RESULTS

This prospective cross sectional study was carried out on seventy women selected from the outpatient clinic of gynecology at benha university hospital, at the period from January 2008 to February 2009. Thirty five women had uterine leiomyoma and represented as the study group, the other thirty five are normal women who have no myoma and represented as the control group.

All data were collected, tabulated and statistically evaluated, all data are shown in tables (2-6) and figures (26-31).

All included females underwent clinical assessment and were submitted to transvaginal ultrasonography, hormonal assays and serum leptin level estimation.

Regarding age, there was no significant difference between myoma group (39.06±8.68 years) in comparison to control group (35.63±6.39 years). Similarly, body mass index showed that there is no statistical significant difference between myoma group (25.87±2.18 kg/m^2) in comparison to control group (25.25±2.52 kg/m^2) (table 1 and figure 26).

Table (2): patients characteristics in the study and control group:

variables	Myoma group (n = 35)	Control group (n = 35)	P value
Age (yr)	39.06±8.68	35.63±6.39	0.64(NS)
BMI (kg/$m^{2)}$	25.87±2.18	25.25±2.52	0.175(NS)
Gravidity	2.00±1.89	1.86±1.611	1.00(NS)
Parity	1.43±1.243	1.69±1.40	0.468(NS)

N.B: Data are presented as mean ± standard deviation.

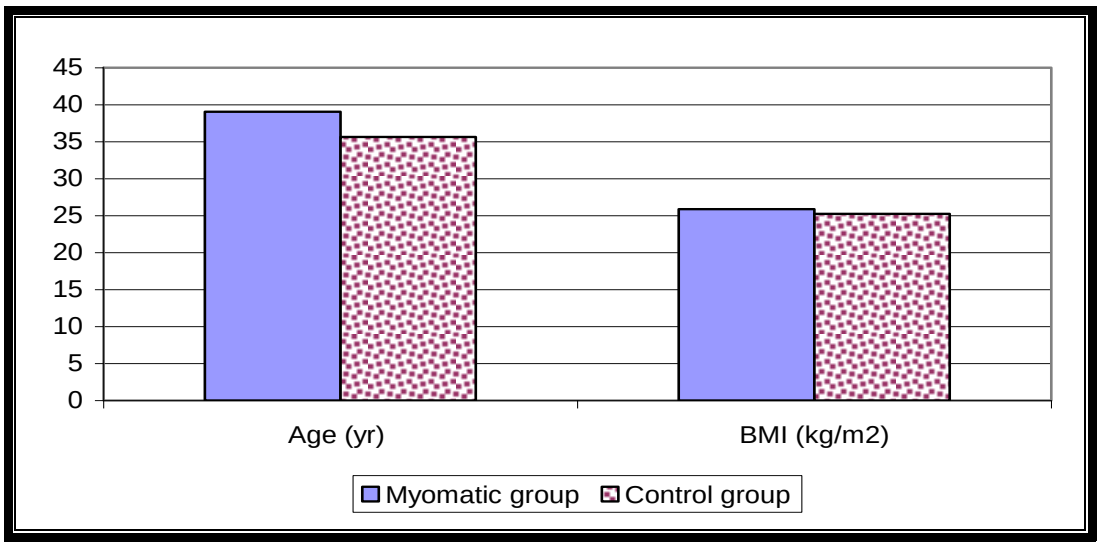

Figure (26): Comparison between Study and Control groups as regard age and body mass index .

Regarding gravidity and parity, there was no statistical significant difference between myoma group (2.00±1.89; 1.43±1.24 for gravidity and parity respectively) in comparison to control group (1.86±1.61; 1.69±1.40 for gravidity and parity respectively) (table 1,figure 27).

