## Results

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This study was done on 50 women who were using marvelon contraceptive pills (C.P. ) as an only method of contraception for 6 months.

75mg Oral glucose tolerance test was done before the study, 3 months and 6 months of use.

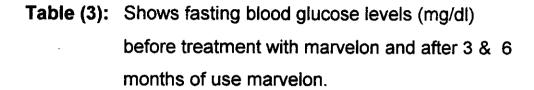
Blood samples are collected at fasting and at 30,60, 90,120,150, and 180 min. Intervals. The results reported and statistical analysis was done.



**Table (2):** 

Table (2) shows the range, mean, S.D. of O.G.T.T. in the study cases before using marvelon, after 3 months and after 6 months of its use.

		Fasting Level	30 Min.	60 Min.	90 Min.	120 Min.	150 Min.	180 Min.
	Range	58-93	88-136	86-140	74-125	62-118	63-102	60-98
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ıtment	Mean	74.2	108.9	109.3	92.3	81.8	79.6	76.9
ues	<u>+</u> S.D.	<u>+</u> 10.1	<u>+</u> 12.9	<u>+</u> 12.8	<u>+</u> 13.2	<u>+</u> 12.5	<u>+</u> 10.2	<u>+</u> 10.7
	Range	59-100	80-136	89-140	77-130	58-108	64-107	60-99
onths								
r use	Mean	75.9	110	111.7	95.3	83.5	82.8	81.5
	<u>+</u> S.D	<u>+</u> 10.3	<u>+</u> 13	<u>+</u> 12.9	<u>+</u> 13.1	<u>+</u> 12.6	<u>+</u> 10.2	<u>+</u> 10.5
	Range	62-100	66-141	87-142	72-144	68-130	69-116	69-112
onths								
r use	Mean	79.3	113.4	117.8	105.1	92.9	88.8	86.2
	<u>+</u> S.D	<u>+</u> 10.8	<u>+</u> 17.5	<u>+</u> 14.6	<u>+</u> 15.9	<u>+</u> 13.8	<u>+</u> 10.8	<u>+</u> 11.3



O.G.T.T.	Pretreatment	After 3	After 6	
Fasting Value	Value	Months	Months	
Range	58-93	59-100	62-100	
Mean	74.2 *	75.9 *	79.3 **	
S.D. <u>+</u>	10.1 *	10.3 *	10.8 **	
P-value	P1> 0.05 *	P2 > 0.05 *	P3 < 0.05 **	

S.D. Standard deviation.

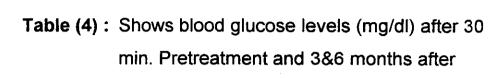
\* No significant change.

\*\* Significant change.

P1 pretreatment value 3 months value

P2 3 months value 6 months value

P3 pretreatment value 6 months value



marvelon.

O.G.T.T.	Pretreatment	After 3	After 6	
Fasting Value	Value	Months	Months	
Range	88-136	80-136	66-141	
Mean	108.9 *	110 *	113.4 **	
S.D. <u>+</u>	12.9 *	13 *	17.5 **	
P value	P1 > 0.05 *	P2 > 0.05 *	P3 < 0.001**	

Table (5):

shows blood glucose levels (mg/dl) after 60 min.

Pretreatment and after 3&6 months of marvelon

O.G.T.T.	Pretreatment	After 3	After 6
Fasting Value	Value	Months	Months
Range	86-140	89-140	87-142
Mean	109.3 *	111.7 *	117.8 **
S.D. <u>+</u>	12.8 *	12.9 *	14 **
P value	P1 > 0.05 *	P2 > 0.05 *	P3 < 0.001**

**Table (6):** 

Shows blood glucose levels (mg/dl) after 90 min. Pretreatment and after 3&6 months of marvelon.

O.G.T.T.	Pretreatment	After 3	After 6	
Fasting Value	Value	Months	Months	
Range	74-125	77-130	72-144	
Mean	92.3 *	95.3 *	105.1 **	
S.D. <u>+</u>	13.2 *	13.1 *	15.9 **	
P value	P1 > 0.05 *	P2 > 0.05 *	P3 < 0.001**	

## **Table (7):**

Shows blood glucose levels (mg/dl) after 120 min pretreatment and after 3&6 months of marvelon.

O.G.T.T. Fasting Value	Pretreatment Value	After 3 Months	After 6 Months
Range	62-118	58-108	68-130
Mean	81.8 *	83.5 *	92.9 **
S.D. <u>+</u>	13.2	12.6 *	13.8 **
P value	P1 > 0.05 *	P2 > 0.05 *	P3 < 0.001**

**Table (8):** 

Shows blood glucose levels (mg/dl) after 150 min. pretreatment and after 3&6 months of marvelon.

O.G.T.T.	Pretreatment	After 3	After 6	
Fasting Value	Value	Months	Months	
Range	63-102	64-107	69-116	
Mean	79.6	82.8	88.8	
S.D. <u>+</u>	10.2	10.2	10.8	
P value	P1 > 0.05 *	P2 > 0.05 *	P3 < 0.05 **	

## **Table (9):**

Shows blood glucose levels (mg/dl) after 180 min. pretreatment and after 3&6 months of marvelon.

