

Results

RESULTS

In patients of group I, the age ranged from 19 to 41 years (mean \pm S.D. = 26.4 ± 6.0). In group II, the age ranged from 20 to 30 years (mean \pm S.D. = 24.9 ± 3.7). The age in group III ranged from 20 to 35 years (mean \pm S.D. = 25.6 ± 5.4). Comparison of the age between the studied groups revealed insignificant mean values ($p > 0.05$) (table-1, chart - 1).

Table (1) : Comparison between the studied groups as regards the age.

Age St. gps	Mean \bar{X}	\pm S.D	Test of significance		
			gp.	T	p
I. Laser	26.4	± 6.0	I _{vs} II	0.663	> 0.05
II. Antiand.	24.9	± 3.7	II _{vs} III	0.323	> 0.05
III. Both	25.6	± 5.4	I _{vs} III	0.315	> 0.05

P > 0.05 i.e. insignificant.

The duration of hirsutism in group I (20 cases) ranged from 2 to 10 years. Comparison between cases with duration less than 5 years (8 cases) and cases with 5 years duration or more (12 cases) before treatment as regards frequency of hair removal per month revealed insignificant mean values ($P > 0.05$) (Table-2, Chart-2). After treatment, comparison between the same subgroups revealed insignificant mean values after 3, 6 and 12 months of laser treatment (table 3, Chart. 3).

Table (2): Comparison between cases with duration of hirsutism less than 5 years and cases with 5 years duration or more in group I as regards frequency of hair removal per month before therapy.

FHR/m gp. I (20 cases).	Mean \bar{X}	\pm S.D.
Less than 5 y (8 cases)	8.1	± 3.7
-5 y or more (12 cases)	7.3	± 2.7
t	0.525	
P	> 0.05	

P > 0.05 i.e. insignificant

Table (3) : Comparison between cases with duration of hirsutism less than 5y and cases with 5 y duration or more in group I (20 cases) as regards FHR /m after laser therapy.

FHR/m gp. I	Less than 5 y		5 y or more		Test of significance	
	\bar{X}	\pm S.D	\bar{X}	\pm S.D	t	P
3 ms	3.3	± 1.0	3.5	± 0.9	0.455	> 0.05
6ms	2.2	± 1.2	1.9	± 1.1	0.566	> 0.05
12ms	1.6	± 1.1	1.4	± 1.0	0.412	> 0.05

P > 0.05 i.e. insignificant

Menstrual cycles were regular in group I. There were menstrual irregularities in group II in 2 cases (25%) and 2 cases in group III (25%). These irregularities were normalized after treatment (table 4).

Table (4): Menstrual irregularities before and after treatment in the studied groups.

St. gps.	No. of cases	Before treatment	After treatment
I-Antiand.		2 cases (amenorrhoea)	Normalized
II-Antiand. & laser		1 case (amenorrhoea)	Normalized
		1 case (menorrhagea)	Normalized

Cases received laser treatment in group I (20 cases) showed 12 cases (60%) with normal ultrasonographic findings (i.e. idiopathic hirsutism) and 8 cases (40%) with PCOS. Comparison between the 2 subgroups as regards frequency of hair removal per month before treatment revealed insignificant results ($P > 0.05$) (Table-5, chart-4). Comparison between the 2 subgroups as regards frequency of hair removal per month after 3, 6 and 12 months of laser therapy revealed insignificant mean values ($P > 0.05$) (Table 6, chart 5).

Table (5) : Comparison between idiopathic hirsute cases and cases with PCOS in group I as regards FHR/m before treatment.

FHR/m	Mean \bar{X}	\pm S.D.
gp. I		
Idiopathic (12 cases)	8.0	± 2.9
PCOS (8 cases)	7.0	± 3.2
t	0.669	
p	> 0.05	

$P > 0.05$ i.e. insignificant

Table (6) : Comparison between idiopathic hirsute cases (12 cases) and cases with PCOS (8 cases) in group I as regards FHR/m after treatment.

gp. I \ FHR/m	Normal U/S		PCOS		Test of significance	
	\bar{X}	\pm S.D	\bar{X}	\pm S.D	T	P
3 ms	3.3	\pm 0.9	3.5	\pm 0.9	0.486	> 0.05
6ms	1.9	\pm 1.1	2.1	\pm 1.2	0.377	> 0.05
12ms	1.4	\pm 0.7	1.7	\pm 1.4	0.561	> 0.05

$P > 0.05$ i.e. insignificant

Frequency of hair removal in group I ranged from 4 to 12 per month (mean \pm S.D = 7.6 ± 3.1). In group II, it ranged from 4 to 24 per month (mean \pm S.D = 11 ± 8.2). In group III, it ranged from 4 to 12 per month (mean \pm S.D. = 8 ± 3.0). Comparison between the studied groups as regards the frequency of hair removal per month before treatment revealed insignificant mean values ($P > 0.05$) (Table 7, chart - 6).

Table (7): Comparison between the studied groups as regards frequency of hair removal per month before treatment.