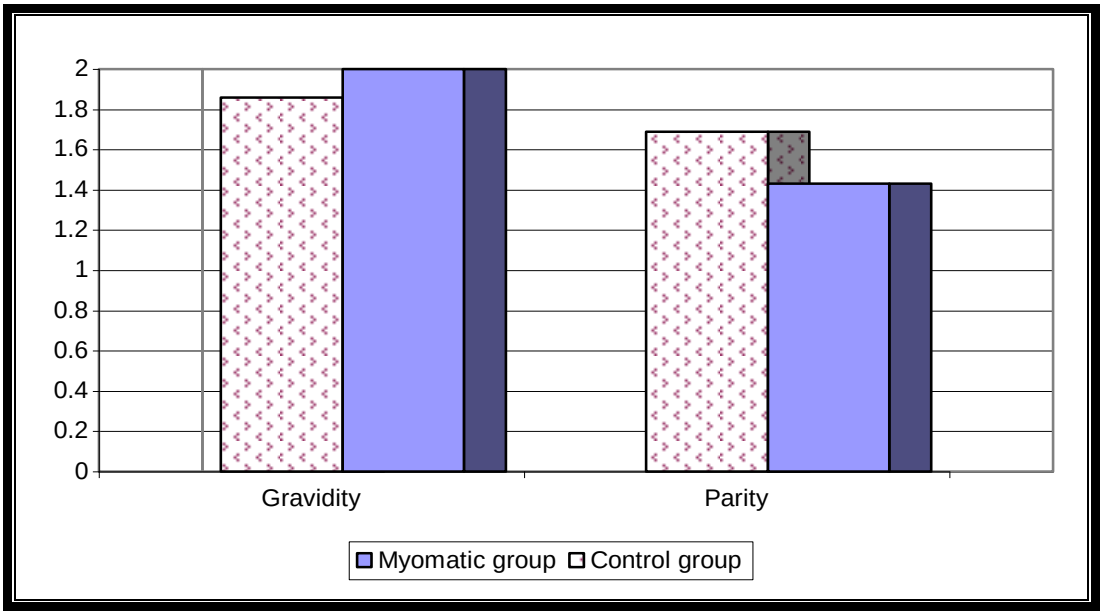

Figure (27): Comparison between myoma group and control group as regard gravidity and parity.

In the present study, fasting blood sugar (FBS) showed no statistical significant difference between myoma group (85.60±7.83 mg/dl) in comparison to control group (82.31±6.63 mg/dl). Similarly, creatinine showed no statistical significant difference between myoma group (0.84±0.14 mg/dl) in comparison to control group (0.83±0.10 mg/dl) (table 2 & figure 28).

Table (3): serum creatinine and fasting blood sugar in Study and Control groups :

variables	Myoma group (n=35)	Control group (n = 35)	P value
FBS (mg/dL)	85.60±7.83	82.31±6.63	0.063(NS)
Creatinine(mg/dL)	0.84±0.14	0.83±0.10	0.849(NS)

N.B: Data are presented as mean ± standard deviation.

