

## RESULTS

**Table (1)** shows the clinical characteristics of non obese women with PCOS and control which pointed out no statistically significant difference between both groups regarding age, body mass index, number of cycles, /year, systolic and diastolic blood pressure ( $P > 0.05$ ).

**Table (1):** Clinical characteristics of non-obese women with PCOS & Control women (mean  $\pm$  S.D).

Characteristics	Non obese PCOS n = 20	Non obese Control n = 20	t	p
1- Age (years)	26 $\pm$ 7	28 $\pm$ 6	0.97	> 0.05
2- Body Mass Index (kg/m <sup>2</sup> )	22.3 $\pm$ 2.5	22.1 $\pm$ 1.9	0.28	> 0.05
3- Number of cycle / year	10.2 $\pm$ 3.5	10.9 $\pm$ 3.4	0.64	> 0.05
4- Systolic Blood Pressure (mm Hg)	121 $\pm$ 8	119 $\pm$ 9	0.74	> 0.05
5- Diastolic Blood Pressure (mm Hg)	74 $\pm$ 4	72 $\pm$ 8	1	> 0.05

**Table (2)** shows the clinical characteristics of obese women with PCOS and control which pointed out no statistically significant difference between both groups regarding age, body mass index, and diastolic blood pressure ( $P > 0.05$ ) while there was statistically significant difference between both groups regarding number of cycles/year and systolic blood pressure ( $P < 0.01$ ).

**Table (2):** Clinical characteristics of obese women with PCOS and Control women (mean  $\pm$  S.D)

Characteristics	Obese PCOS n = 20	Obese Control n = 20	t	p
1- Age (years)	29 $\pm$ 5	30 $\pm$ 7	0.52	> 0.05
2- Body Mass Index (kg/m <sup>2</sup> )	36.2 $\pm$ 6.8	35.9 $\pm$ 6.8	0.14	> 0.05
3- Number of cycle / year	6.9 $\pm$ 2.9	11.2 $\pm$ 6.8	1.39	< 0.01
4- Systolic Blood Pressure (mm Hg)	131 $\pm$ 12	120 $\pm$ 8	3.41	< 0.01
5- Diastolic Blood Pressure (mm Hg)	79 $\pm$ 3	78 $\pm$ 1	1.41	> 0.05

**Table (3)** showed statistically highly significant difference between PCOS and control group in non obese women regarding ultrasound criteria of both ovaries (diameter of ovaries).

**Table (3):** Ultrasound diameter of ovary in non-obese PCOS and control women (mean  $\pm$  S.D)

	Non obese PCOS n = 20	Non obese Control n = 20	t	p
Right ovary diameter (mm)	35.8 $\pm$ 6.2	28.6 $\pm$ 3.9	4.4	< 0.001
Left ovary diameter (mm)	36.1 $\pm$ 4.3	29.3 $\pm$ 6.1	4.07	< 0.001

**Table (4)** shows statistically highly significant difference between PCOS and control groups in obese women regarding ultrasound measurement of ovarian diameters.

**Table (4):** Ultrasound diameter of ovary in obese PCOS and control women (mean  $\pm$  S.D)

	obese PCOS n = 20	obese Control n = 20	t	p
Right ovary diameter (mm)	39.1 $\pm$ 8.1	29.2 $\pm$ 2.3	5.26	< 0.001
Left ovary diameter (mm)	37.5 $\pm$ 9.2	29.3 $\pm$ 5.9	3.36	< 0.01

**Table (5)** includes the laboratory diagnosis of non-obese PCOS in control groups that showed statistically highly significant difference between both groups regarding serum testosterone, serum FSH and serum LH.

**Table (5):** Laboratory hormonal data of non-obese PCOS cases and the control groups

	Non Obese PCOS (20)	Non Obese Control (20)	t	p
Serum testosterone (ng/ml)	$1.9 \pm 1.3$	$0.39 \pm 0.12$	5.17	<0.001
Serum Follicular stimulating hormone (iu/L)	$4.9 \pm 1.8$	$7.1 \pm 1.3$	4.43	<0.001
Serum Luteinizing hormone (iu/L)	$8.9 \pm 1.3$	$7.4 \pm 1.2$	3.79	<0.001

**Table (6)** include the laboratory diagnosis of obese PCOS compare to control cases that showed statistically highly significant difference of both groups regarding serum testosterone, serum FSH and serum LH.

