Results

Table (1) , figure (1) and chart (1):

Comparisone between the arterial blood pressure(systolic and diastolic) in normal rats **(control group 1)** and rats with renal artery ligation**(group 2)**

	Systolic blood pressure (SBP)		Diastolic blood pressure (DBP)	
	Groups		Groups	
	group 1	group 2	group 1	group 2
N	6	6	6	6
	120	200	80	140
	130	190	90	120
	110	180	70	130
	130	190	90	110
	110	200	80	130
	120	180	80	120
Mean	*120.00	*190.00	**81.67	**125.00
Std. Deviation	8.944	8.944	7.528	10.488
t	13.5		8.2	
p	<0.001		<0.001	

Table (1)

,* Significant increase in systolic and diastolic blood pressure in group(2) compared with the corresponding value in group(1) value($p<0.001$)

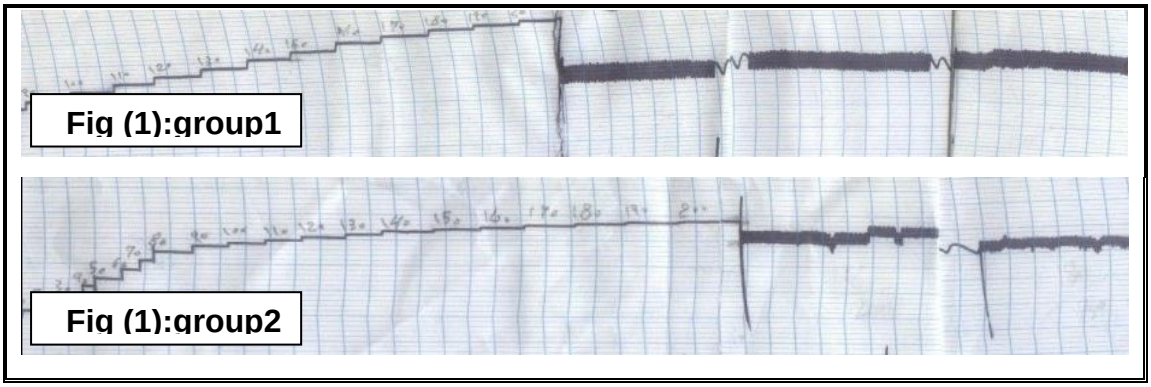
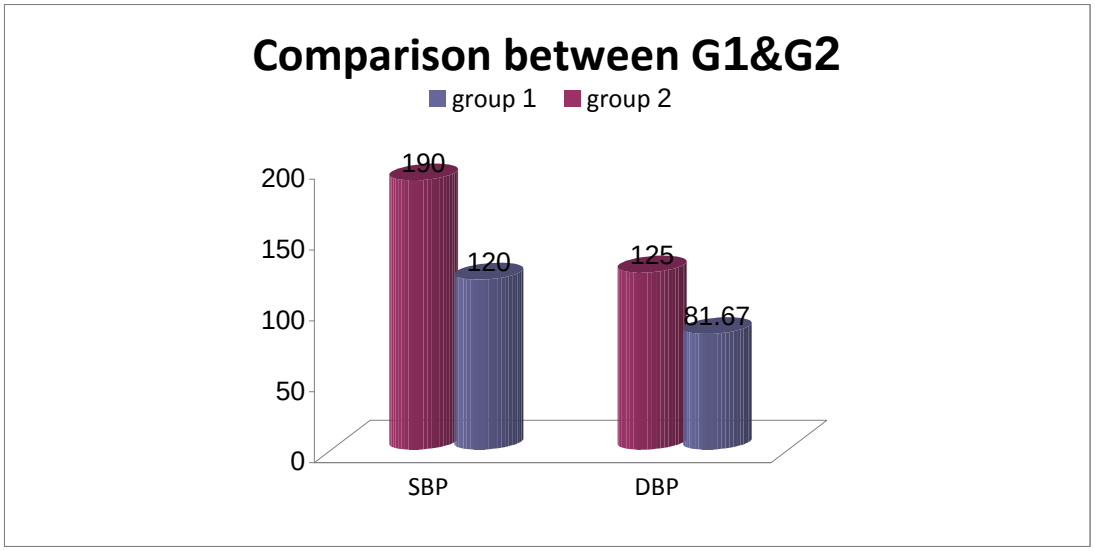


Figure (1)



Chart(1)

From Table (1) , figure (1) and chart (1)

we detect that there is Significant increase in systolic blood pressure from 120±8.9 in normal rats (control group 1) to 190 ± 8.9 in rats with renal artery ligation(group 2) ($p<0.001$)and there is Significant increase in diastolic blood pressure from 81.7±7.5 in control group (1) to 125 ± 10.5 in group (2) ($p<0.001$)

Table (2) , figure (2) and chart (2):

Comparison between the arterial blood pressure(systolic and diastolic) in normal rats **(control group 1)** and normal rats treated with quercetin in a dose 10mg/kg/day **(group 3)**

	Systolic blood pressure (SBP)		Diastolic blood pressure (DBP)	
	Groups		Groups	
	group 1	group 3	group 1	group 3
N	6	6	6	6
	120	110	80	80
	130	130	90	90
	110	120	70	70
	130	120	90	80
	110	110	80	80
	120	130	80	80
Mean	120.00	120.00	81.67	80.00
Std. Deviation	8.944	8.944	7.528	6.325
t	---		0.4	
p	---		>0.05	

Table (2)

No significant change compared with the corresponding value P(>0.05)

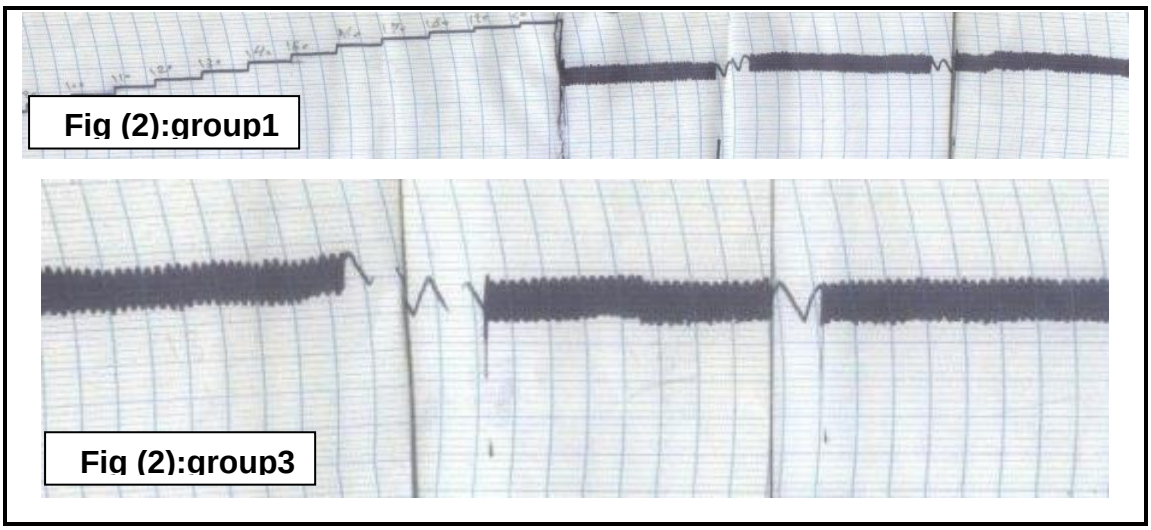


Figure (2)

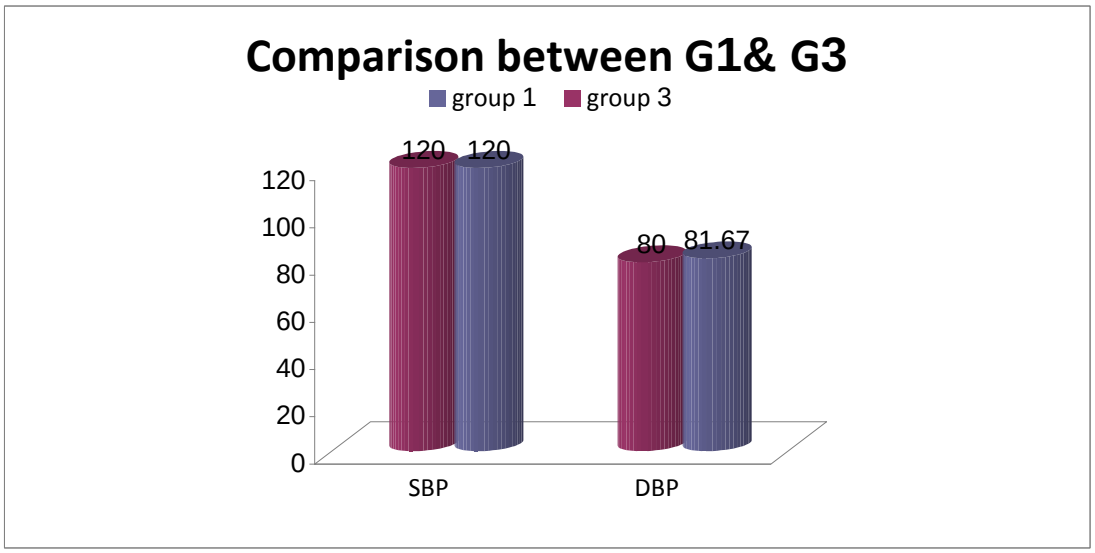


Chart (2)

From Table (2) , figure (2) and chart (2):

we detect that there is no Significant effect of quercetin on normal arterial blood pressure as the change in the systolic blood pressure is equale in normal rats (control group 1) and normal rats treated with quercetin in a dose 10mg/kg/day (group 3) {120 ± 8.9} in addition to that the diastolic blood pressure is changed from 81.7±7.5 in normal rats (control group 1) to 80 ± 6.3 in normal rats treated with quercetin in a dose 10mg/kg/day (group 3) (p>0. 05).

Table (3), figure (3) and chart (3)

Comparison between the arterial blood pressure in rats with renal artery ligation [hypertensive rats] **(group 2)** and groups treated with quercetin in adose(10mg /kg/d):**{Group 4-A1, Group 4-A2 }**

***Group 4-A1**: hypertensive rats received daily oral dose of quercetin(10mg /kg/d)for 1 week before and 2 weeks after induction of hypertension.

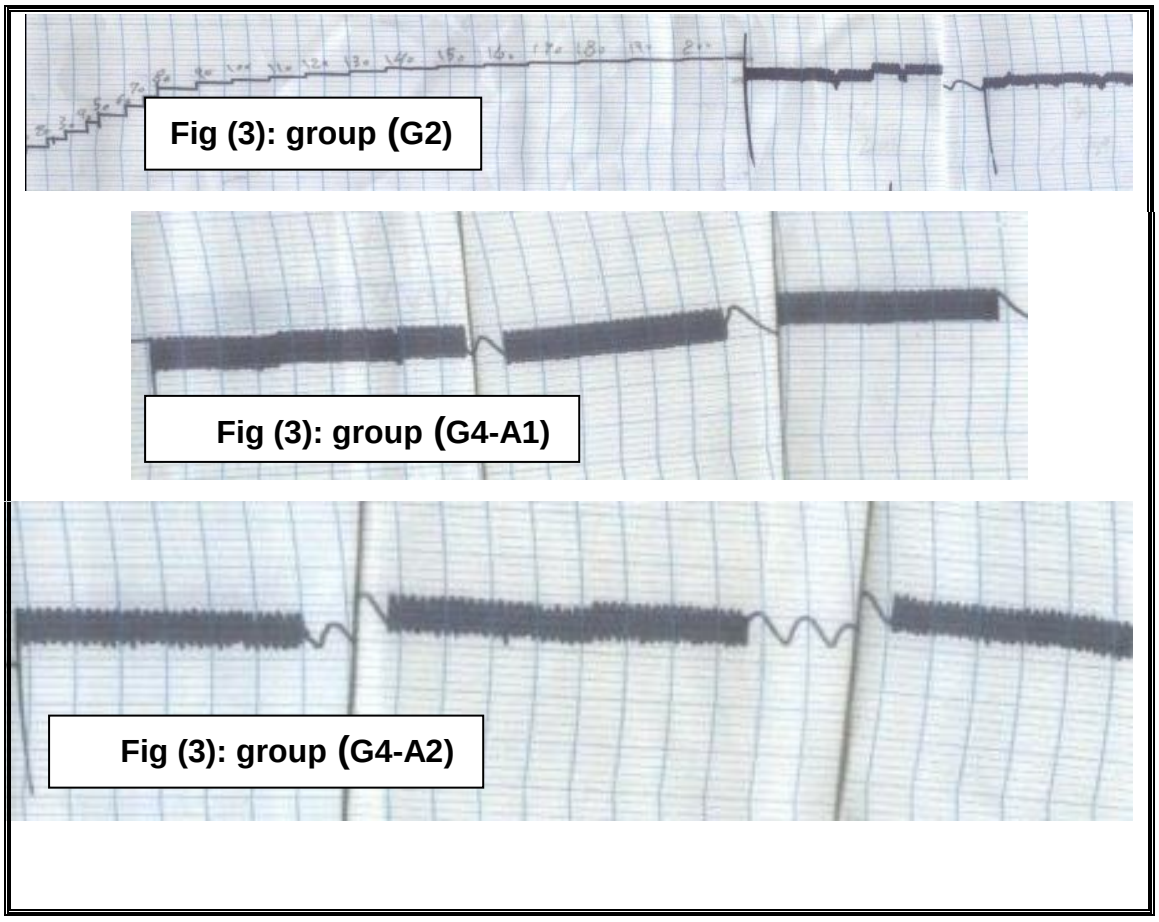
***Group 4-A2:** hypertensive rats received daily oral dose of quercetin(10mg /kg/d)for 3 week after induction of hypertension .