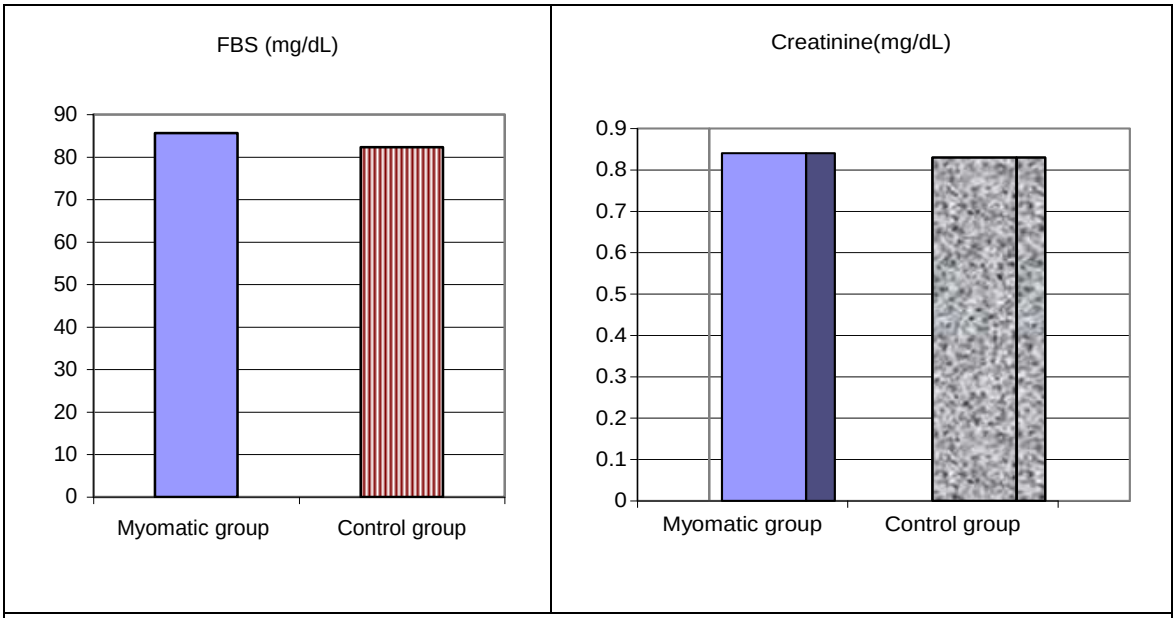

Figure (28): Comparison between Study and Control groups as regard laboratory parameters.

In the present work, there was no statistical significant difference between myoma group and control group as regard FSH (9.17±6.74 versus 5.63±2.86 mIU/ml respectively); LH (5.62±2.96 versus 4.40±2.57 mIU/ml respectively) and E2 (41.79±30.27 versus 30.52±13.27 pg/ml respectively) (table 3, figure 29).

Table (4): Serum levels of FSH, LH and E2 in study group and control group :

variables	Myoma group (n = 35)	Control group (n = 35)	P value
FSH (mIU/ml)	9.17 ± 6.74	5.63 ± 2.86	0.137(NS)
LH (mIU/ml)	5.62 ± 2.96	4.40 ± 2.57	0.054(NS)
E2(pg/ml)	41.79 ± 30.27	30.52 ± 13.27	0.228(NS)

N.B: Data are presented as mean ± standard deviation.