**Table (6) :** Laboratory hormonal data of obese PCOS cases and the control groups

	Obese PCOS (20)	Obese Control (20)	t	p
Serum testosterone (ng/ml)	$1.3 \pm 0.2$	$0.45 \pm 0.23$	12.47	<0.001
Serum Follicular stimulating hormone (iu/L)	$4.61 \pm 0.91$	$6.8 \pm 0.93$	7.53	<0.001
Serum Luteinizing hormone (iu/L)	$8.1 \pm 1.1$	$6.9 \pm 0.81$	3.93	<0.001

**Table (7)** shows lipid profile in non obese PCOS compared to control demonstrating statistically highly significant difference between both groups regarding serum total cholesterol, serum triglycerides, which there was statistically non significance difference between both groups regarding high density lipoprotein (HDL), low density lipoprotein (LDL) and very low density lipoprotein (VLDL).

**Table (7):** Lipid profile in non- obese women groups (PCOS and the control groups)

	<b>Non obese PCOS n= 20</b>	<b>Non obese Control n=20</b>	<b>t</b>	<b>p</b>
Total cholesterol (mg/ dL)	<b>209.91 <math>\pm</math> 15.28</b>	180.35 $\pm$ 7.7	7.73	<0.001
Triglycerides (mg/ dL)	135.2 $\pm$ 11.3	110.3 $\pm$ 9.1	7.68	<0.001
High Density lipoprotein (mg/dL)	45.3 $\pm$ 3.75	44.2 $\pm$ 2.31	4.16	>0.05
Low density lipoprotein (mg/ dL)	106.71 $\pm$ 9.3	101.3 $\pm$ 11.2	1.66	>0.05
Very Low density lipoprotein (mg/ dL)	27.04 $\pm$ 11.5	22.06 $\pm$ 9.4	1.5	>0.05

**Table (8)** shows lipid profile in obese PCOS and control groups that demonstrating statistically highly significant difference between both groups regarding serum total cholesterol, serum triglycerides, serum low density lipoprotein (LDL). There was statistically insignificant differences between both groups as regard serum high density lipoprotein (HDL) and very low density lipoprotein (VLDL).