	Systolic blood pressure (SBP)			Diastolic blood pressure (DBP)		
	group 2	group 4-A1	group 4-A2	group 2	group 4-A1	group 4-A2
N	6	6	6	6	6	6
	200	150	140	140	100	100
	190	140	130	120	100	80
	180	130	140	130	90	90
	190	140	120	110	90	100
	200	130	130	130	80	90
	180	120	140	120	90	110
Mean	190	*135	*133.33	125	**91.67	**95
Std. Deviation	8.94	10.48	8.16	10.48	7.52	10.48
f	72.9			21.9		
p	<0.001			<0.001		

Table(3)

*,** Significant decrease in systolic and diastolic blood pressure in group (4-A1& 4-A2) compared with the corresponding value in group(2)

P(<0.001)



Figure(3)

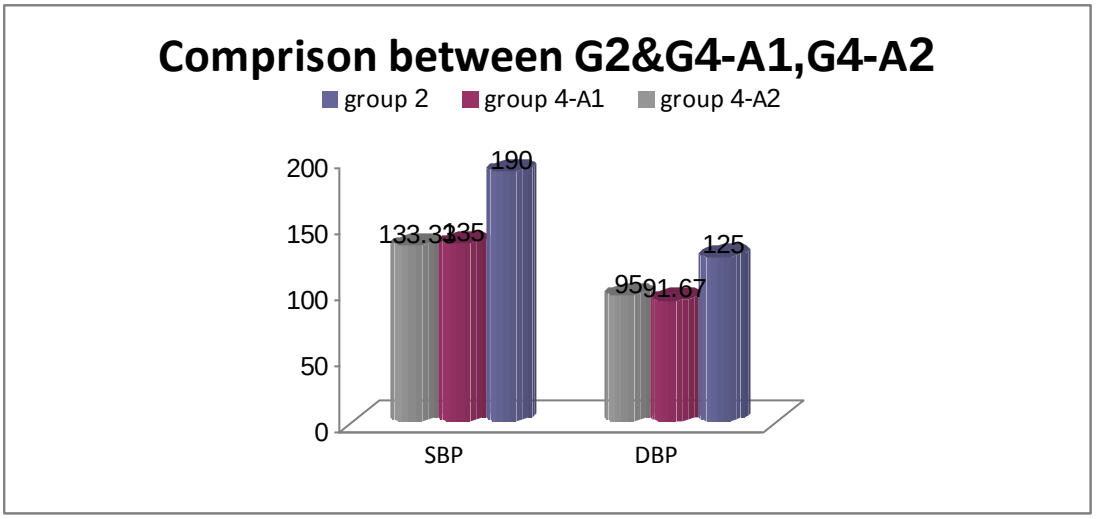


Chart (3)

From table(3),figure (3) and chart (3) we detect that there is Significant decrease in arterial blood pressure as the systolic blood pressure is changed from 190 ±8.94 in (group2) to : 135 ± 10.48 in (group 4-A1) and to133.33 ± 8.16 in (group 4-A2) ($p<0.001$) . In addition to that the diastolic blood pressure is changed from 125 ±10.48 in (group 2) to : 91.67 ± 7.52 in (group 4-A1) and to 95 ± 10.48 in (group 4-A2) ($p<0.001$).

Table (4), figure (4) and chart (4):

Comparison between the arterial blood pressure in rats with renal artery ligation [hypertensive rats] **(group 2)** and groups treated with quercetin in adose(20mg /kg/d):**{Group 4-B1, Group 4-B2 }**

* **Group 4-B1:** hypertensive rats received daily oral dose of quercetin (20 mg/kg/d)for 1 week before and 2 weeks after induction of hypertension .

* **Group 4-B2:** hypertensive rats receive daily oral dose of quercetin(20mg /kg/d)for 3 week after induction of hypertension.

	Systolic blood pressure (SBP)			Diastolic blood pressure (DBP)		
	group 2	group 4-B1	group 4-B2	group 2	group 4-B1	Group 4-B2
N	6	6	6	6	6	6
	200	120	120	140	80	90
	190	130	140	120	80	80
	180	120	130	130	90	90
	190	130	130	110	80	80
	200	140	140	130	90	100
	180	120	140	120	80	90
Mean	190	*126.67	*133.33	125	**83.33	**88.33
Std. Deviation	8.94	8.165	8.165	10.48	5.164	7.528
f	102.2			48.2		
p	<0.001			<0.001		

Table (4)

*,** Significant decrease in systolic and diastolic blood pressure in group (4-B1& 4-B2) compared with the corresponding value in group(2)

P(<0.001)

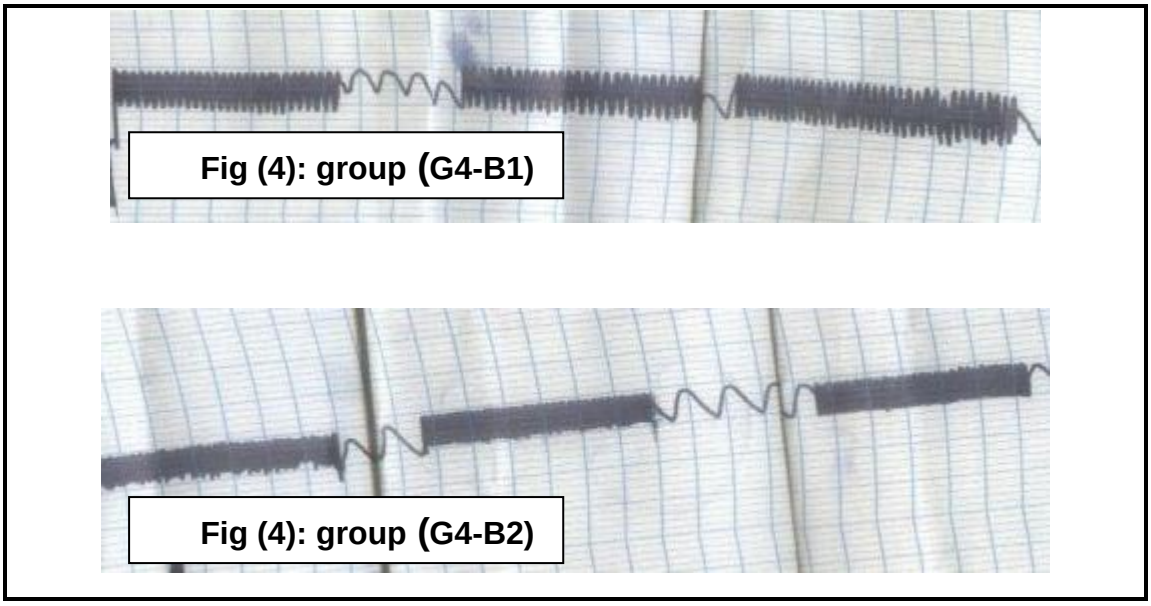


Figure (4)

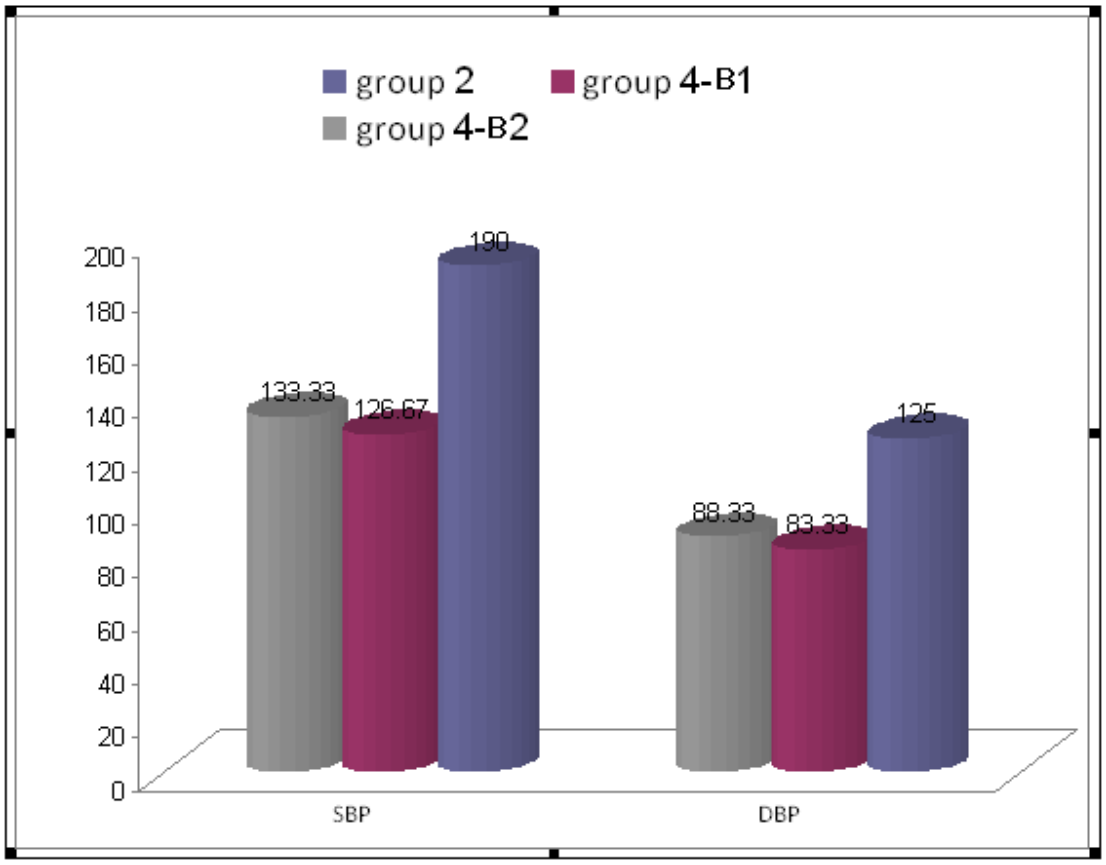


Chart (4)

From table(4) ,figure (4) and chart (4) we detect that there is Significant decrease in arterial blood pressure as the systolic blood pressure is changed from 190 ±8.94 in (group 2) to : 126.67 ± 8.16 in (group 4-B1) and to 133.33 ± 8.16 in(group4-B2) (p<0. 001) In addition to that the diastolic blood pressure is changed from 125 ±10.48 in (group 2) to : 83.33 ± 5.16 in (group 4-B1) and to 88.33± 7.52 in (group4-B2) (p<0. 001)

Table (5),figure (5) and chart (5):