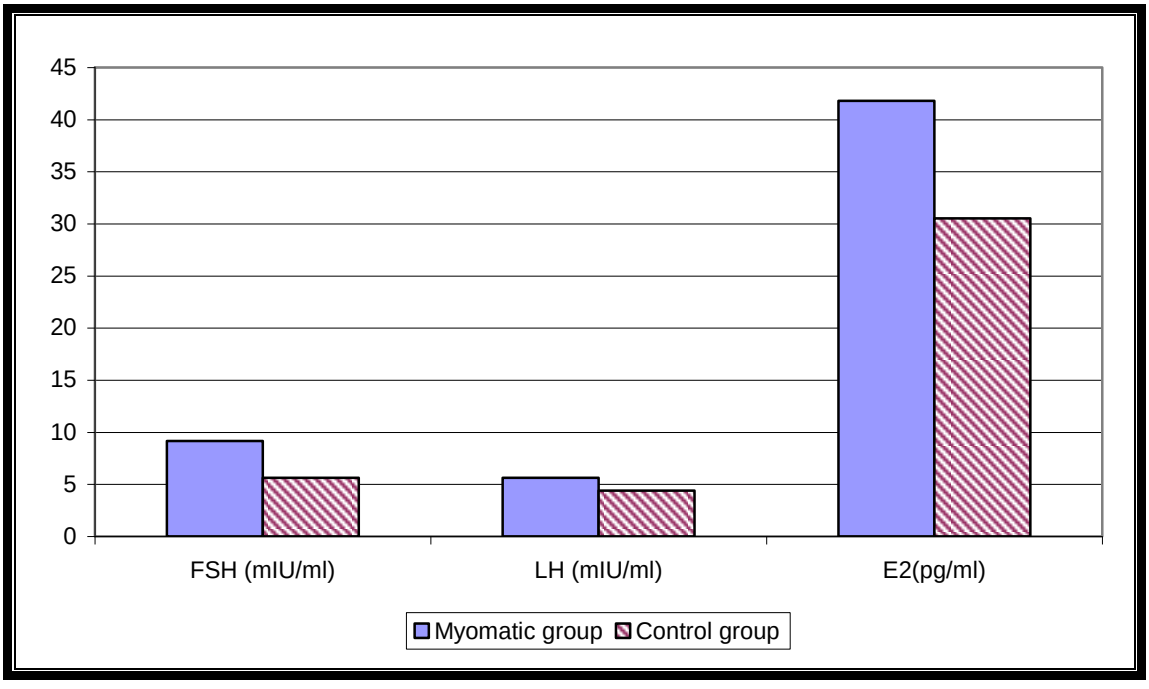

Figure (29): Comparison between study group and control group as regard Serum levels of hormones**.**

In our study, there was statistically, highly significant increase in leptin levels in myoma group (23.53±17.98 ng/ml) in comparison to control group (4.86±3.44ng/ml) and similarly, there was statistical highly significant increase in leptin/BMI ratio in myoma group (0.89±0.65) in comparison to control group (0.19±0.14) (table 4, figure 30).

Table (5): serum Leptin levels and the ratio of leptin/body mass index (BMI) in study and control groups:

variables	Myoma group (n = 35)	Control group (n = 35)	P value
Leptin (ng/ml)	23.53±17.98	4.86±3.44	<0.001(S)*
Leptin/BMI	0.89±0.65	0.19±0.14	<0.001 (S)*

N.B: Data are presented as mean ± standard deviation.

*highly significant change.

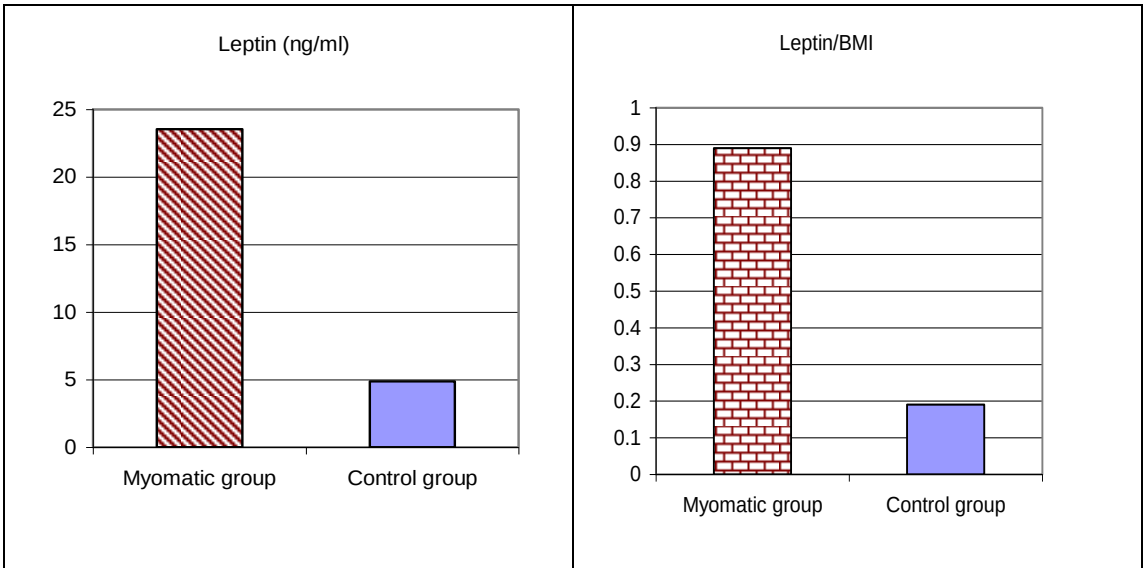

Figure (30): Comparison between study group and control group as regard Leptin levels and the ratio of leptin/body mass index (BMI).