O.G.T.T.	Pretreatment	After 3	After 6	
Fasting Value	Value	Months	Months	
Range	60-98	60-99	69-112	
Mean	76.9	81.5	86.2	
S.D. <u>+</u>	10.7	10.5	11.3	
P value	P1 > 0.05 *	P2 > 0.05 *	P3 < 0.001**	

On comparing the fasting blood sugar values before the use of marvelon, and after 3 & 6 months of use: Table (3).

The mean fasting blood sugar value was  $74.2 \pm 10.0$ mg/dl, 3 months after use marvelon the mean fasting blood sugar became  $75.9 \pm 10.3$ mg/dl.

There were no statistical significant difference between before using marvelon and after 3 months of its use.

6 Months after use, the mean fasting blood sugar became 79.3 ± 10.8 mg/dl.

There was significant change 6 months after marvelon use than the pretreatment value (P<0.05).

There was also significant difference between 3 months and 6 months values.

On comparing blood sugar values, at 30 min. Before the use of marvelon, and after 3 & 6 months of use (table 4).

The mean blood sugar was  $108.9 \pm 12.9$  mg/dl, 3 months after use, the mean blood sugar became  $110 \pm 13$  mg/dl.

After 6 months of use, the mean blood sugar became 113.4+17.5 mg/dl.

There were no significant difference between blood sugar values at 30 min. before the use of marvelon and at 30 min. after 3 months of use. On the other hand, the blood sugar values show significant higher 6 months after marvelon use than the pretreatment values (P<0.001).

There was also significant difference between 3 months and 6 months values.

On comparing, blood sugar values at 60 min., before the use of marvelon, 3 and 6 months after use (table 5).

The mean blood sugar was 109.3  $\pm$  12.8 mg/dl , 3 months after use, the mean blood sugar became 111.7  $\pm$  12.9 mg/dl.

6 Months after use, the mean blood sugar became 117.8  $\pm$  14.6 mg/dl.

There were no significant difference between blood sugar values at 60min. before the use of marvelon and at 60 min. After 3 months of use.

On the other hand, the blood sugar values show significant change 6 months after marvelon use than the pretreatment values ( P<0.05 ).

There was also significant difference between 3 months and 6 months values.

On comparing, blood sugar values at 90 min., before the use of marvelon, 3 and 6 months after use (table 6).

The mean blood sugar was 92.3  $\pm$  13.2 mg/dl, 3 months after use, the mean blood sugar became 95.3  $\pm$  13.1 mg/dl.

6 Months after use, the mean blood sugar became 105.1  $\pm$  15.9 mg/dl.

There were no significant difference between blood sugar values at 90 min. before the use of marvelon and at 90 min. 3 months after use. On the other hand, the blood sugar values

show significant higher 6 months after marvelon use than the pretreatment values (P<0.001).

There was also significant difference between 3 months and 6 months values.

On comparing, blood sugar values at 120 min., before the use of marvelon, 3 and 6 months after use (table 7).

The mean blood sugar was 81.8  $\pm$  12.5 mg/dl. 3 months after use, the mean blood sugar became 83.5  $\pm$  12.6 mg/dl.

6 Months after use, the mean blood sugar, became 92.9 ± 13.8 mg/dl.

There were no significant difference between blood sugar values at 120 min. before the use of marvelon and at 120 min. 3 months after use.

On the other hand, the blood sugar values show significant higher 6 months after marvelon use than the pretreatment values (P<0.001).

There was also significant difference between 3 months and 6 months values.

On comparing, blood sugar values at 150min. Before the use of marvelon, 3 and 6 months after use (table 8).

The mean blood sugar was 79.6  $\pm$  10.2 mg/dl 3 months after use, the man blood sugar became 82.8  $\pm$  10.2 mg/dl.

6 Months after use, the man blood sugar became  $88.8 \pm 10.8 \text{ mg/dl}$ .

There were no significant difference between blood sugar values at 150 min. before the use of marvelon and at 150 min. 3 months after use.

On the other hand, the blood sugar values show significant higher 6 months after marvelon use than the pretreatment values ( P<0.05 ).

There was also significant difference between 3 months and 6 months values.

On comparing, blood sugar values at 180 min. Before the use of marvelon, 3 and 6 months after use (table 9).

The mean blood sugar was 76.2  $\pm$  10.7 mg/dl, 3 months after use, the mean blood sugar became 81.5  $\pm$  10.5 mg/dl.

6 Months after use, the mean blood sugar became 86.2 <u>+</u> 11.3 mg/dl.

There were no significant difference between blood sugar values at 180 min. 3 months after use.

On the other hand, the blood sugar values show significant higher 6 months after marvelon use than the pretreatment values (P<0.001).

There was also significant difference between 3 months and 6 months values.

Fig (1): Shows O.G.T curves before, 3:6 months after treatment with marvelon which show an increase of all mean blood glucose values after 3:6 months of use, The increase in the mean blood glucose values was more after 6 months than after 3 months of use but all values remain within the normal range for glucose tolerance curve.

Figure 1. Blood glucose levels overtime.