Comparisone between the arterial blood pressure(systolic and diastolic) in group of rats treated with quercetin in adose (10mg /kg/d) before and after induction of hypertension**(group 4-A1)** and group of rats treated with quercetin in adose (10mg /kg/d) after induction of hypertension only **(group 4-A2)**:

	Systolic blood pressure (SBP)		Diastolic blood pressure (DBP)	
	Groups		Groups	
	group 4-A1	group 4-A2	group 4-A1	group 4-A2
N	6	6	6	6
	150	140	100	100
	140	130	100	80
	130	140	90	90
	140	120	90	100
	130	130	80	90
	120	140	90	110
Mean	135.00	133.33	91.67	95.00
Std. Deviation	10.488	8.165	7.528	10.488
t	0.3		0.6	
p	>0.05		>0.05	

Table (5)

No significant change compared with the corresponding value P(>0.05)

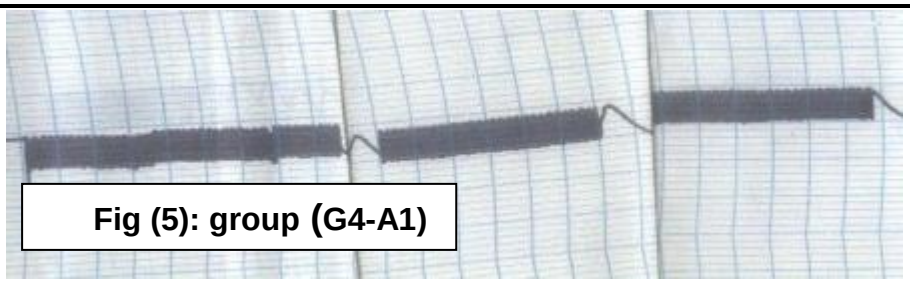


Fig (5): group (G4-A1)

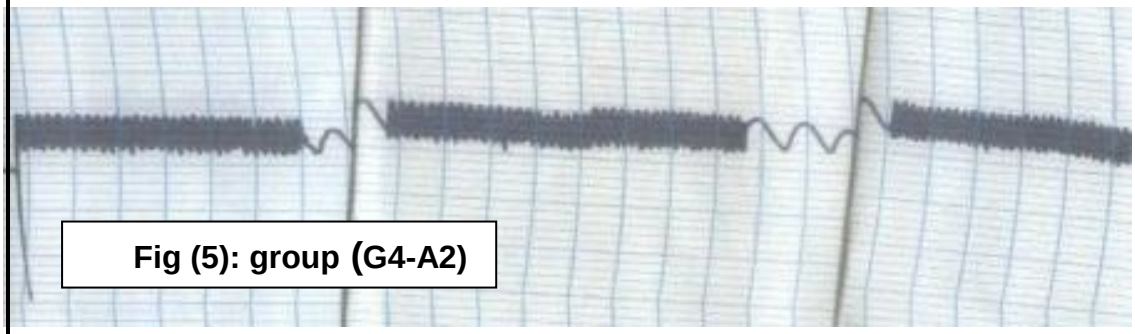


Fig (5): group (G4-A2)

Figure(5)

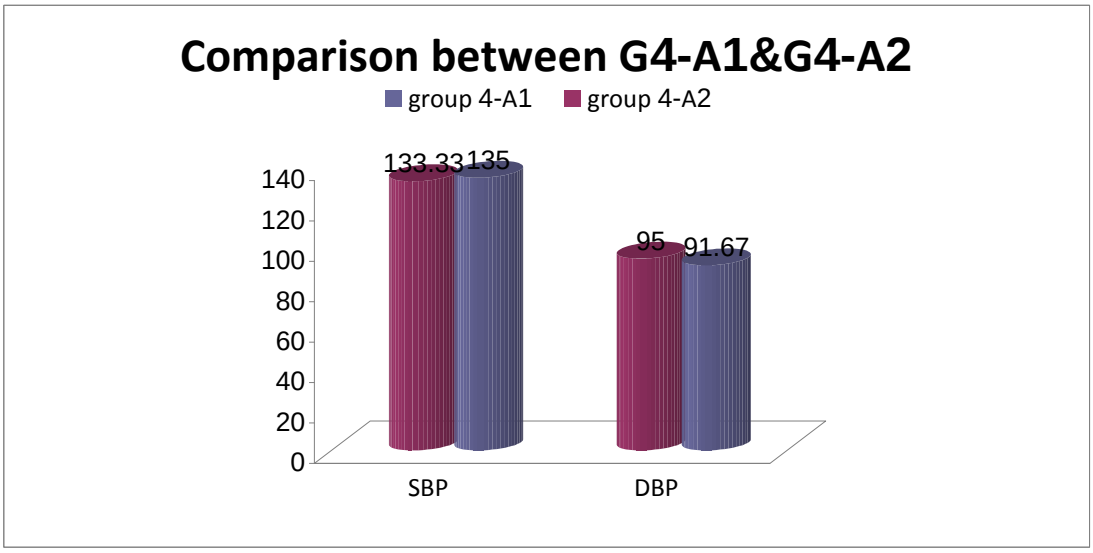


Chart (5)

From table(5),figure(5) and chart (5) we detect that there is no Significant change in arterial blood pressure as the systolic blood pressure is changed from 135.00±10.488 in (group 4-A1) to 133.33 ± 8.165 in (group4-A2) (p>0.05) and the diastolic blood pressure is changed from 91.67±7.528 in (group 4-A1) to 95.00 ± 10.488 in (group4-A2) (p>0.05)

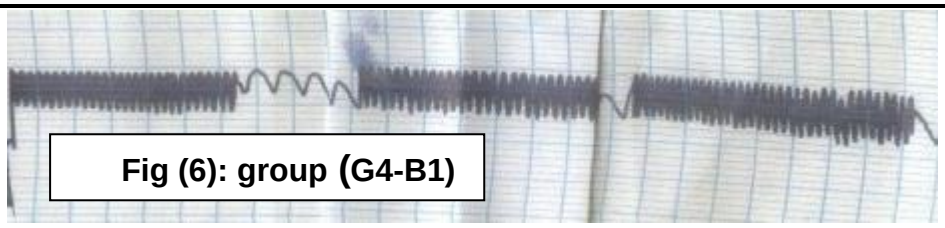
Table (6),figure (6) and chart (6):

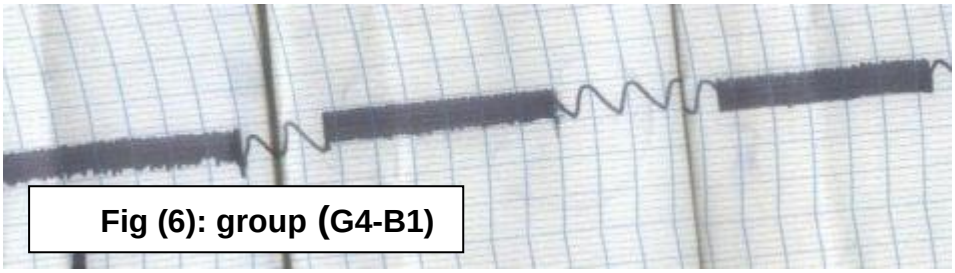
Comparisone between the arterial blood pressure(systolic and diastolic) in group of rats treated with quercetin in adose (20mg /kg/d) before and after induction of hypertension**(group 4-B1)** and group of rats treated with quercetin in adose (20mg /kg/d) after induction of hypertension only **(group 4-B2)**:

	Systolic blood pressure (SBP)		Diastolic blood pressure (DBP)	
	Groups		Groups	
	group 4-B1	group 4-B2	group 4-B1	group 4-B2
N	6	6	6	6
	120	120	80	90
	130	140	80	80
	120	130	90	90
	130	130	80	80
	140	140	90	100
	120	140	80	90
Mean	126.67	133.33	83.33	88.33
Std. Deviation	8.165	8.165	5.164	7.528
t	1.4		1.3	
p	>0.05		>0.05	

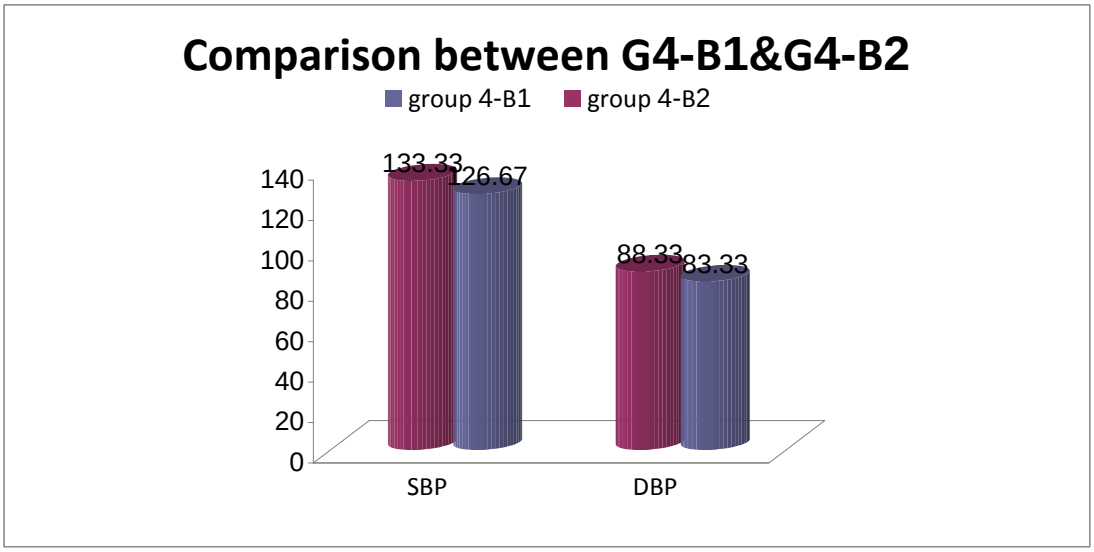
Table (6)

No significant change compared with the corresponding value P(>0.05)





Figure(6)



Chart(6)

From table(6) and chart (6) we detect that there is no Significant change in arterial blood pressure as the systolic blood pressure is changed from 126.67 ±8.16 in (group 4-B1) to 133.33 ± 8.16 in (group4-B2) (p>0.05) and the diastolic blood pressure is changed from 84.33±5.16 in (group 4-B1) to 88.33 ± 7.52 in (group4-B2) (p>0.05)

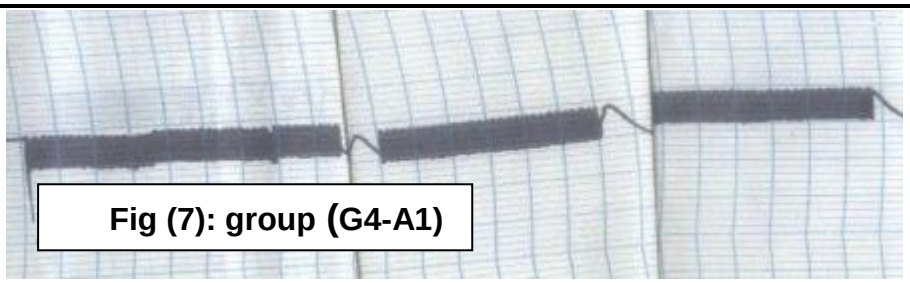
Table (7),fig (7) and chart (7):

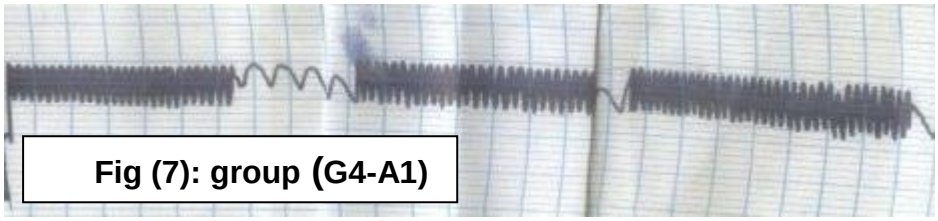
Comparisone between the arterial blood pressure (systolic and diastolic) in group of rats treated with quercetin in adose (10mg /kg/d) before and after induction of hypertension**(group 4-A1)** and group of rats treated with quercetin in adose (20mg /kg/d) before and after induction of hypertension **(group 4-B1)**:

	Systolic blood pressure (SBP)		Diastolic blood pressure (DBP)	
	Groups		Groups	
	group 4-A1	group 4-B1	group 4-A1	group 4-B1
N	6	6	6	6
	150	120	100	80
	140	130	100	80
	130	120	90	90
	140	130	90	80
	130	140	80	90
	120	120	90	80
Mean	135.00	126.67	91.67	83.33
Std. Deviation	10.488	8.165	7.528	5.164
t	1.5		1.9	
p	>0.05		>0.05	

Table (7)

No significant change compared with the corresponding value P(>0.05)





Figure(7)

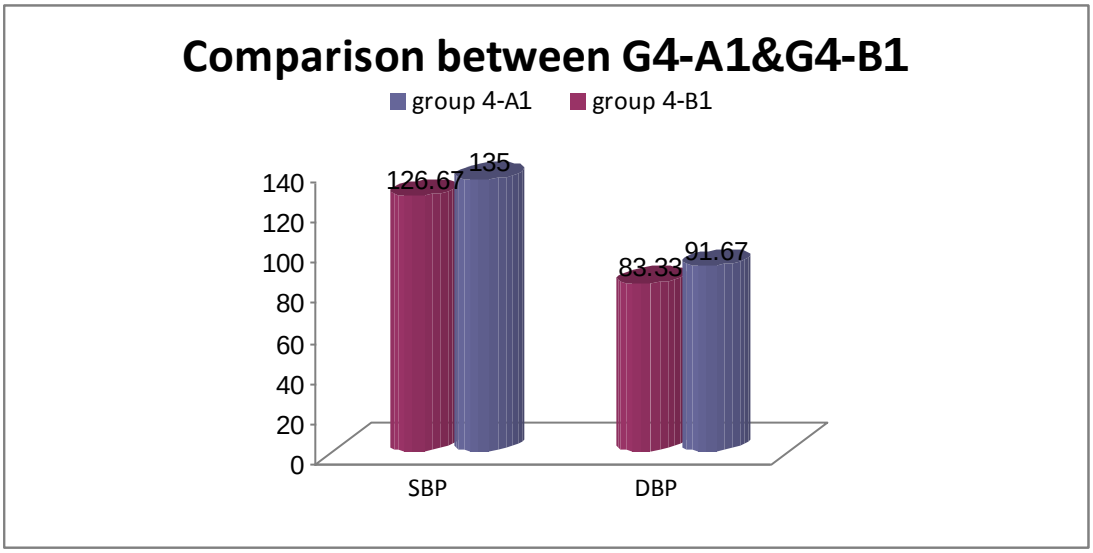


Chart (7)

From table(7),fig (7) and chart (7) we detect that there is no Significant change in arterial blood pressure as the systolic blood pressure is changed from 135±10.48 in (group 4-A1) to 126.67± 8.165 in (group4-B1) (p>0.05) and the diastolic blood pressure is changed from 91.67 ±7.528 in (group 4-A1) to83.33 ±5.164 in (group4-B1) (p>0.05)

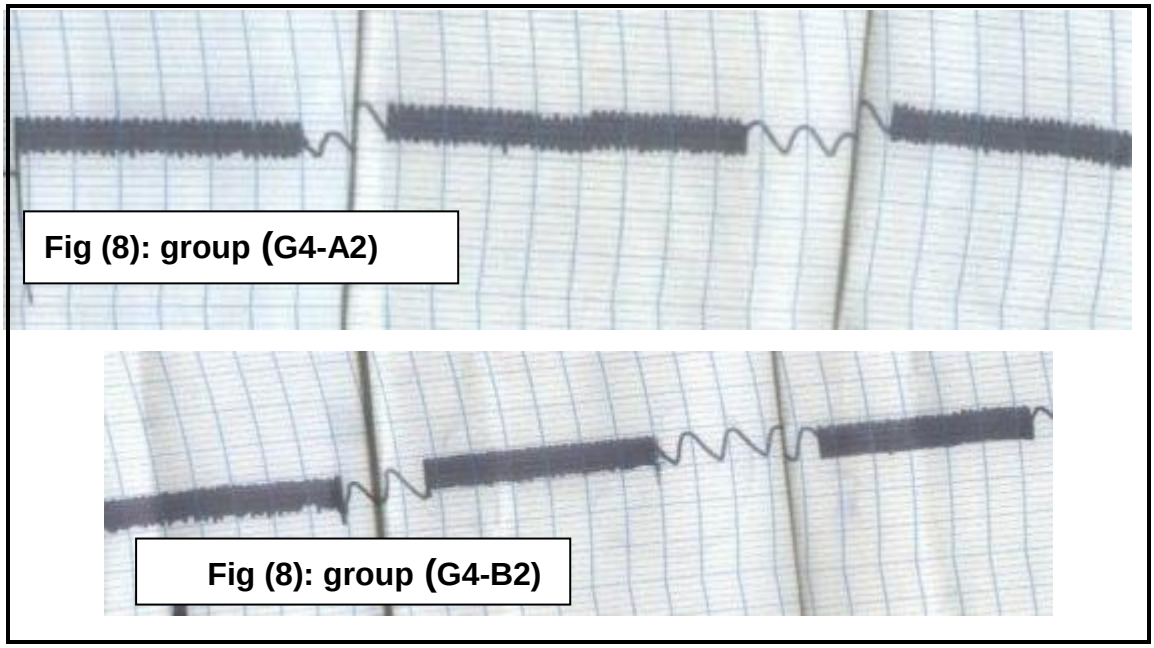
Table (8),fig (8) and chart (8):

Comparisone between the arterial blood pressure (systolic and diastolic) in group of rats treated with quercetin in adose (10mg /kg/d) after induction of hypertension only**(group 4-A2)** and group of rats treated with quercetin in adose (20mg /kg/d) after induction of hypertension only **(group 4-B2)**:

	Systolic blood pressure (SBP)		Diastolic blood pressure (DBP)	
	Groups		Groups	
	group 4-A2	group 4-B2	group 4-A2	group 4-B2
N	6	6	6	6
	140	120	100	90
	130	140	80	80
	140	130	90	90
	120	130	100	80
	130	140	90	100
	140	140	110	90
Mean	133.33	133.33	95.00	88.33
Std. Deviation	8.165	8.165	10.488	7.528
t	--		1.3	
p	--		>0.05	

Table (8)

No significant change compared with the corresponding value P(>0.05)



Figure(8)

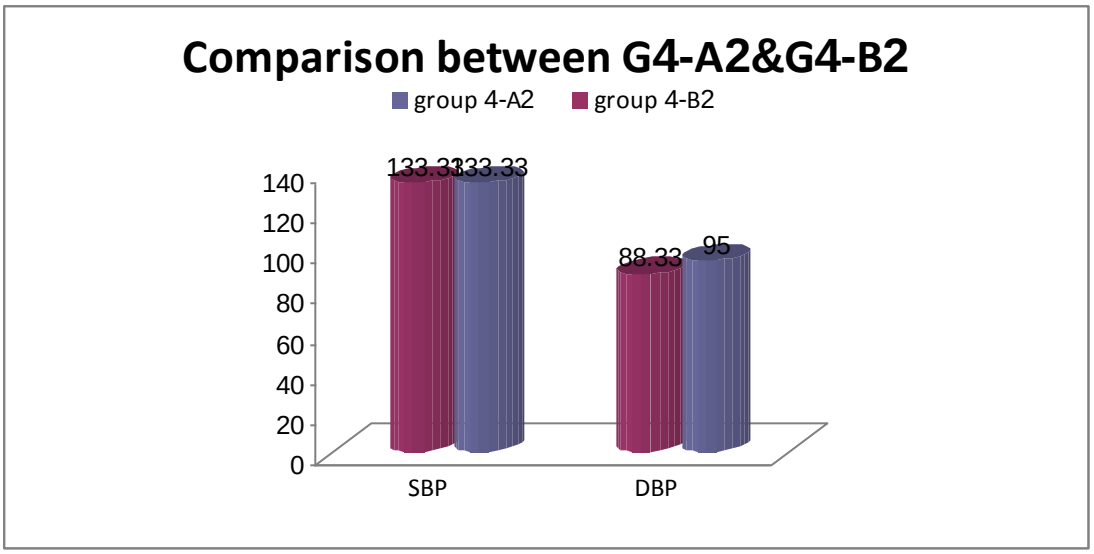


chart (8)

From table(8),fig (8) and chart (8) we detect that there is no Significant change in arterial blood pressure as the change in systolic blood pressure is equale in (group 4-A2) and (group 4-B2) {133.33±8.165} in addition to that the diastolic blood pressure is changed from 95.00 ±10.488 in (group 4-A2) to 88.33 ± 7.528 in (group4-B2) (p>0. 05).

Table(9) and chart (9):Changes in arterial blood pressure in all groups :

	Systolic blood pressure (SBP)							Diastolic blood pressure (DBP)						
	g 1	g 2	g 3	g 4-A1	g 4-A2	g 4-B1	g 4-B2	g 1	g 2	g 3	g 4-A1	g 4-A2	g 4-B1	g 4-B2
Mean	120.00	*190	120.00	**135	**133.3	**126.6	**133.3	81.6	*125	80	**91.6	**95	**84.3	**88.33
Std. Deviation	8.944	8.94	8.944	10.48	8.16	8.165	8.165	7.52	10.4	6.32	7.52	10.4	5.164	7.528
f	44.9							22.03						
p	<0.001							<0.001						

Table(9)

*Significant increase in systolic and diastolic blood pressure in group(2) compared with the corresponding value in group(1)

** Significant decrease in systolic and diastolic blood pressure in group 4(A1-A2-B1-B2) compared with the corresponding value in group(2)

No significant change in systolic and diastolic blood pressure in group(3) compared with the corresponding value in group(1)

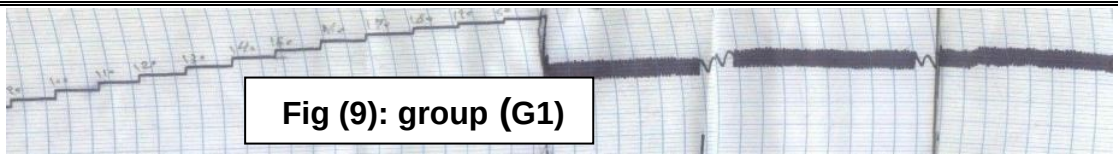


Fig (9): group (G1)

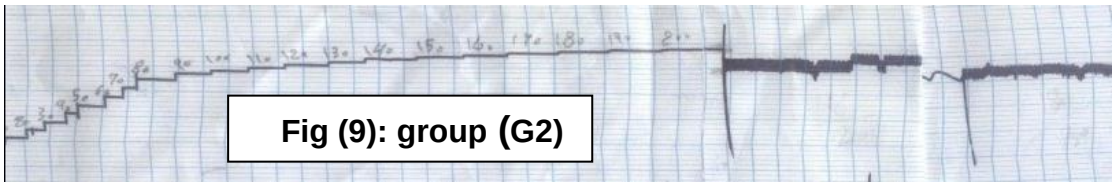


Fig (9): group (G2)

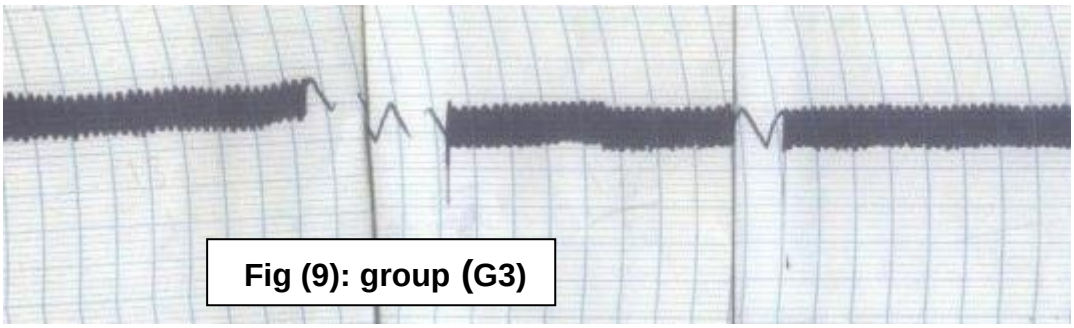


Fig (9): group (G3)