Our results showed proportional (positive), powerful (r>0.7), statistical significant correlation between serum leptin levels and leptin/BMI ratio, while the correlation between leptin and E2, LH, FSH, serum creatinine, FBS, BMI, parity, gravidity and age was mild and statistically non significant (table 6, figure 31).

Table (6): Correlation between serum leptin level and various clinical and laboratory parameters in both groups:

Variables	leptin	
	Correlation Coefficient (r)	**Sig.**
Age	0.211	0.052 (NS)
Gravidity	0.165	0.171 (NS)
Parity	0.111	0.360 (NS)
BMI	0.200	0.097 (NS)
Leptin/BMI	0.989	<0.001 (S)*
FSH	0.078	0.519 (NS)
LH	0.151	0.211 (NS)
E2	0.131	0.280 (NS)
FBS	0.101	0.407 (NS)
S.Creatinine	-0.202	0.094 (NS)

*highly significant change.

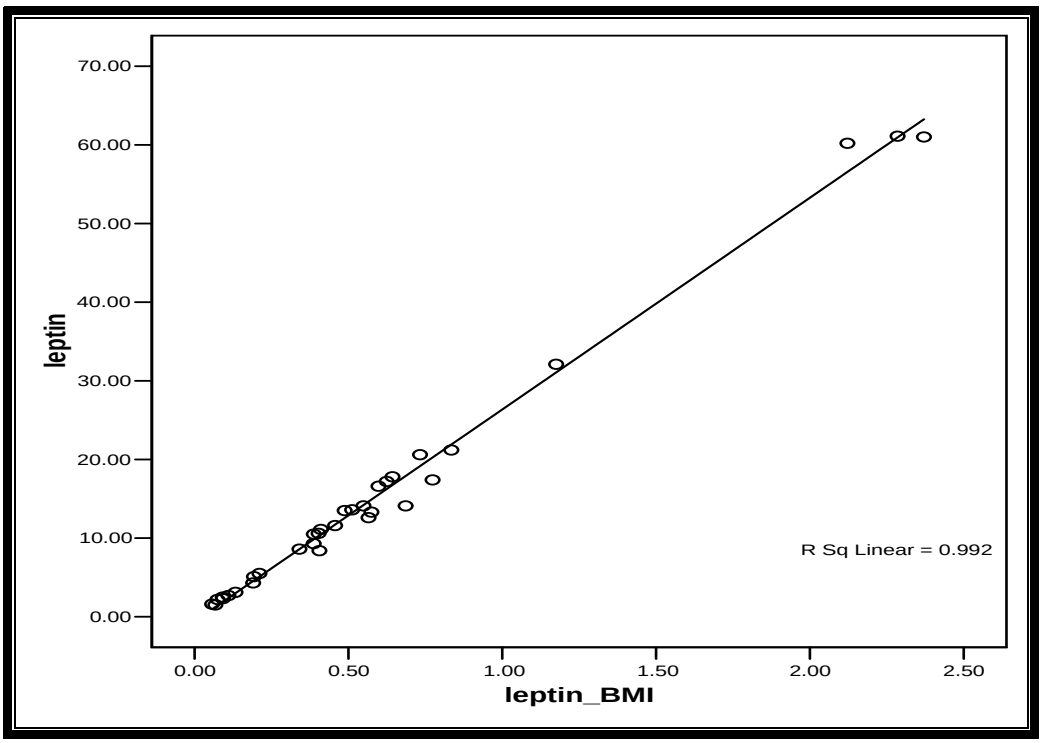

Figure (31): Correlation between serum leptin level and leptin/BMI ratio**.**