**Table (8):** Lipid profile in obese women groups (PCOS and non PCOS):

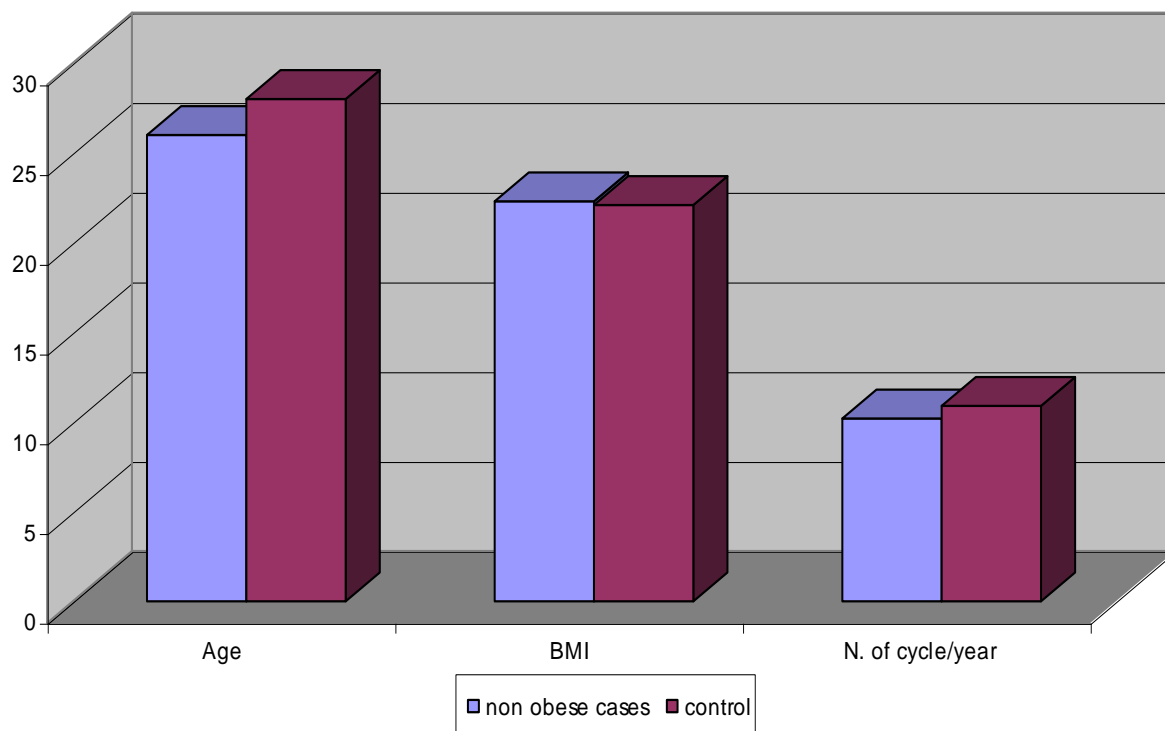
	<b>Obese PCOS (n=20)</b>	<b>Obese non PCOS (n=20)</b>	<b>t</b>	<b>p</b>
Total cholesterol (mg/ dL)	<b>293.88 ± 13.91</b>	195.93 ± 14.9	21.49	<0.001
Triglycerides (mg/ dL)	166.94 ± 18.1	129.85 ± 13.3	7.38	<0.001
High Density lipoprotein (mg/dL)	34.31 ± 7.31	33.61 ± 12.1	0.22	>0.05
Low density lipoprotein (mg/ dL)	<b>149.93 ± 10.1</b>	138.9 ± 10.8	3.34	<0.01
Very Low density lipoprotein (mg/ dL)	33.38 ± 16.1	25.97 ± 12.3	1.64	>0.05

**Table (9):** Shows lipid profile in obese PCOS and non obese PCOS that demonstrate statistically highly significant difference between both groups regarding serum total cholesterol, serum triglycerides, serum low density lipoprotein (LDL) which there was statistically insignificant differences between both groups as regard serum very low density lipoprotein (VLDL).

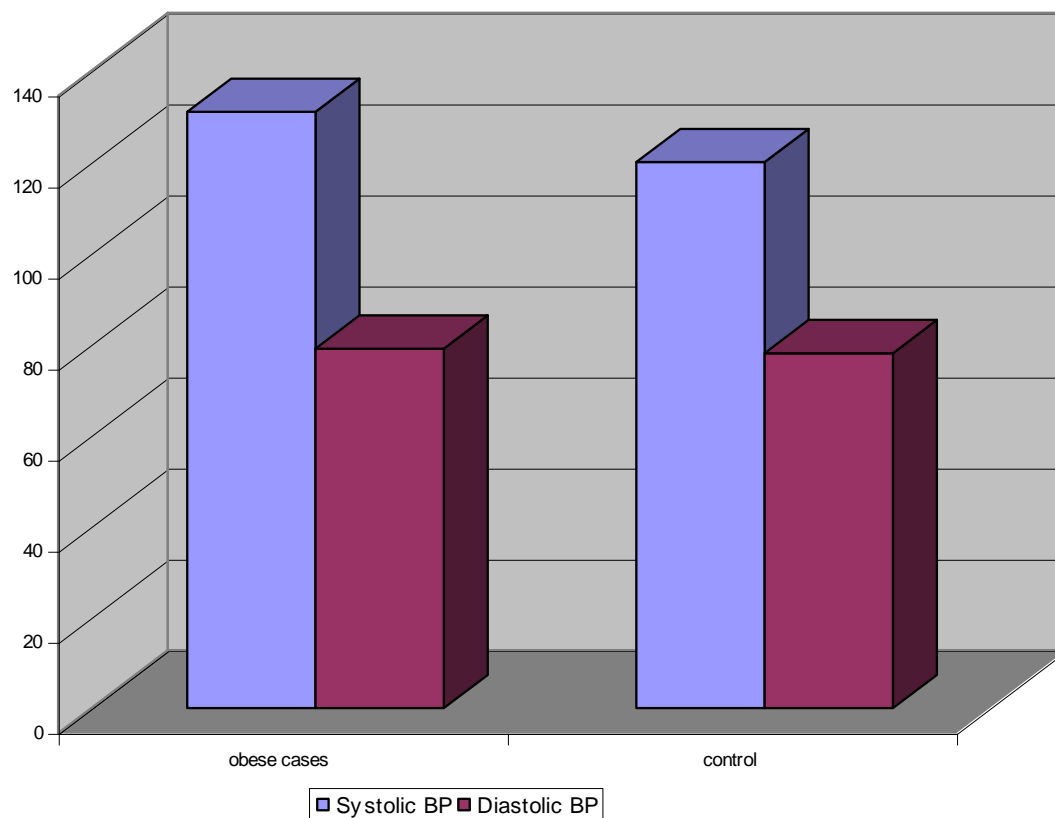
**Table (9):** Lipid profile in obese PCOS and non-obese PCOS women  
(Mean  $\pm$  S.D.)