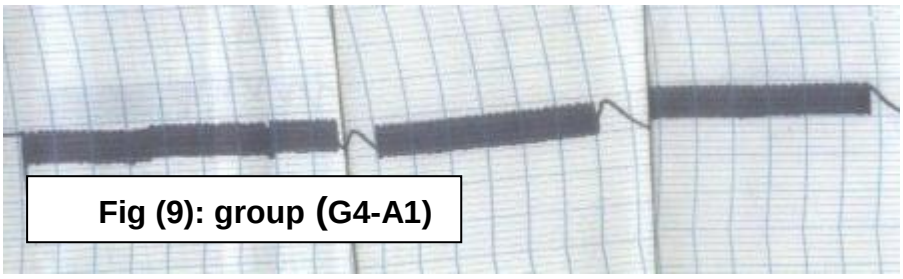


Fig (9): group (G4-A1)

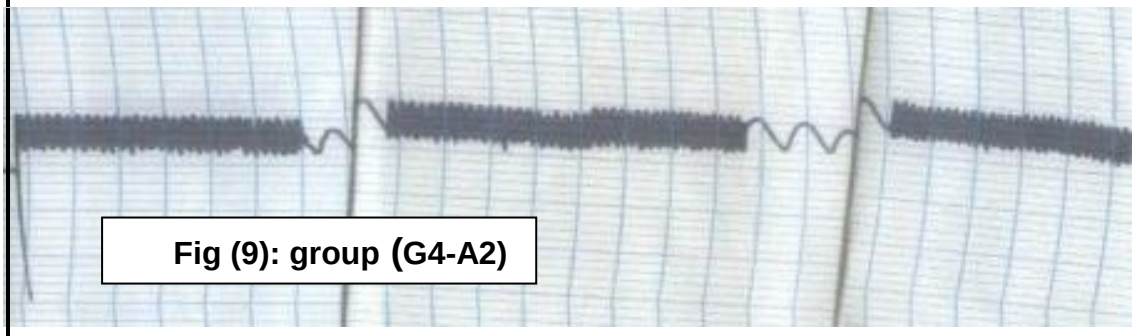


Fig (9): group (G4-A2)

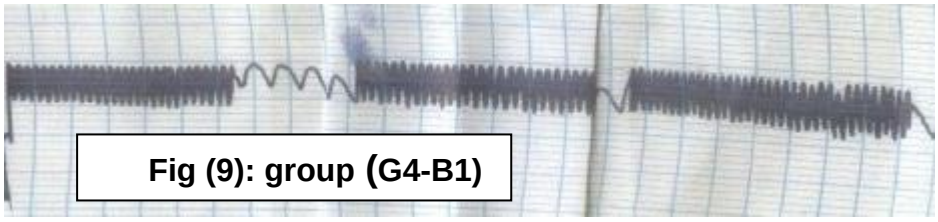
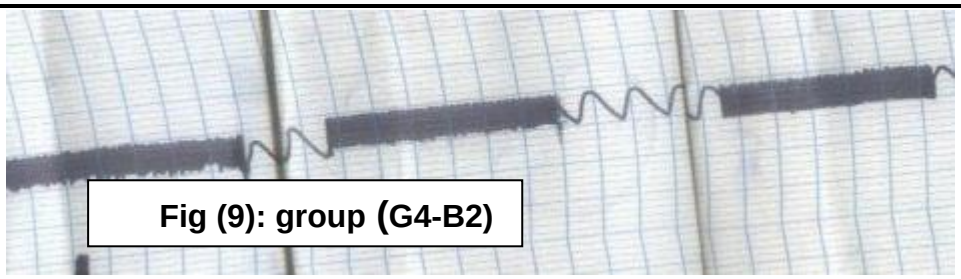


Fig (9): group (G4-B1)



Figure(9)

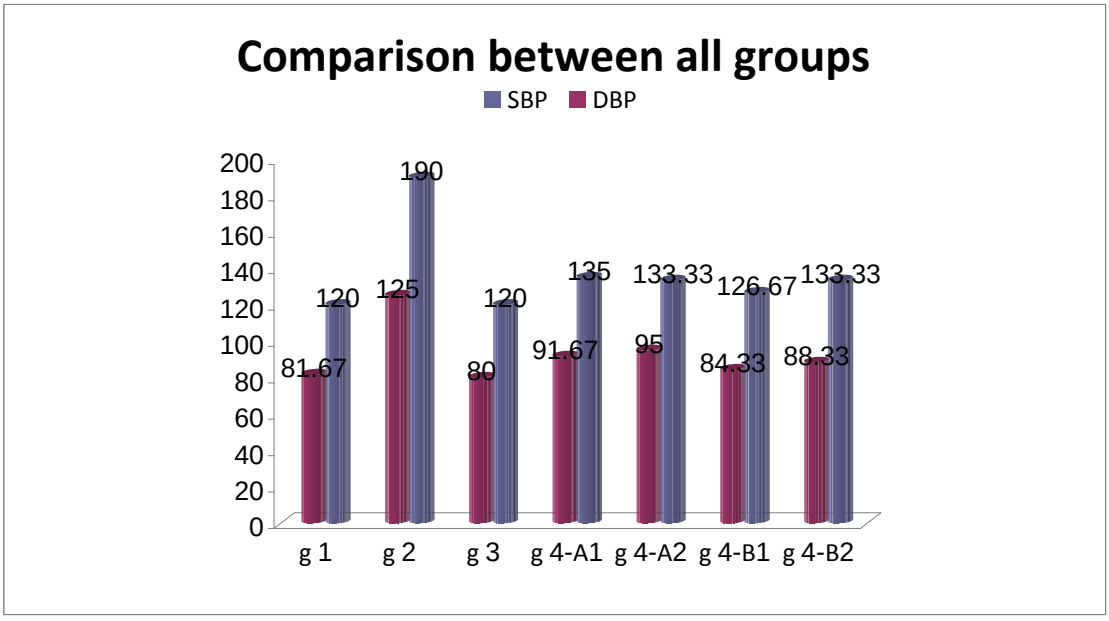


Chart (9)

From table(9),fig (9) and chart (9) we detect that there is Significant increase in systolic and diastolic blood pressure in group(2) compared with the corresponding value in group(1)and Significant decrease in systolic and diastolic blood pressure in group 4(A1-A2-B1-B2) compared with the corresponding value in group(2)and no significant change in systolic and diastolic blood pressure in group(3) compared with the corresponding value in group(1).

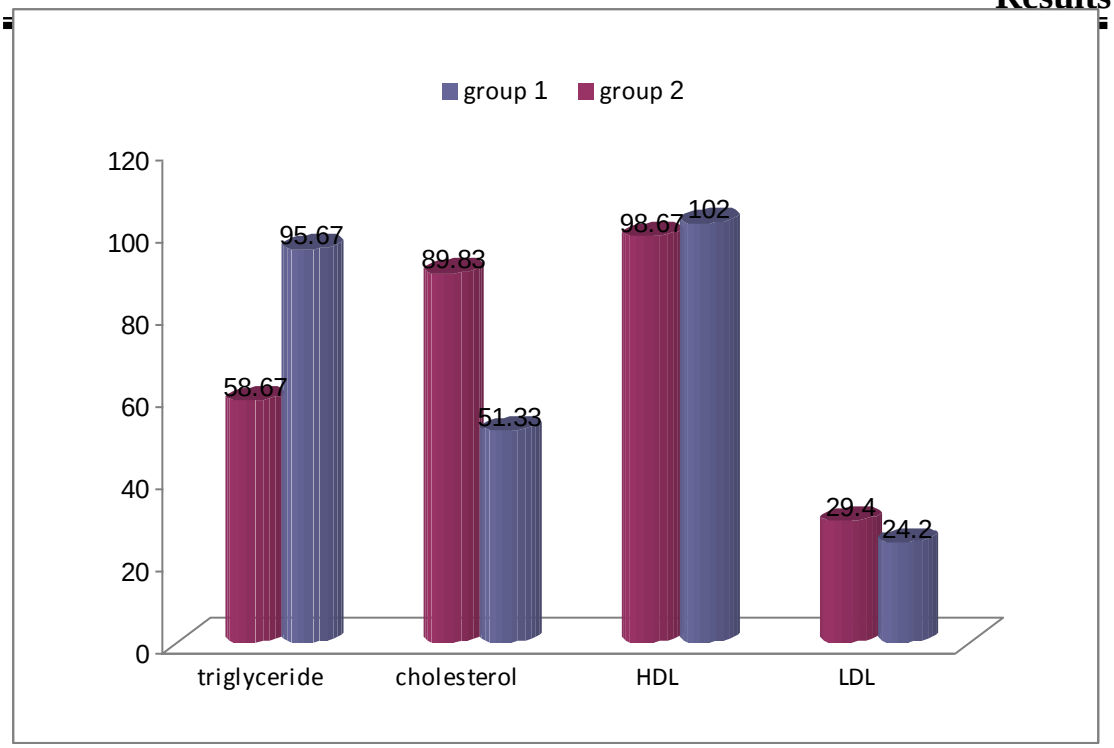
Table (10) and chart (10):

Comparisone between the lipid profile in normal rats **(control group 1)** and rats with renal artery ligation**(group 2)**

	Trig		Chol		HDL		LDL	
	Groups		Groups		Groups		Groups	
	group 1	group 2	group 1	group 2	group 1	group 2	group 1	group 2
N	6	6	6	6	6	6	6	6
	75	80	103	86	63	42	25	28
	84	76	90	73	67	44	6.2	13.8
	105	88	120	103	58	45	41	40.4
	98	91	100	130	60	55	20.4	56.8
	102	100	110	102	59	60	30.6	22
	110	104	89	98	45	62	22	15.2
Mean	95.67	89.83	102.00	98.67	58.67	51.33	24.2	29.4
Std. Deviation	13.426	10.926	11.883	19.138	7.448	8.756	11.5	16.6
t	0.8		0.4		1.6		0.6	
p	>0.05		>0.05		>0.05		>0.05	

Table(10)

No significant change compared with the corresponding value P(>0.05)



Chart(10)

From table(10) and chart (10) we detect that there is no significant change in:

*Triglyceride level as it is changed from 95.67 ± 13.43 in (control group 1) to 89.83± 10.93 in (group2) (p>0.05)

*Cholesterol level as it is changed from 102 ±11.8in(control group 1) to 98.67 ± 19.14 in(groupG2) (p>0.05)

*HDL level as it is changed from 58.67±7.4in(control group 1) to 51.33± 8.75in (group2) (p>0.05)

*LDL level as it is changed from 24.2±11.5in (control group 1) to29.4 ±16.6 in (group2) (p>0.05)

