

Results

Concerning:

- FBG = fasting blood glucose
- TG = triglycerides
- HDL-c = high density lipoproteins
- TC = total cholesterol
- LDL-c = low density lipoproteins

Table (1):

FBG, lipid profile (TC, HDL-c, and LDL-c & TGs) and insulin hormone level in control group.

No Of exp.	FBG mg/dl	Lipid profile (mg/dl)				Insulin level (uU/ml)
		TC	HDL-c	LDL-c	TGs	
1	53	90	35	37	90	6.3
2	60	91	39	37.4	73	7.3
3	75	89	36	31.8	106	8.1
4	80	112	42	45.2	124	8.2
5	63	123	44	60.4	94	7.9
6	61	84	38	25.8	101	7.1
Mean	65.3	98.1	39	39	98	7.7
S.E	4.1	6.3	1.4	4.9	6.9	0.4
S.D	10.1	15.6	3.4	12.05	17.05	1.2

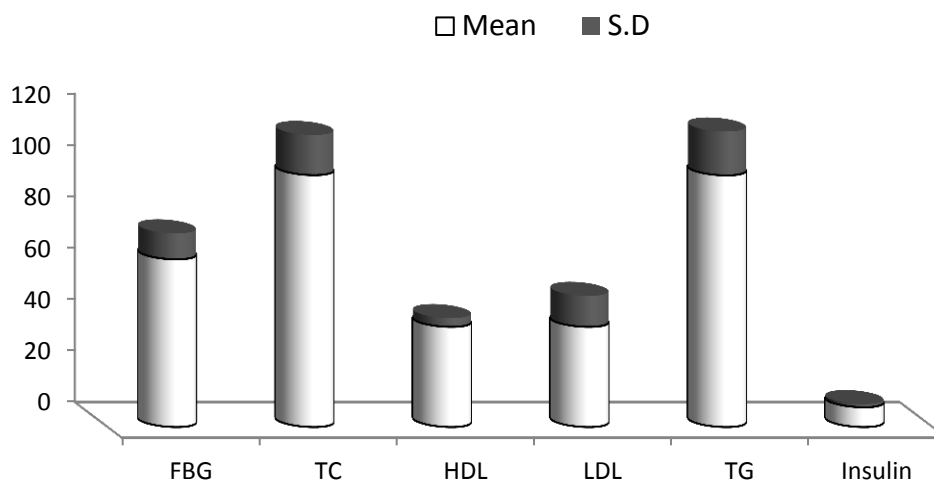


Fig. 1: Mean value and S.D of control group

Table & fig. (1):

These are the parameters recorded in the control group. In respect of fasting blood glucose, it ranges from 53 to 80 mg/dl with a mean \pm S.D is 65.3 ± 10.1 . As regard, lipid profile, TC level is ranged between 123 and 84 mg/dl with a mean 98.1 ± 15.6 . Furthermore, HDL-c record is between 35 – 44 mg/dl with the mean value is 39 ± 3.4 . Concerning LDL-c and TG, their ranges are (25.8 – 60.4) and (73 – 124) mg/dl respectively. The mean values in the same order are 39 ± 12.05 and 98 ± 17.05 . Also, insulin level ranges between 6.3 and 8.2 uU/ml with mean value is 7.7 ± 1.2 .

Table (2):

FBG, lipid profile (TC, HDL-c, and LDL-c & TGs) and insulin hormone levels in diabetic control group.

No Of exp.	FBG mg/dl	Lipid profile (mg/dl)				Insulin level (uU/ml)
		TC	HDL-c	LDL-c	TGs	
1	323	116	23	62	155	1.2
2	220	120	22	66.8	156	2.1
3	289	175	25	114	180	3.1
4	214	164	26	102.8	176	3.2
5	257	133	24	68.8	201	2.8
6	264	177	21	116.4	198	3.4
Mean	261.1	147.5	23.5	88.5	177.7	2.6
S.E	16.9	11.3	0.8	10.3	8.06	0.33
S.D	41.3	27.8	1.9	25.3	19.7	0.82