	<b>Obese PCOS (n = 20)</b>	<b>Non-obese PCOS (n=20)</b>	<b>t</b>	<b>P</b>
<b>Total cholesterol mg/dl</b>	293.88 $\pm$ 13.91	209.91 $\pm$ 15.28	18.17	<0.001
<b>Triglycerides mg/dl</b>	166.94 $\pm$ 18.1	135.2 $\pm$ 11.3	6.65	< 0.001
<b>HDL mg/dl</b>	34.31 $\pm$ 7.31	45.3 $\pm$ 3.75	5.98	< 0.001
<b>LDL mg/dl</b>	149.93 $\pm$ 10.1	106.71 $\pm$ 9.3	16.03	< 0.001
<b>VLDL mg/dl</b>	33.38 $\pm$ 16.1	27.04 $\pm$ 11.5	1.43	> 0.05

**Chart (1a) means of age, BMI and no. of cycle among non obese PCOS cases and control**

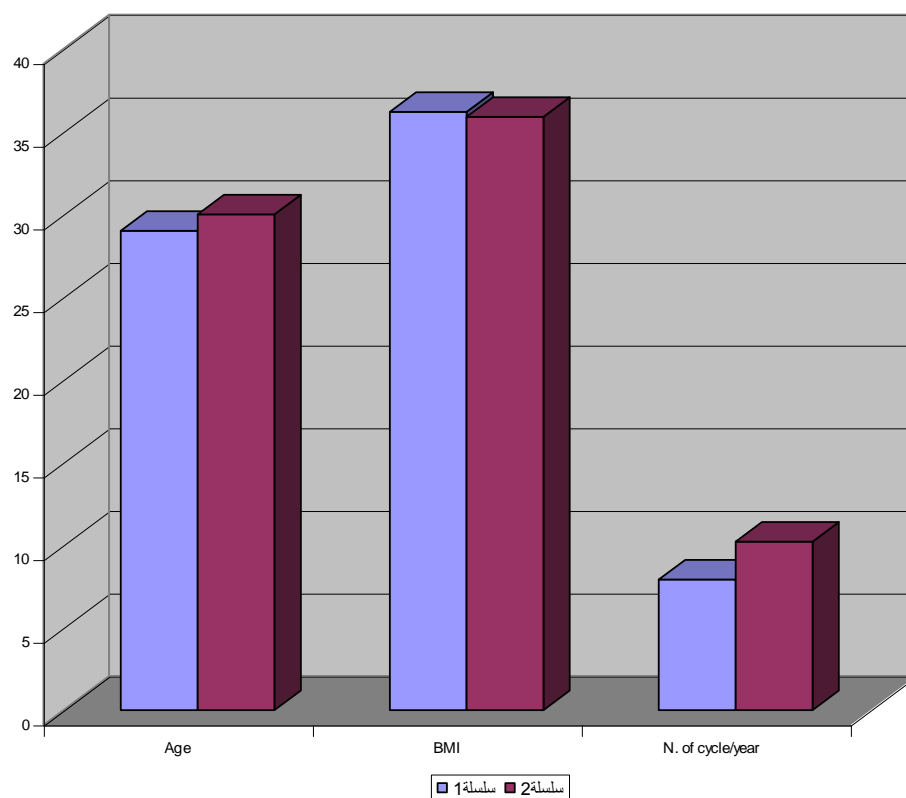


**Chart (1b) means of systolic and diastolic blood pressure among non obese PCOS cases and control**

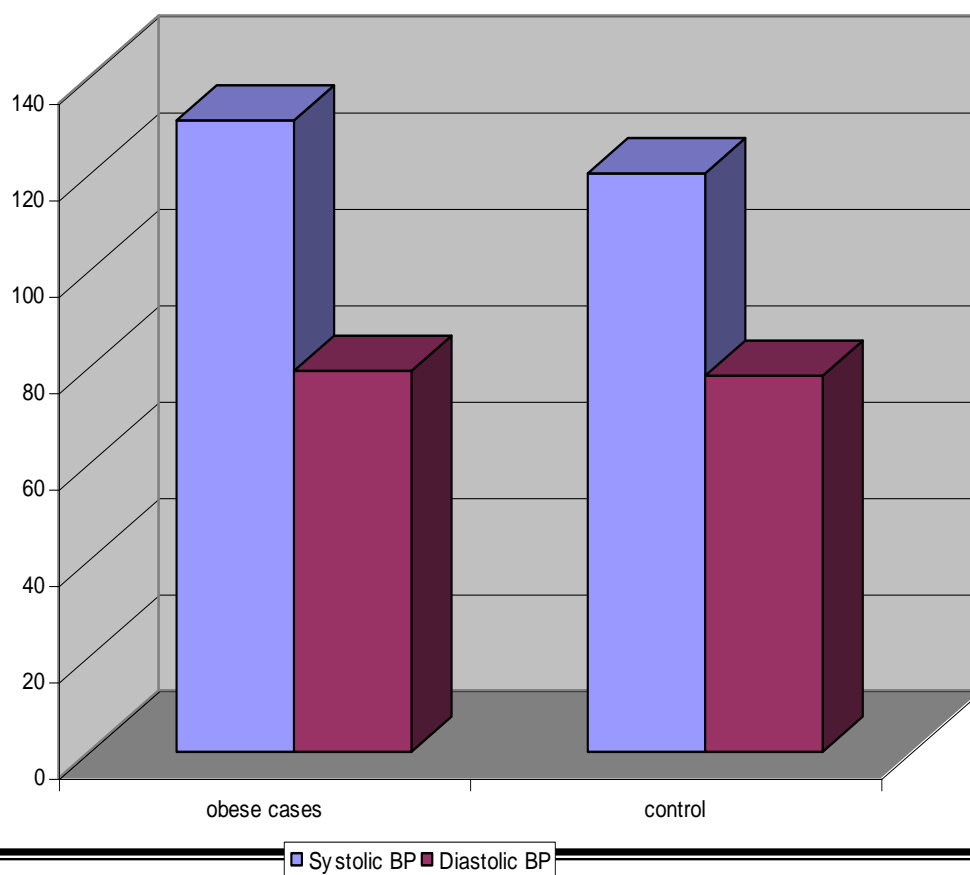