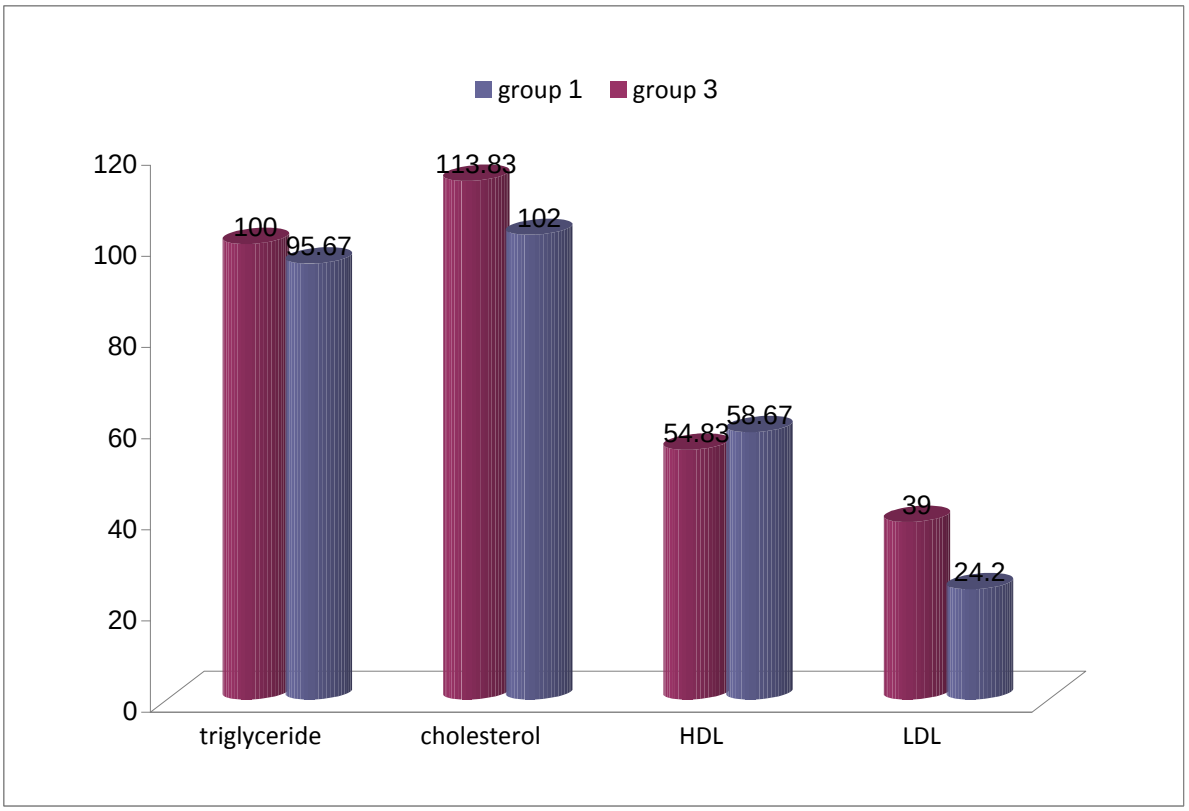
Table (11) and chart (11):

Comparison between the lipid profilein normal rats **(control group1)** and normal rats treated with quercetin in a dose 10mg/kg/day **(group 3)**

	Trig		Chol		HDL		LDL	
	Groups		Groups		Groups		Groups	
	group 1	group 3	group 1	group 3	group 1	group 3	group 1	group 3
N	6	6	6	6	6	6	6	6
	75	100	103	105	63	60	25	25
	84	130	90	130	67	57	6.2	47
	105	104	120	140	58	48	41	71.2
	98	99	100	100	60	63	20.4	17.2
	102	70	110	88	59	55	30.6	19
	110	97	89	120	45	46	22	54.6
Mean	95.67	100.00	102.00	113.83	58.67	54.83	24.2	39
Std. Deviation	13.426	19.110	11.883	19.600	7.448	6.676	11.5	21.9
t	0.5		1.3		0.9		1.5	
p	>0.05		>0.05		>0.05		>0.05	

Table (11)

No significant change compared with the corresponding value P(>0.05)



(Chart(11)

From table(11) and chart (11) we detect that there is no significant change in:

*Triglyceride level as it is changed from 95.67 ±13.43 in (control group 1) to 100.00 ± 19.11 in (group3) (p>0.05)

*Cholesterol level as it is changed from 102.00 ±11.88 in (control group1) to 113.83 ± 19.6 in(group3) (p>0.05)

*HDL level as it is changed from 58.67±7.45in(control group1) to 54.83± 6.68 in(group3) (p>0.05)

*LDL level as it is changed from 24.2±11.5in(control group 1) to 39± 21.9 in (group3) (p>0.05)

Table (12) and chart (12):

Comparison between the lipid profile in rats with renal artery ligation [hypertensive rats] **(group 2)** and groups treated with quercetin in adose(10mg /kg/d):**{Group 4-A1, Group 4-A2 }**

*__Group 4-A1__: hypertensive rats received daily oral dose of quercetin(10mg /kg/d)for 1 week before and 2 weeks after induction of hypertension.

*__Group 4-A2:__ hypertensive rats received daily oral dose of quercetin(10mg /kg/d)for 3 week after induction of hypertension .

	Trig			Chol			HDL			LDL		
	group 2	group 4-A1	group 4-A2	group 2	group 4-A1	group 4-A2	group 2	group 4-A1	group 4-A2	group 2	group 4-A1	group 4-A2
N	6	6	6	6	6	6	6	6	6	6	6	6
	80	100	102	86	105	120	42	60	50	28	25	49.6
	76	130	89	73	130	104	44	57	67	13.8	47	19.2
	88	104	103	103	140	98	45	48	55	40.4	71.2	22.4
	91	99	110	130	100	88	55	63	63	56.8	17.2	3
	100	70	77	102	88	110	60	55	57	22	19	37.6
	104	97	67	98	120	99	62	46	49	15.2	54.6	36.6
Mean	89.83	100	91.33	98.67	113.83	103.17	51.33	54.83	56.83	29.36	39.	28.06
Std. Deviation	10.92	19.11	16.74	19.13	19.6	10.99	8.75	6.67	7.11	16.57	21.97	16.53
f	0.7			1.3			0.8			0.6		
p	>0.05			>0.05			>0.05			>0.05		

Table(12)

No significant change compared with the corresponding value P(>0.05)

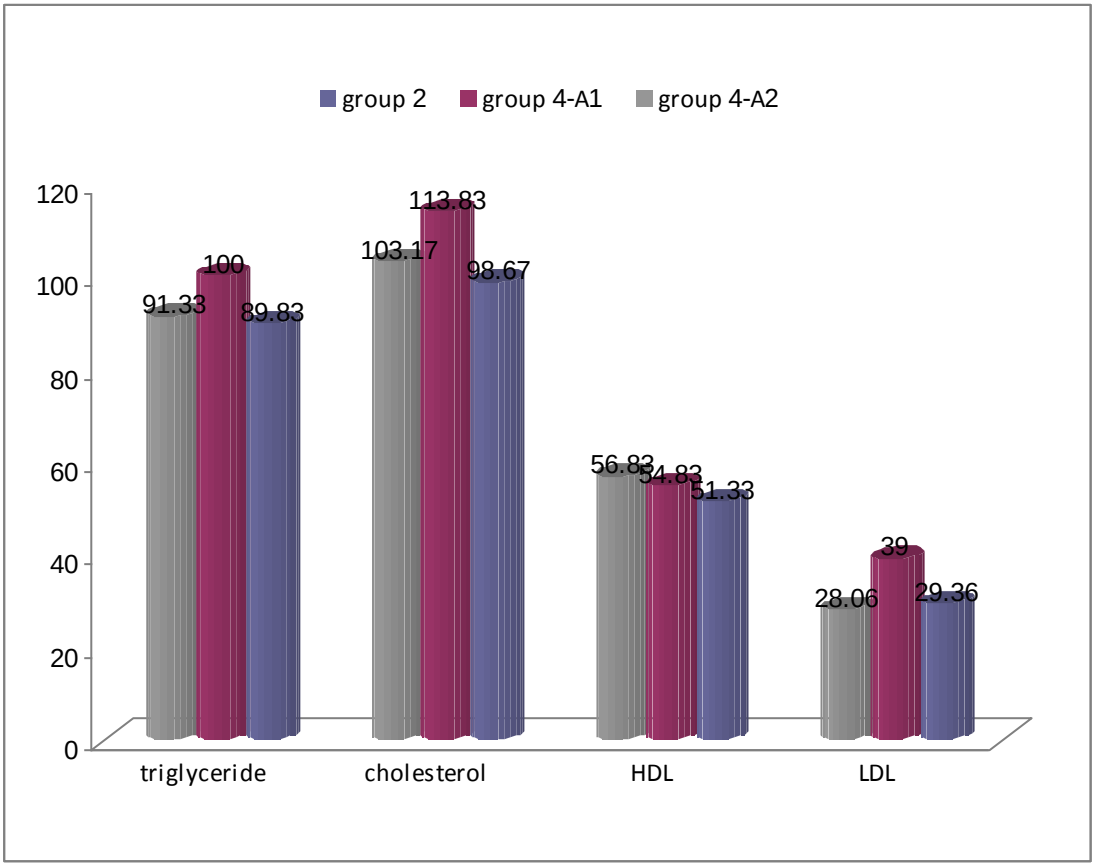


Chart (12)

From table(12) and chart (12) we detect that there is no significant change in:

*Triglyceride level as it is changed from 89.83 ±10.92 in (group2) to : 100± 19.11 in (group4-A1) and 91.33± 16.74 in (group4-A2) (p>0.05)

* Cholesterol level as it is changed from 98.67 ±19.13 in (group2)to:113.83 ±19.6 in group(G4-A1) and103.17 ± 10.99 in (group4-A2) (p>0.05)

* HDL level as it is changed from51.33 ±8.75 in (group 2) to :

54.83 ± 6.67 in group(G4-A1) and 56.83 ± 7.11 in group(G4-A2) (p>0.05)

* LDL level as it is changed from 29.36±16.57 in in group (G2) to : 39±21.97in(group4-A1) and 28.06±16.53 in(group4-A2) (p>0.05)

Table (13) and chart (13):

Comparison between the lipid profile in rats with renal artery ligation [hypertensive rats] **(group 2)** and groups treated with quercetin in adose(20mg /kg/d):{Group 4-B1, Group 4-B2 }

* **Group 4-B1:** hypertensive rats received daily oral dose of quercetin (20 mg/kg/d)for 1 week before and 2 weeks after induction of hypertension .

* **Group 4-B2:** hypertensive rats receive daily oral dose of quercetin(20mg /kg/d)for 3 week after induction of hypertension.

	Trig			Chol			HDL			LDL		
	group 2	group 4-B1	group 4-B2	group 2	group 4-B1	group 4-B2	group 2	group 4-B1	group 4-B2	group 2	group 4-B1	group 4-B2
N	6	6	6	6	6	6	6	6	6	6	6	6
	80	50	93	86	80	90	42	66	51	28	4	20.4
	76	79	74	73	100	105	44	65	50	13.8	19.2	40.2
	88	89	101	103	90	103	45	56	60	40.4	16.2	22.8
	91	67	99	130	82	92	55	57	67	56.8	11.6	5.2
	100	90	89	102	73	85	60	59	63	22	-4	4.2
	104	77	102	98	81	80	62	60	55	15.2	5.6	4.6
Mean	89.83	75.33	93	98.67	84.33	92.50	51.33	60.50	57.67	29.36	8.76	16.23
Std. Deviation	10.92	15.029	10.564	19.13	9.395	9.854	8.75	4.135	6.802	16.57	8.57	14.39
f	3.5			1.7			2.8			3.5		
p	>0.05			>0.05			>0.05			>0.05		

Table(13)

No significant change compared with the corresponding value P(>0.05).