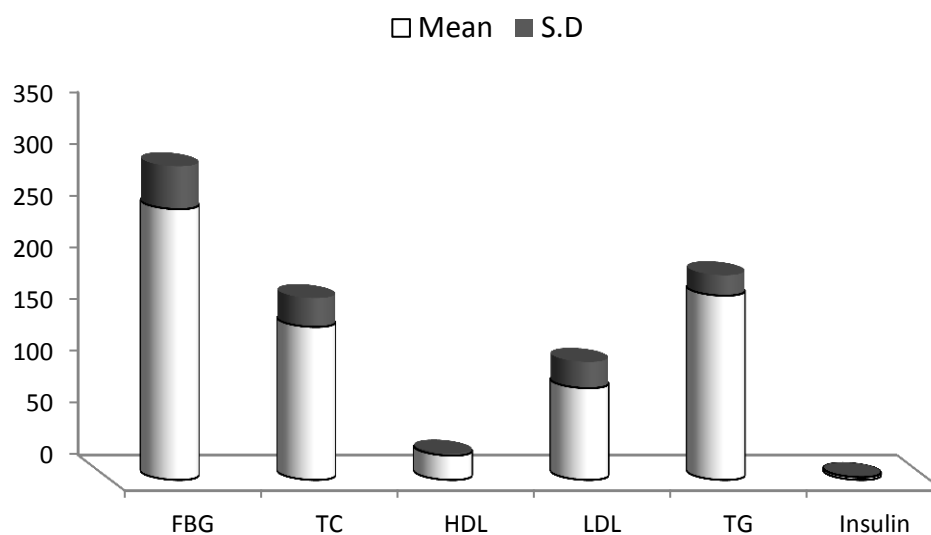
**Fig. 2:** Mean value and S.D of group (II)

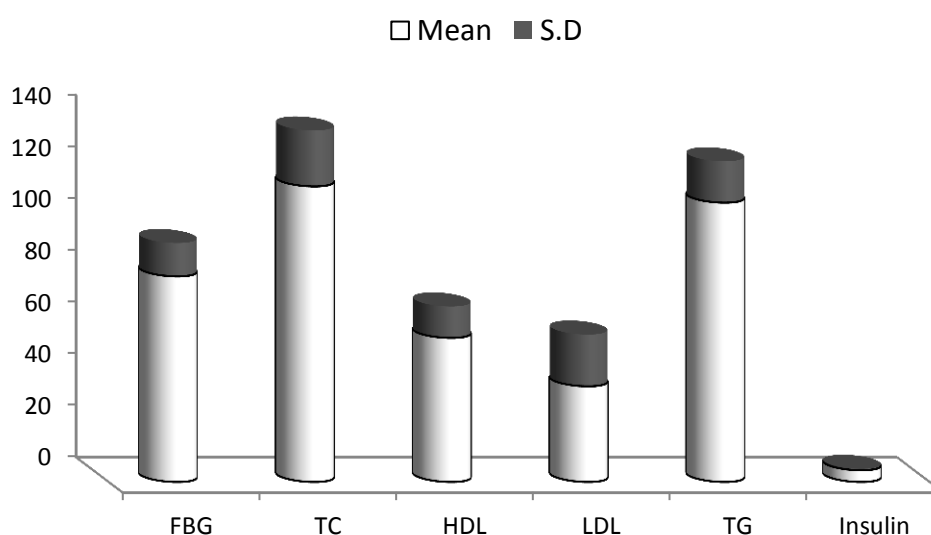
Table & fig. (2):

These are the recorded parameters of diabetic control group that received alloxan in the dose of 160 mg/kg/i.p. As regard FBG, it ranges between 214 and 264 mg/dl with a mean 261.1 ± 41.3 . Meanwhile, insulin level is ranged between 1.2 – 3.4 uU/ml with a mean of 2.6 ± 0.82 . Concerning lipid profile, the detected parameters show that, TC level ranges between 177 & 116 mg/dl with mean 147.5 ± 27.8 . Additionally, the mean of HDL-c level value is 23.5 ± 1.9 . LDL-c is ranged between 62 – 116.4 mg/dl and mean value 88.5 ± 25.3 . Furthermore, TGs are ranged from 155 - 201 mg/dl and the mean value is 177.7 ± 19.7 .

Table (3)

FBG, lipid profile and insulin levels in Quercetin treated group (III A1) that received Quercetin in a dose of 50 mg/kg for one week before alloxan injection.