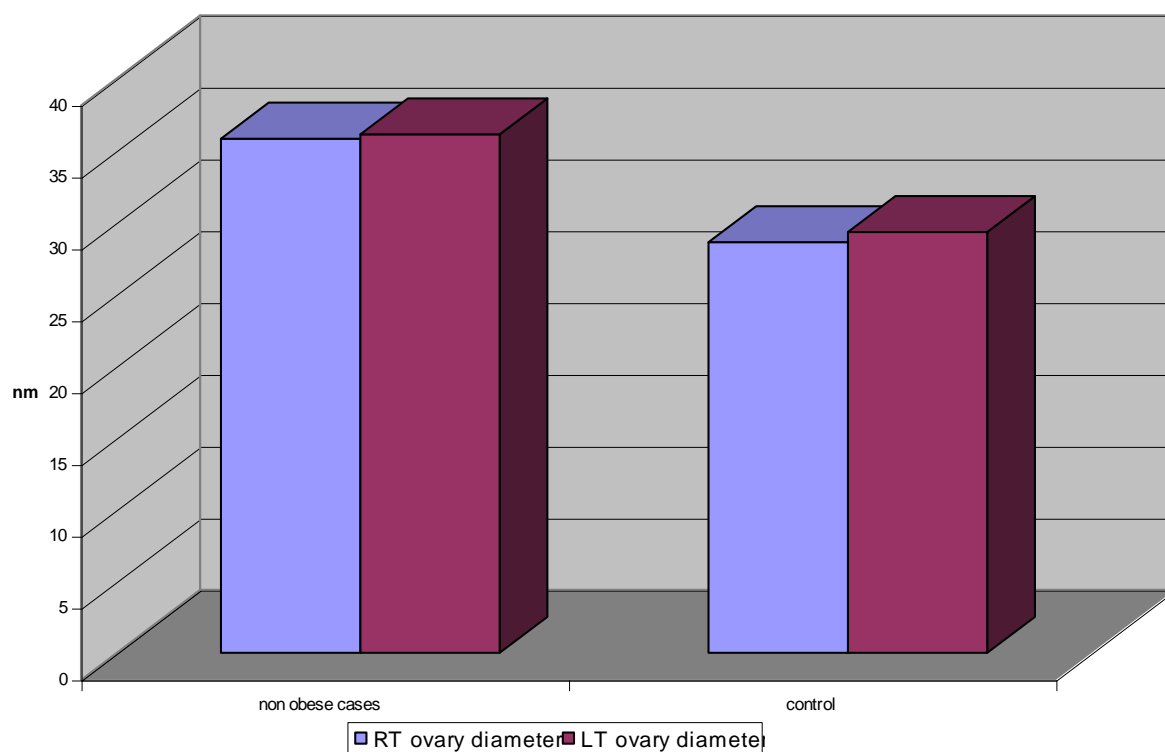
**Chart (2a) means of age, body mass index and number of cycle/year among obese PCOS cases and control**



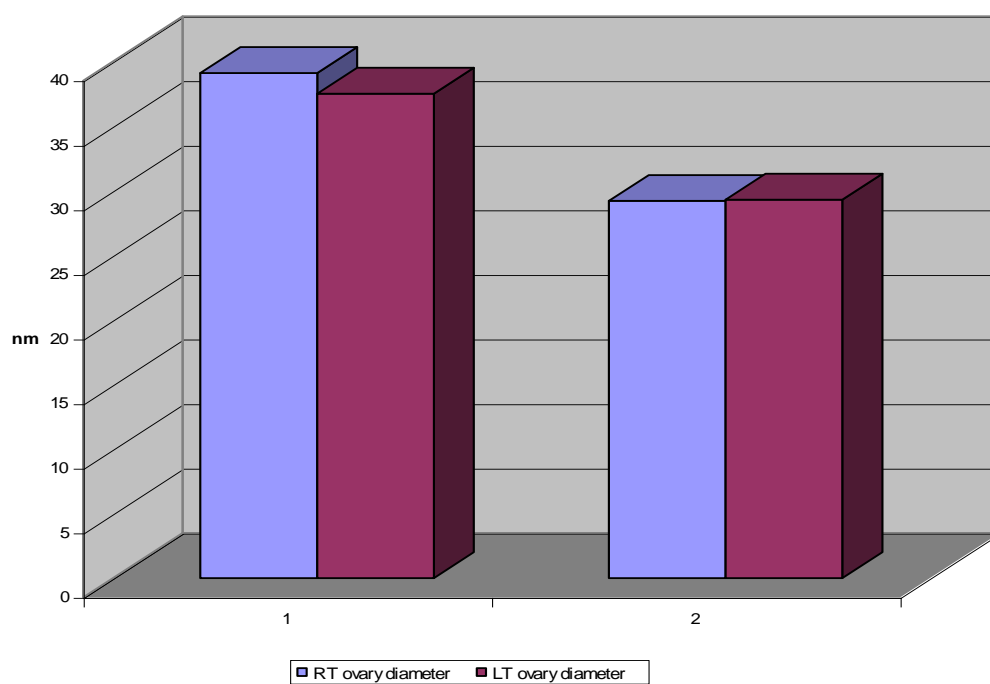
**Chart ( 2 b) means of systolic and diastolic blood pressure among obese PCOS cases and control**