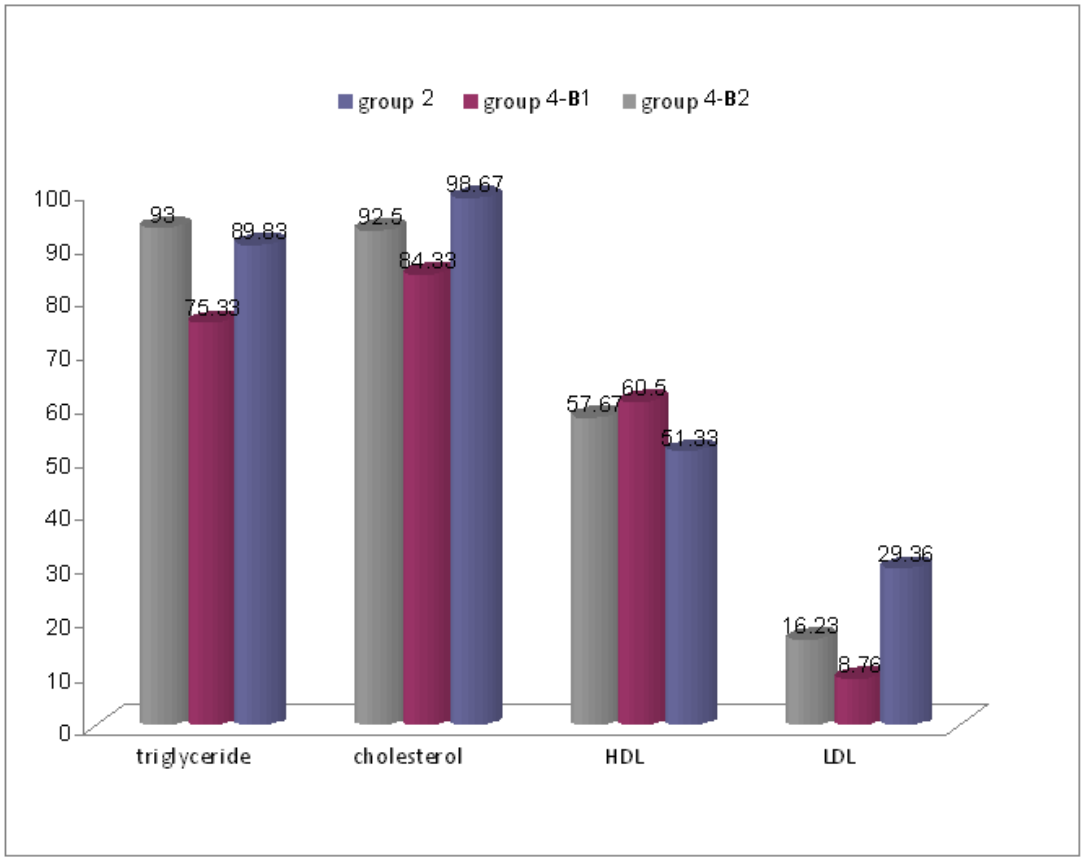


Chart (13)

From table(13) and chart (13) we detect that there is no significant change in:

*Triglyceride level as it is changed from 89.83 ±10.92 in (group2) to : 75.33±15.03 in (group4-B1) (p>0.05) and 93 ± 10.564 in (group4-B2) (p>0.05)

* Cholesterol level as it is changed from 98.67 ±19.13 in (group2) to:

84.33±9.39 in(group4-B1)and 92.50±9.85 in (group4-B2) (p>0.05)

* HDL level as it is changed from51.33 ±8.75 in (group 2) to :

60.50 ± 4.14in(group4-B1) and 57.67± 6.80in (group4-B2) (p>0.05)

* LDL level as it is changed from 29.36±16.57 in in (group 2) to 8.76 ±8.57 in (group4-B1) and16.23±14.39 in (group4-B2) (p>0.05)

Table (14),figure (14):

Comparisone between the lipid profile in group of rats treated with quercetin in adose (10mg /kg/d) before and after induction of hypertension**(group 4-A1)** and group of rats treated with quercetin in adose (10mg /kg/d) after induction of hypertension only **(group 4-A2)**:

	Trig		Chol		HDL		LDL	
	Groups		Groups		Groups		Groups	
	group 4-A1	group 4-A2	group 4-A1	group 4-A2	group 4-A1	group 4-A2	group 4-A1	group 4-A2
N	6	6	6	6	6	6	6	6
	100	102	105	120	60	50	25	49.6
	130	89	130	104	57	67	47	19.2
	104	103	140	98	48	55	71.2	22.4
	99	110	100	88	63	63	17.2	3
	70	77	88	110	55	57	19	37.6
	97	67	120	99	46	49	54.6	36.6
Mean	100.00	91.33	113.83	103.17	54.83	56.83	39	28.1
Std. Deviation	19.110	16.74	19.6	10.99	6.67	7.11	21.9	16.5
t	0.8		1.2		0.5		0.9	
p	>0.05		>0.05		>0.05		>0.05	

Table(14)

No significant change compared with the corresponding value P(>0.05).

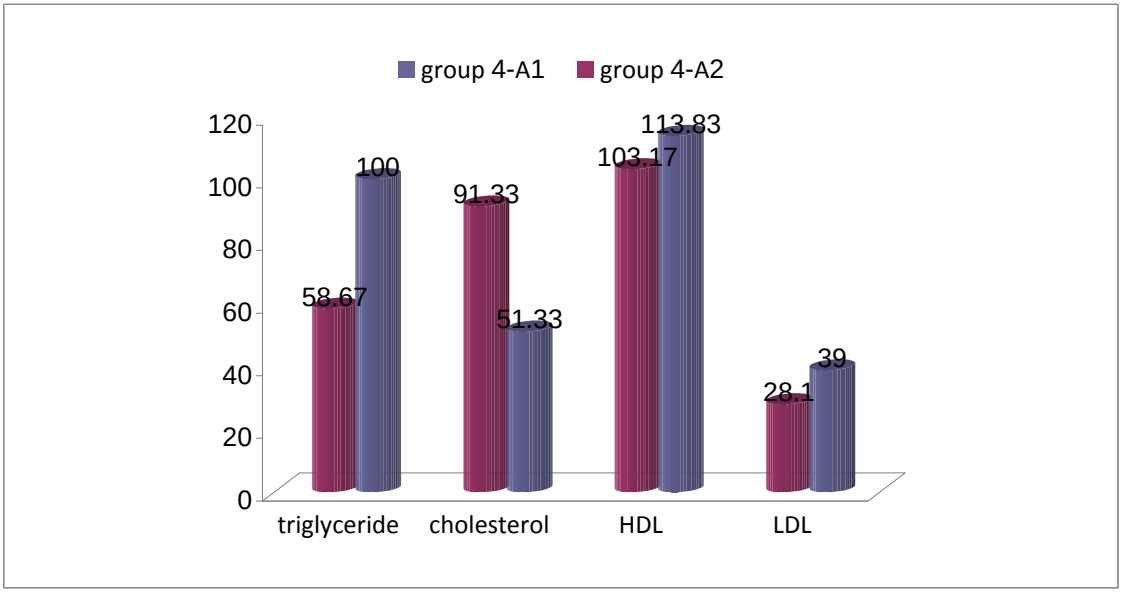


Chart (14)

From table(14) and chart (14) we detect that there is no significant change in:

*Triglyceride level as it is changed from 100.00 ±19.11 in (group 4-A1) to 91.33±16.74 in (group4-A2) (p>0.05)

*Cholesterol level as it is changed from113.83± 19.6 in (group 4-A1) to103.17 ± 10.99 in (group4-A2) (p>0.05)

*HDL level as it is changed from 54.83±6.67in (group 4-A1) to56.83±7.11in (group4-A2) (p>0.05)

*LDL level as it is changed from 39±21.9in(group 4-A1) to 28.1± 16.5 in (group4-A2)(p>0.05)

Table (15) and chart (15):

Comparisone between the lipid profile in group of rats treated with quercetin in adose (20mg /kg/d) before and after induction of hypertension**(group 4-B1)** and group of rats treated with quercetin in adose (20mg /kg/d) after induction of hypertension only **(group 4-B2)**:

	Trig		Chol		HDL		LDL	
	Groups		Groups		Groups		Groups	
	group 4-B1	group 4-B2	group 4-B1	group 4-B2	group 4-B1	group 4-B2	group 4-B1	group 4-B2
N	6	6	6	6	6	6	6	6
	50	93	80	90	66	51	4	20.4
	79	74	100	105	65	50	19.2	40.2
	89	101	90	103	56	60	16.2	22.8
	67	99	82	92	57	67	11.6	5.2
	90	89	73	85	59	63	-4	4.2
	77	102	81	80	60	55	5.6	4.6
Mean	*75.33	93.00	84.33	92.50	60.50	57.67	8.7	16.23
Std. Deviation	15.029	10.564	9.395	9.854	4.135	6.802	8.5	14.39
t	2.4		1.5		0.9		1.1	
p	<0.05		>0.05		>0.05		>0.05	

Table(15)

No significant change in Cholesterol,HDLand LDL level compared with the corresponding value P(>0.05)

* Significant decrease in triglyceride level in **group4-B1** compared with the corresponding value in **group4-B2** P(<0.05).

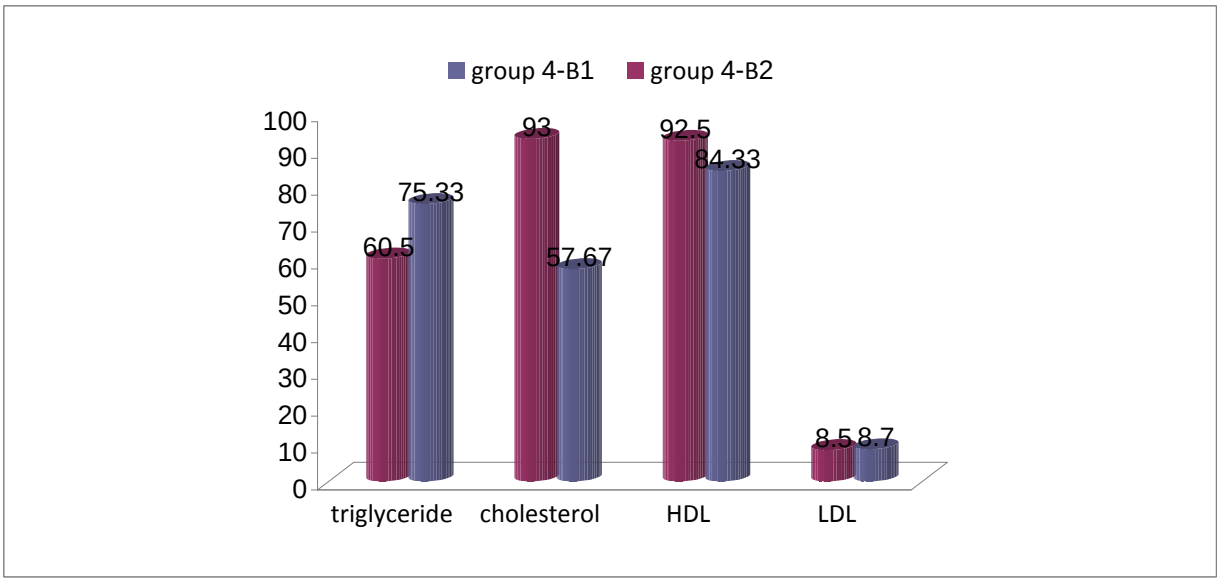


Chart (15)

From table(15) and chart (15) we detect that there is no significant change in:

*Cholesterol level as it is changed from 84.33 ±9.39 in (group 4-B1) to 92.50 ±9.85 in (group4-B2) (p>0.05)

*HDL level as it is changed from60.50±4.14 in (group4-B1) to 57.67± 6.8 in (group4-B2) (p>0.05)

*LDL level as it is changed from 8.8±8.6in (group4-B1) to 16.2±14.4in (group4-B2) (p>0.05)

But there is significant change in triglyceride level as it is changed from 75.33±15.03in (group 4-B1) to 93 ± 10.56 in (group4-B2) (p<0.05)

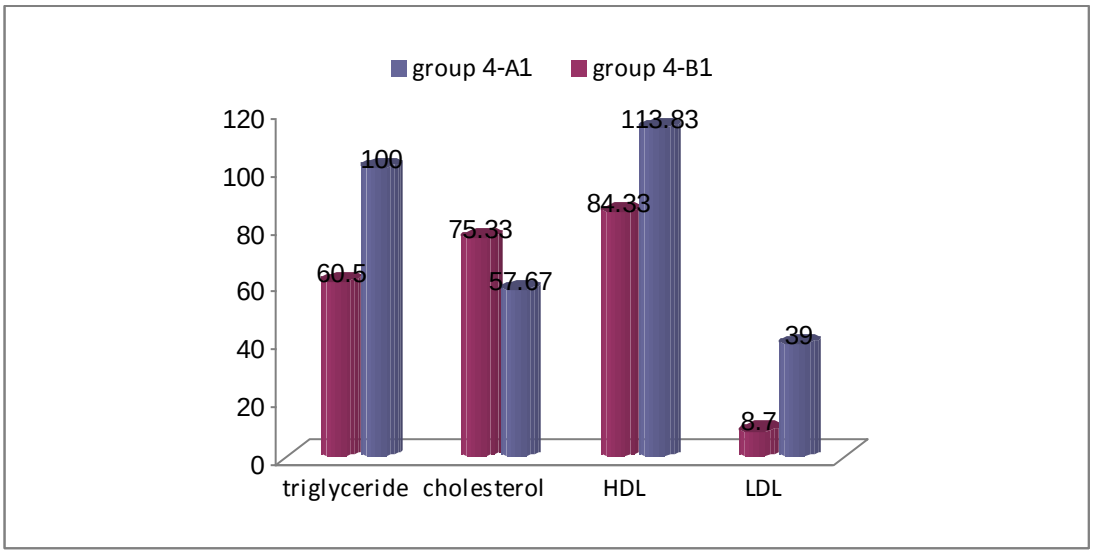
Table (16) and chart (16):