No Of exp.	FBG mg/dl	Lipid profile (mg/dl)				Insulin level (uU/ml)
		TC	HDL-c	LDL-c	TGs	
1	83	110	66	23	105	4.9
2	65	116	59	33.8	116	5.2
3	67	93	57	13.4	113	4.8
4	93	89	37	33	95	3.9
5	74	142	46	69.6	132	4.6
6	95	136	69	49.6	87	3.8
Mean	79.5	114.3	55.7	37	108	4.53
S.E	5.26	8.8	4.96	8.1	6.5	0.23
S.D	12.89	21.6	12.16	20	16	0.56

***Fig. 3:*** Mean value and S.D of group (IIIA1)

Table& fig. (3):

The recorded parameters of this group show that, FBG is ranges from 65 to 95 mg/dl and the mean \pm S.D is 79.5 ± 12.89 . As for insulin level, it ranges between 3.8 and 5.2 uU/ml within mean 4.53 ± 0.56 . When lipid profile parameters are analyzed, TC, HDL-c levels vary from (89 – 136), (37 – 69) mg/dl with mean values is 114.3 ± 21.6 and 55.7 ± 12.16 respectively. Concerning LDL-c and TGs levels, they fluctuate between (23 & 69.6) and (87 & 132) mg/dl and mean values in the same order are 37.1 ± 20 and 108 ± 16 .

Table (4)

FBG, lipid profile (TC, HDL-c, and LDL-c & TGs) and insulin hormone level in the group (IIIA2) that received Quercetin in a dose of 25 mg/kg for one week before alloxan injection.

No Of exp.	FBG mg/dl	Lipid profile (mg/dl)				Insulin level (uU/ml)
		TC	HDL-c	LDL-c	TGs	
1	210	154	27	98.4	143	2.1
2	290	123	24	66	165	3.2
3	233	133	21	82.8	146	2.8
4	310	143	23	88.2	159	3.4
5	211	116	22	67.6	132	2.3
6	213	114	21	66.4	133	2.2
Mean	244.5	130.5	23.0	78.2	146.3	2.6
S.E	18.1	6.46	0.93	5.56	5.48	0.22
S.D	44.26	15.8	2.28	13.6	13.4	0.55

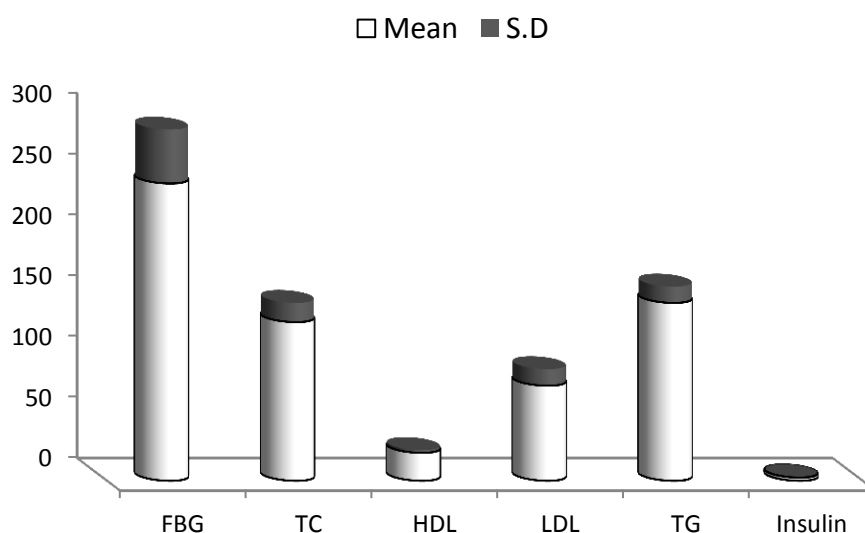
***Figure 4:*** Mean value and S.D of group (IIIA2)

Table & fig. (4):

The parameters has been recorded in this table shows that, the levels of FBG is ranged between 310-210 mg/dl with a mean value 244.5 ± 44.26 . While, lipid profile parameters as regard TC fluctuates between 154 and 114 mg/dl with a mean value 130.5 ± 15.8 . As regard other lipid profile parameters, they range from 21 to 27 for HDL-c, from 66 to 88.2 for LDL-c, and from 132 to 165mg/dl for TGs. Additionally; the mean values of these parameters in the same order are 23.0 ± 2.28 , 78.2 ± 13.6 , and 146.3 ± 13.4 . Furthermore, the recorded insulin level varies between 2.1 – 3.4 uU/ml with mean of 2.6 ± 0.55 .

Table (5)

FBG, lipid profile (TC, HDL-c, and LDL-c & TGs) and insulin in Quercetin treated group (IIIB1) that received Quercetin in a dose of 50 mg/kg for one week after alloxan injection.