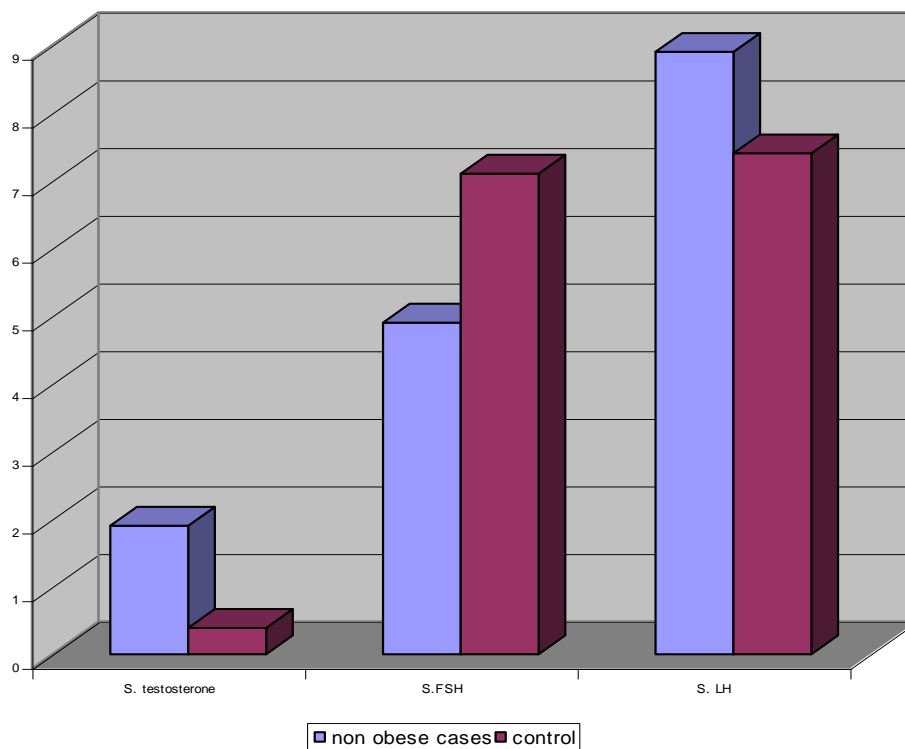
**Chart (3): means of diameters of right ovary and left ovary of non obese PCOS cases and control**



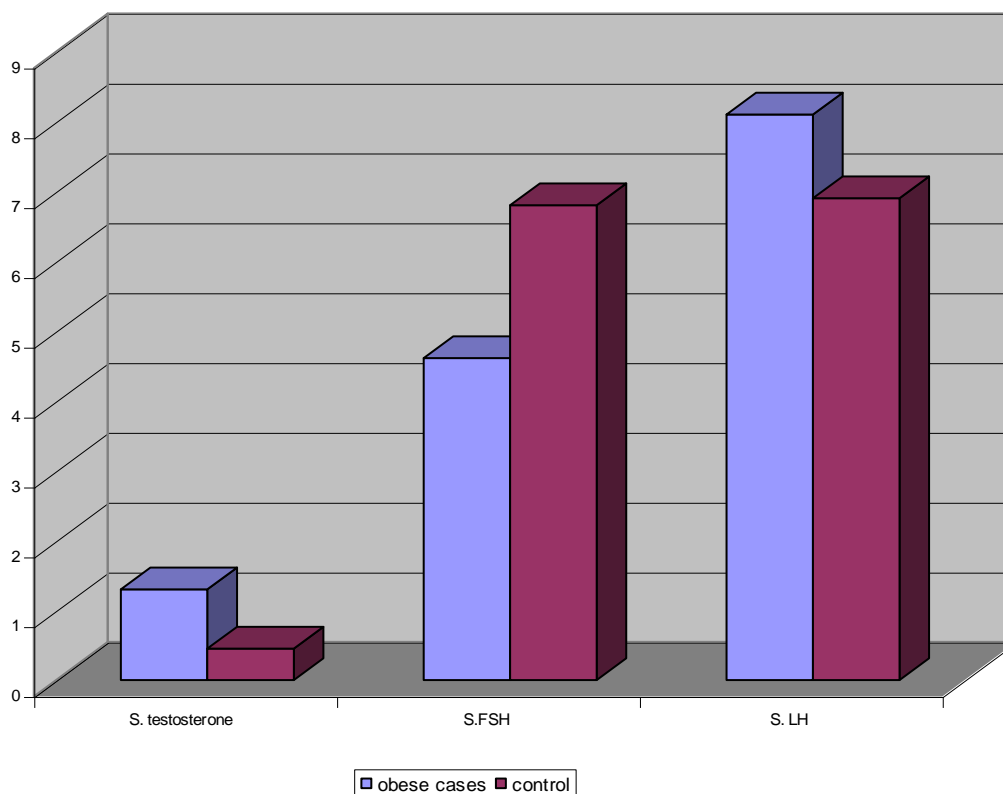
**Chart (4) means of diameters of right ovary and left ovary of obese PCOS cases and control**



