)*	0.1619(0.450)*
-Apo-B	0.2200(0.302)*	-0.1550(0.469)*	0.2457(0.247)*

** statistically significant .

* Statistically non- significant .

Fig. (33) : Correlation between the Antithrombin III and total lipid in the normoalbuminuric group .

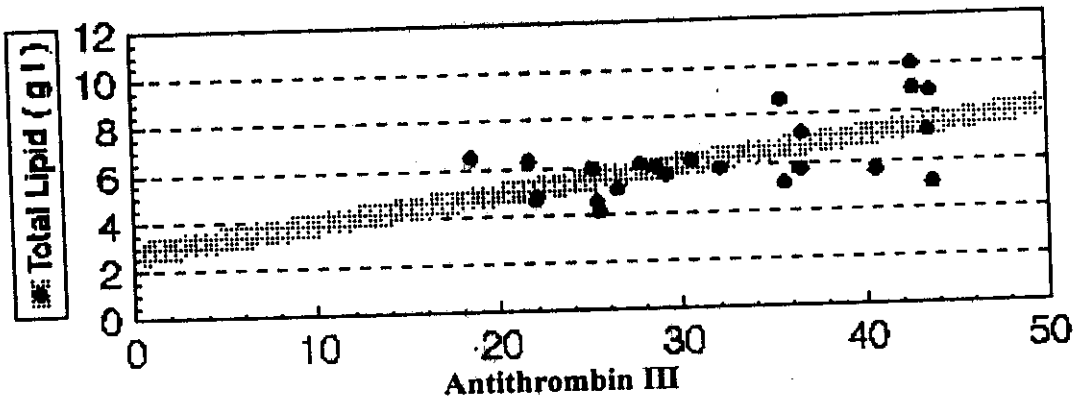


Fig. (34):Correlation between the Antithrombin III and total cholesterol in the normoalbuminuric group .

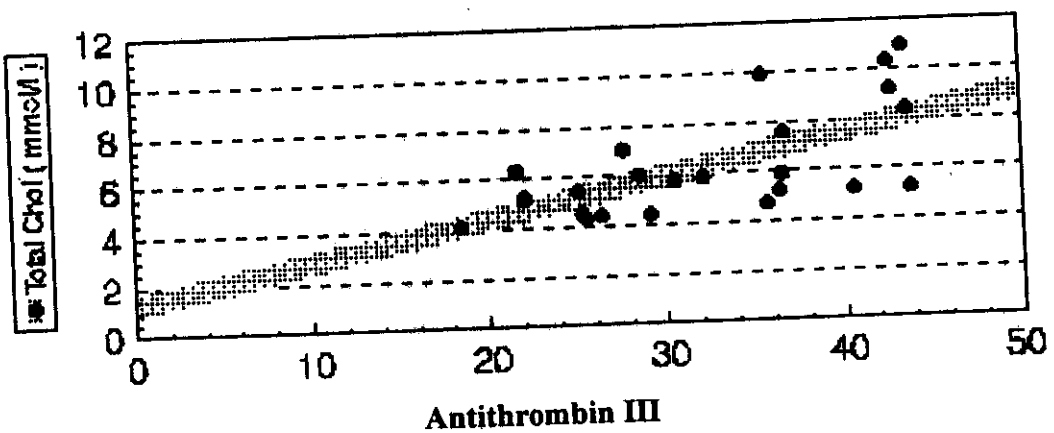


Fig.(35) : Correlation between the Antithrombin III and LDL-ch in the normoalbuminuric group .

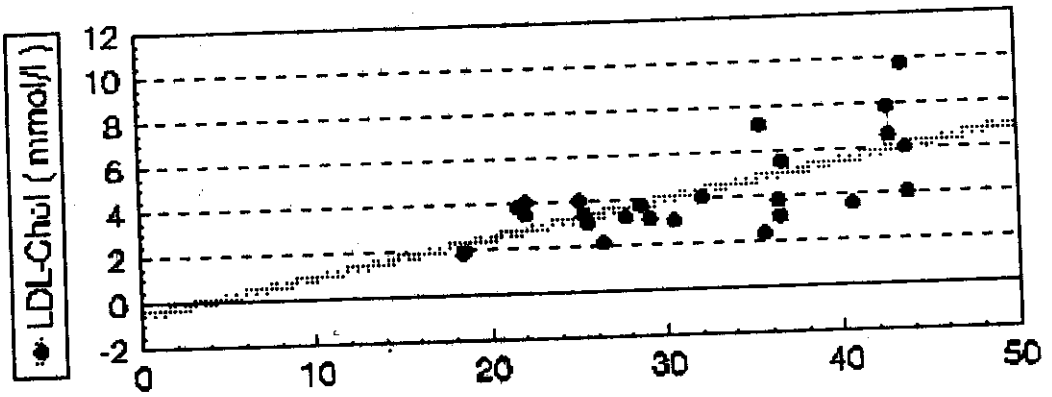


Fig. (36) : Correlation between the Antithrombin III and phospholipids in the normoalbuminuric group .