No Of exp.	FBG mg/dl	Lipid profile (mg/dl)				Insulin level (uU/ml)
		TC	HDL-c	LDL-c	TGs	
1	226	123	20	79.4	118	1.9
2	275	165	24	103.2	189	2.6
3	281	171	25	106.4	198	2.2
4	198	113	17	71.6	122	1.5
5	211	120	19	72.4	143	1.8
6	234	141	21	87.4	163	2.7
Mean	237.5	138.8	21	86.7	155.5	2.1
S.E	13.79	9.99	1.23	6.18	13.74	0.19
S.D	33.78	24.48	3.03	15.14	33.67	0.47

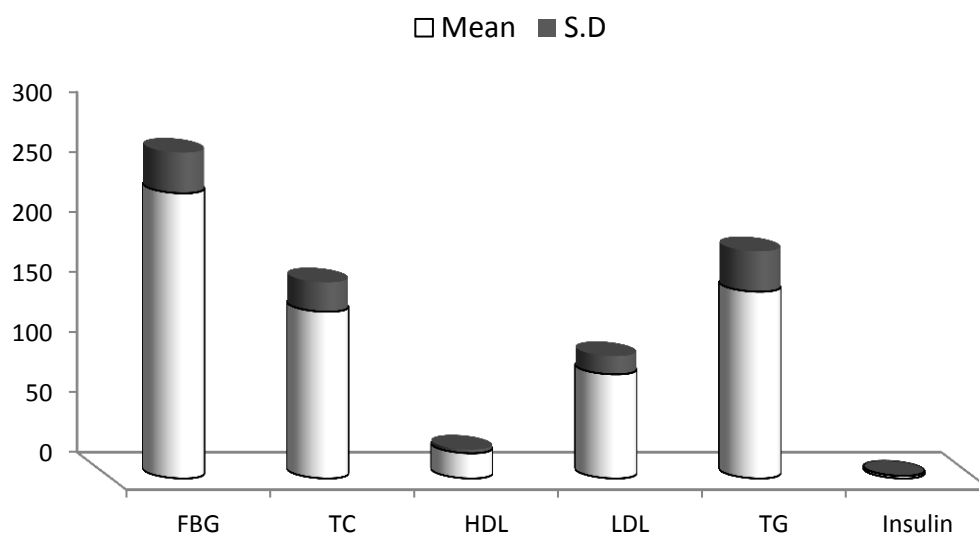
***Figure 5:*** Mean value and S.D of group (IIIB1)

Table & fig. (5):

The parameters of FBG, lipid profile and insulin are recorded in this table. It shows that, the level of FBG is ranged between 218- 198 mg/dl with a mean value 237.5 ± 33.78 . While, TC level is ranged between 171- 113 mg/dl with a mean value 138.8 ± 24.48 . Furthermore, the ranges of other lipid profile parameters are 17 – 25mg/dl for HDL-c, 71.6 – 106.4mg/dl for LDL-c and 122 – 189 mg/dl for TGs. Concerning mean values of HDL-c, LDL-c & TGs are 21 ± 3.03 , 86.7 ± 15.14 , and 155.5 ± 33.67 respectively. The range of the recorded insulin is between 1.5 & 2.7 uU/ml with the mean of 2.1 ± 0.47 .

Table (6)

FBG, lipid profile (TC, HDL-c, and LDL-c & TG) and insulin level in Quercetin treated group (IIIB2) which was received Quercetin in a dose of 25 mg/kg for one week after alloxan injection.

No Of exp.	FBG mg/dl	Lipid profile (mg/dl)				Insulin level (uU/ml)
		TC	HDL-c	LDL-c	TGs	
1	264	181	25	121.8	171	1.4
2	231	121	21	67.4	163	1.5
3	243	135	18	92.4	123	2.5
4	311	183	24	121.4	188	1.1
5	223	164	18	120	130	2.6
6	212	114	13	76.8	121	2.1
Mean	247.3	149.6	19.8	99.96	149.3	1.86
S.E	14.67	12.39	1.81	9.98	11.57	0.25
S.D	35.9	30.35	4.44	24.46	28.35	0.62