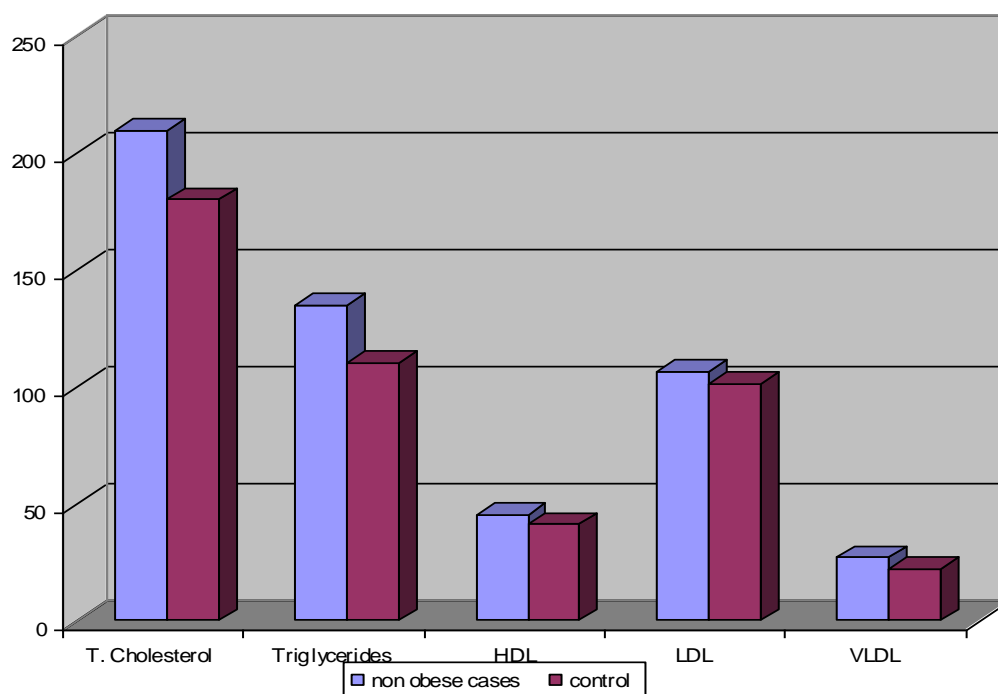
**Chart (9) means of serum Testosterone, serum FSH and serum LH among non obese PCOS cases and control**



**Chart (10) means of serum Testosterone, serum FSH and serum LH among obese PCOS cases and control**



**Chart ( 7 ) means of total cholesterol, Triglycerides, high density lipoportein, low density lipoprotein and verry low density lipoprotein among non obese PCOS cases and control**



**Chart ( 8 ) Means of T.cholesterol, Triglycerides, high density lipoportein, low density lipoprotein and very low density lipoprotein among obese PCOS cases and control**