Comparisone between the lipid profile in group of rats treated with quercetin in adose (10mg /kg/d) before and after induction of hypertension**(group 4-A1)** and group of rats treated with quercetin in adose (20mg /kg/d) before and after induction of hypertension **(group 4-B1)**:

	Trig		Chol		HDL		LDL	
	Groups		Groups		Groups		Groups	
	group 4-A1	group 4-B1	group 4-A1	group 4-B1	group 4-A1	group 4-B1	group 4-A1	group 4-B1
N	6	6	6	6	6	6	6	6
	100	50	105	80	60	66	25	4
	130	79	130	100	57	65	47	19.2
	104	89	140	90	48	56	71.2	16.2
	99	67	100	82	63	57	17.2	11.6
	70	90	88	73	55	59	19	-4
	97	77	120	81	46	60	54.6	5.6
Mean	100.00	*75.33	113.83	**84.33	54.83	60.50	39	***8.7
Std. Deviation	19.110	15.029	19.600	9.395	6.67	4.135	21.9	8.5
t	2.5		3.3		1.8		3.1	
p	<0.05		<0.05		>0.05		<0.05	

Table(16)

*،**،*** Significant decrease in triglyceride, Cholesterol and LDL level in **group4-B1**compared with the corresponding value in **group4-A1** P(<0.05) and no significant change in HDL level compared with the corresponding value P(>0.05).



Chart(16)

From table(16) and chart (16) we detect that there is significant decrease in:

*Triglyceride level as it is changed from 100 ±19.110 in (group 4-A1) to75.33± 15.03 in(group4-B1) ($p<0.05$) *Cholesterol level as it is changed from 113.8 ± 19.6 in (group 4-A1) to 84.3 ± 9.4 in(group4-B1) ($p<0.05$)

*LDL level as it is changed from 39±21.9in (group4-A1)to8.7±8.6 in (group4-B1) ($p<0.05$)

But there is no significant change in HDL level as it is changed from54.83 ±6.7 in (group4-A1) to60.5±4.13 in(group4-B1) ($p>0.05$)

Table (17) and chart (17):

Comparisone between the lipid profile in group of rats treated with quercetin in adose (10mg /kg/d) after induction of hypertension only**(group 4-A2)** and group of rats treated with quercetin in adose (20mg /kg/d) after induction of hypertension only **(group 4-B2):**

	Trig		Chol		HDL		LDL	
	Groups		Groups		Groups		Groups	
	group 4-A2	group 4-B2	group 4-A2	group 4-B2	group 4-A2	group 4-B2	group 4-A2	group 4-B2
N	6	6	6	6	6	6		
	102	93	120	90	50	51	49.6	20.4
	89	74	104	105	67	50	19.2	40.2
	103	101	98	103	55	60	22.4	22.8
	110	99	88	92	63	67	3	5.2
	77	89	110	85	57	63	37.6	4.2
	67	102	99	80	49	55	36.6	4.6
Mean	91.33	93.00	103.17	92.50	56.83	57.67	28.1	16.2
Std. Deviation	16.741	10.564	10.998	9.854	7.11	6.802	16.5	14.4
t	0.2		1.8		0.2		1.3	
p	>0.05		>0.05		>0.05		>0.05	

Table(17)

No significant change compared with the corresponding value P(>0.05).

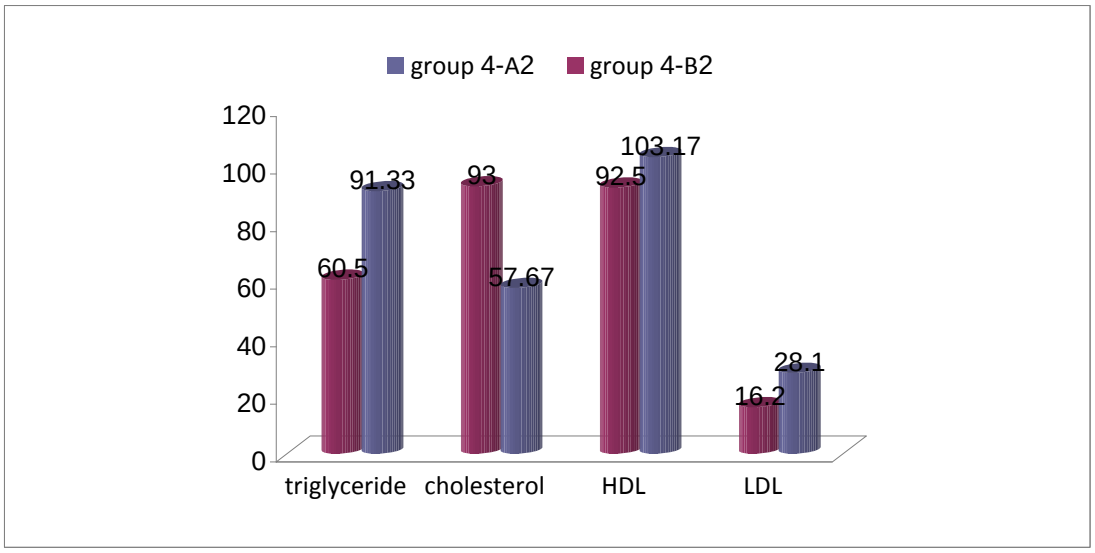


Chart (17)

From table(17) and chart (17) we detect that there is no significant change in :

*Triglyceride level as it is changed from91.33 ±16.74 in (group 4-A2 to 93 ± 10.56 in (group4-B2) (p>0.05)

*Cholesterol level as it is changed from103.17± 10.9 in (group 4-A2) to92.5± 9.9 in (group4-B2) (p>0.05)

*HDL level as it is changed from56.83±7.11n (group4-A2) to57.67±6.8 in (group4-B2) (p>0.05)

*LDL level as it is changed from28.1 ±16.5in (group4-A2) to 16.9 ±14.4 in (group4-B2) (p>0.05)

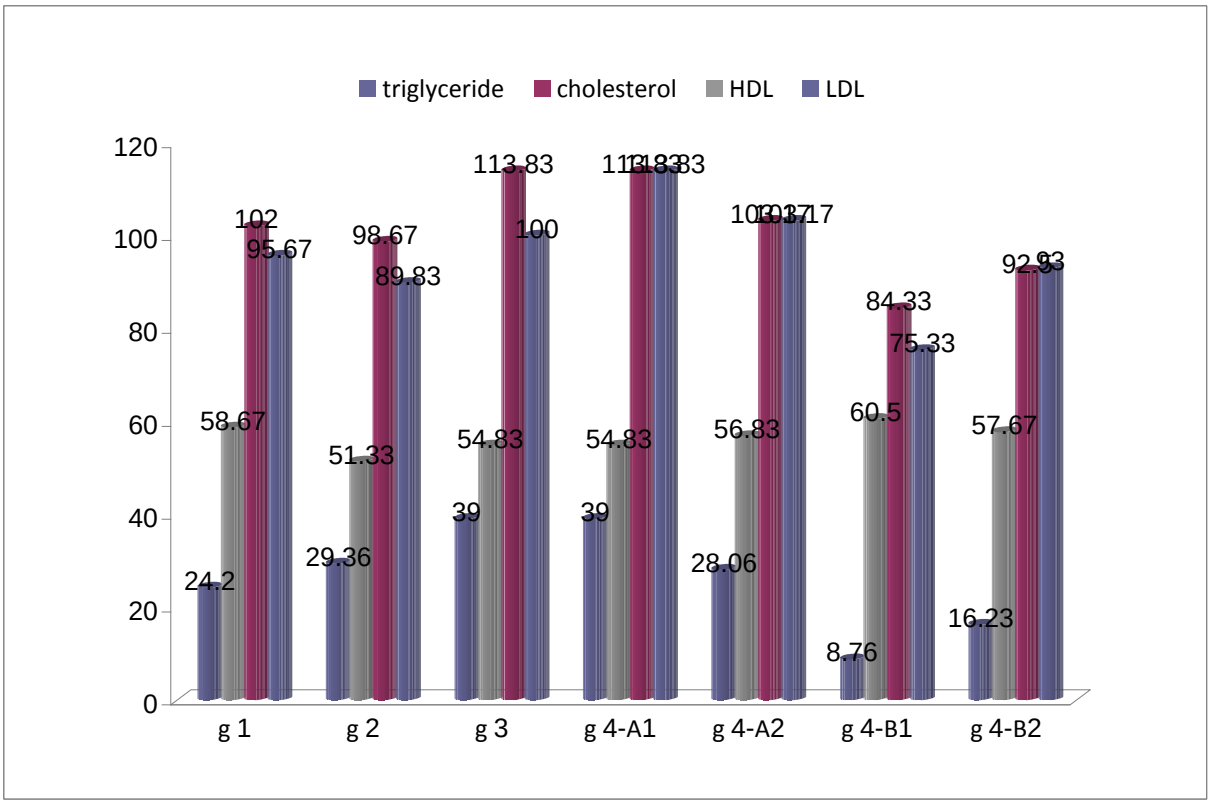
Table(18) and chart (18):Changes in lipid profile in all groups:

	Trig							Chol						
	g 1	g 2	g 3	g 4-A1	g 4-A2	g 4-B1	g 4-B2	g 1	g 2	g 3	g 4-A1	g 4-A2	g 4-B1	g 4-B2
N	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	75	80	100	105	120	50	93	103	86	105	105	120	80	90
	84	76	130	130	104	79	74	90	73	130	130	104	100	105
	105	88	104	140	98	89	101	120	103	140	140	98	90	103
	98	91	99	100	88	67	99	100	130	100	100	88	82	92
	102	100	70	88	110	90	89	110	102	88	88	110	73	85
	110	104	97	120	99	77	102	89	98	120	120	99	81	80
Mean	95.67	89.83	100.00	100	91.33	75.33	93	102.00	98.67	113.83	113.83	103.17	84.33	92.50
Std. Deviation	13.426	10.92	19.110	19.11	16.74	15.029	10.564	11.883	19.13	19.600	19.6	10.99	9.395	9.854
f	1.8							3.1						
p	>0.05							<0.05						

	HDL							LDL						
	g 1	g 2	g 3	g 4-A1	g 4-A2	g 4-B1	g 4-B2	g 1	g 2	g 3	g 4-A1	g 4-A2	g 4-B1	g 4-B2
N	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	63	42	60	60	50	66	51	25	28	25	25	49.6	4	20.4
	67	44	57	57	67	65	50	6.2	13.8	47	47	19.2	19.2	40.2
	58	45	48	48	55	56	60	41	40.4	71.2	71.2	22.4	16.2	22.8
	60	55	63	63	63	57	67	20.4	56.8	17.2	17.2	3	11.6	5.2
	59	60	55	55	57	59	63	30.6	22	19	19	37.6	-4	4.2
	45	62	46	46	49	60	55	22	15.2	54.6	54.6	36.6	5.6	4.6
Mean	58.67	51.33	54.83	54.83	56.83	60.50	57.67	24.2	29.36	39	39	28.06	8.76	16.23
Std. Deviation	7.448	8.75	6.676	6.67	7.11	4.135	6.802	11.5	16.57	21.9	21.97	16.53	8.57	14.39
f	1.1							2.7						
p	>0.05							<0.05						

Table(18)

*Significant decrease in Cholesterol and LDL level compared with the corresponding value P(<0.05) and no significant change in triglyceride and HDL level compared with the corresponding value P(>0.05).



Chart(18)

From table(18) and chart (18) we detect that there is significant change in cholesterol and LDL level ($p<0.05$) but there is no significant change in triglyceride and HDL level ($p>0.05$) in comparisone between all groups .