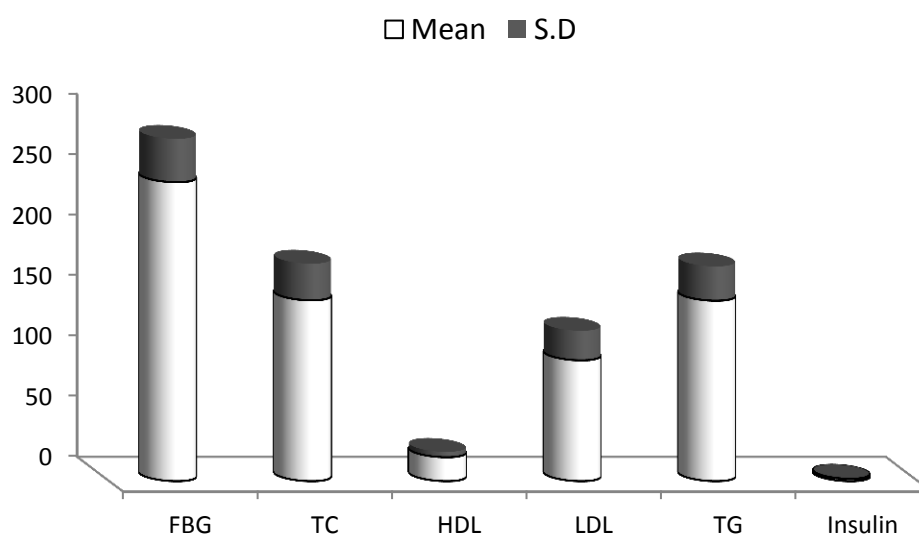
***Fig. 6:*** Mean value and S.D of group (IIIB2)

Table & fig. (6):

The parameters of FBG, lipid profile and insulin are recorded in this table. It shows that, the level of FBG is ranged between 311-212 mg/dl with a mean value 247.3 ± 35.9 . Meanwhile, the insulin level ranges between 2.5 and 1.1uU/ml with the mean value is 1.86 ± 0.62 . As regard TC level, it is ranged between 183 and 114 mg/dl with a mean value 149.6 ± 30.35 . The recorded ranges of HDL-c and LDL-c are (13 - 25) and (67.4 - 121.8) with the mean values are 19.8 ± 4.44 , 99.96 ± 24.46 . Concerning TGs, their range extends from 121 and 188 mg/dl with mean of 149.3 ± 28.35 .

Table (7)

FBG, lipid profile and insulin level in Quercetin treated group (IIC1) that was received Quercetin in a dose of 50 mg/kg 3days before and one week after alloxan injection.

No Of exp.	FBG mg/dl	Lipid profile (mg/dl)				Insulin level (uU/ml)
		TC	HDL-c	LDL-c	TG	
1	112	121	35	64	110	5.4
2	132	154	45	84.8	121	3.1
3	65	89	48	18.4	113	4.7
4	89	99	59	15.4	123	5.2
5	113	132	38	72.6	107	4.3
6	93	101	65	13	115	5.1
Mean	100.6	116	48.3	44.7	114.8	4.6
S.E	9.5	9.94	4.78	13.3	2.5	0.34
S.D	23.36	24.3	11.7	32.6	6.2	0.8

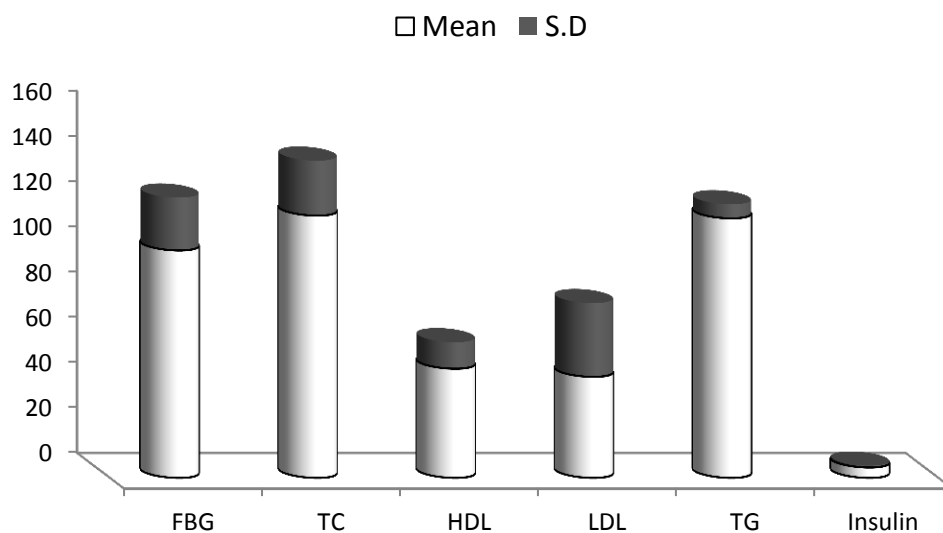
***Fig. 7:*** Mean value and S.D of group (IIC1)

Table & fig. (7):

As shown, the recorded parameters for FBG range is 65 & 132 mg/dl with mean 100.6 ± 23.36 . Meanwhile, insulin hormone recorded levels vary between 3.1 and 5.4 uU/ml and the mean value is 4.6 ± 0.8 . As regard lipid profile, TC fluctuates between 154 and 89 mg/dl with mean value 116 ± 24.3 . Furthermore, HDL-c value varies from 65 to 35 mg/dl with mean 48.3 ± 11.7 . As for LDL-c & TGs, their levels range from 13 to 84.8 for LDL-c and from 107 to 123 mg/dl for TGs. Also, their mean values are 44.7 ± 32.6 and 114.8 ± 6.2 when setting in order occur.

Table (8)

FBG, lipid profile (TC, HDL-c, and LDL-c & TGs) and insulin hormone in Quercetin treated group (IIC2) that received Quercetin in a dose of 25 mg/kg 3days before and one week after alloxan injection.

No Of exp.	FBG mg/dl	Lipid profile (mg/dl)				Insulin level (uU/ml)
		TC	HDL-c	LDL-c	TGs	
1	210	211	30	154.6	132	2.9
2	199	238	43	161.4	168	2.5
3	195	254	74	143.8	181	2.4
4	231	231	71	141.2	94	3.1
5	213	199	62	120.4	83	2.1
6	181	179	59	97.8	111	4.4
Mean	204.8	218.66	56.5	136.5	128.16	2.9
S.E	7.01	11.24	6.9	9.6	16.22	0.33
S.D	17.18	27.54	16.95	23.57	39.73	0.81

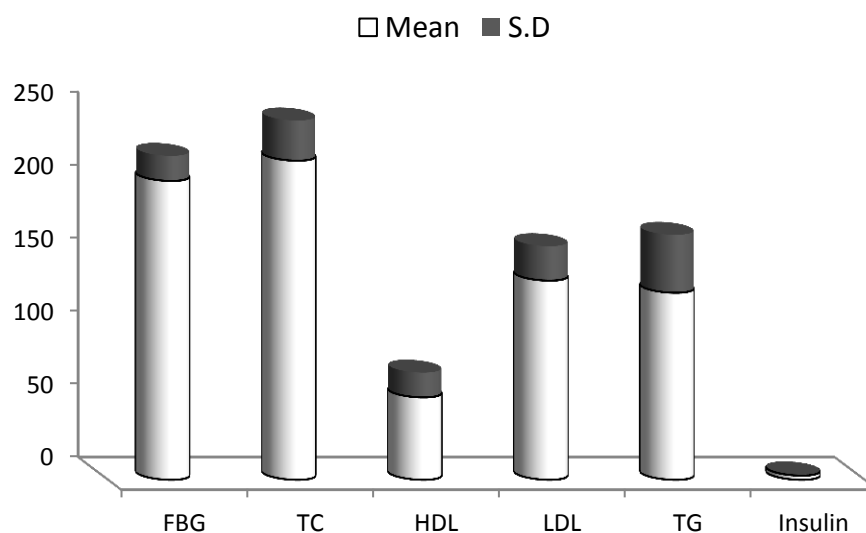
***Figure 8:*** Mean value and S.D of group (IIC2)

Table & fig. (8):

As shown in this table, the range of the recorded parameters for FBG and insulin hormone are (195 – 231 mg/dl) and (2.4 – 4.4 uU/ml) with the mean value of 204.8 ± 17.18 and 2.9 ± 0.81 respectively. Concerning lipid profile, TC ranged between 254-179 mg/dl with mean value is 218.66 ± 27.54 . However, HDL-c range is between 30 and 74 mg/dl with the mean value is 56.5 ± 16.95 . With respect to LDL-c, its level ranges from 97.8 to 161.4, while TGs range from 83 to 168 mg/dl. The mean values are, 136.5 ± 23.57 and 128.16 ± 39.73 for LDL-c and TGs respectively.