St. gps. \ FHR/m.	Mean value \pm S.D.		Test of significance		
	\bar{X}		gp.	t	p
I. Laser	7.6	\pm 3.1	I _{vs} II	1.62	> 0.05
II. Antiand.	11.0	\pm 8.2	II _{vs} III	0.96	> 0.05
III. Both	8.0	\pm 3.0	I _{vs} III	0.31	> 0.05

$P > 0.05$ i.e. insignificant

Laser therapy (group I) revealed significant decrease in frequency of hair removal per month after 3, 6 and 12 months ($P < 0.01$) (Table 8, chart -7).

Table (8) : Effect of laser therapy on frequency of hair removal/m in group I (20 cases).

gp. I \ FHR/m	Before treatment	After treatment	Paired t	P
	$\bar{X} \pm S.D$	$\bar{X} \pm S.D$		
3 ms	7.6 \pm 3.10	3.7 \pm 0.94	6.15	< 0.01
6ms		2.0 \pm 1.15	9.33	< 0.01
12ms		1.5 \pm 1.01	8.52	< 0.01

P < 0.01 i.e. highly significant.

Antiandrogen therapy (CPA / Diane) revealed insignificant decrease in the mean values of frequency of hair removal per month in group II after 3 months ($P > 0.05$), and significant decreases in the mean values after 6 and 12 months ($P < 0.05$) (table 9, chart 8).

Table (9) : Effect of antiandrogen on frequency of hair removal/m in group II (8 cases).

gp. I \ FHR/m	Before treatment	After treatment	Paired t	P
	$\bar{X} \pm S.D$	$\bar{X} \pm S.D$		
3 ms	11 \pm 8.21	8.0 \pm 3.0	1.53	> 0.05
6ms		4.0 \pm 0.0	2.41	< 0.05
12ms		2.5 \pm 0.9	2.84	< 0.05

P > 0.05 i.e. insignificant P < 0.05 i.e. significant

The frequency of hair removal per month in group III who received laser and antiandrogen showed significant decrease in the mean values after 3, 6 and 12 months of therapy ($P < 0.01$) (Table 10, chart 9).

Table (10) : Effect of laser and antiandrogen on frequency of hair removal /m in group III (8 cases).

FHR/m gp. III	Before treatment		After treatment		Paired t	P
	\bar{X}	\pm S.D	\bar{X}	\pm S.D		
3ms	8.0	\pm 3.2	3.5	\pm 0.93	5.46	< 0.01
6ms			1.4	\pm 0.67	7.22	< 0.01
12ms			0.75	\pm 0.27	7.22	< 0.01

P < 0.01 i.e highly significant

After 3 months of treatment, we compared the mean value of FHR/m between the studied groups. This comparison revealed significant differences between group I vs II (mean \pm S.D. = 3.4 ± 0.94) ($p < 0.01$), and II vs III (mean \pm S.D. = 8 ± 3.02) ($p < 0.01$). This difference was insignificant between group I vs III (mean \pm S.D. = 3.5 ± 0.92) ($p > 0.05$) (table 11, Chart-10).

Table (11) : Comparison between the studied groups as regards frequency of hair removal/m after 3 months of treatment.

FHR /m St. gp.	Mean \bar{X}	\pm S.D.	Test of significance		
			gp.	t.	p
I-laser	3.4	\pm 0.94	I _{vs} II	6.238	< 0.01
II-Antiand.	8.0	\pm 3.02	II _{vs} III	4.025	< 0.01
III-Both	3.5	\pm 0.92	I _{vs} III	0.255	> 0.05

P < 0.01 i.e highly significant

P > 0.05 i.e. insignificant

After 6 months of therapy, we compared the mean values of frequency of hair removal per month between the studied groups. This comparison revealed significant difference between group I vs II (mean \pm

S.D. = 2.02 ± 1.5) ($P < 0.01$), group II vs III (mean \pm S.D. = 4 ± 0.00) ($P < 0.01$). This difference was insignificant between group I vs III (mean \pm S.D. = 1.4 ± 0.67) ($P > 0.05$) (Table 12, Chart 11).

Table (12) : Comparison between the studied groups as regards frequency of hair removal / m after 6 months of treatment.

FHR/m St. gp	\bar{X}	\pm S.D.	Test of significance		
			gp.	t.	p
I-Laser	2.02	± 1.15	I _{vs} II	4.780	< 0.01
II-Antiand.	4.00	± 0.00	II _{vs} III	11.112	< 0.01
III-Both	1.4	± 0.67	I _{vs} III	1.484	> 0.05

$P < 0.01$ i.e highly significant

$P > 0.05$ i.e. insignificant

After 12 months of therapy, we compared the mean values of frequency of hair removal per month between the studied groups. This comparison revealed significant difference between group I vs II (mean \pm S.D. = 1.5 ± 1.02) ($P < 0.05$), group II vs III (mean \pm S.D. = 2.5 ± 0.93) ($P < 0.01$) and group I vs III (mean \pm S.D. = 0.75 ± 0.27) ($P < 0.05$) (Table 13 , Chart 12)

Table (13): Comparison between the studied groups as regards frequency of hair removal/m after 12 months of treatment.

FHR/m St.gp.	Mean \bar{X}	\pm S.D.	Test of significance		
			gp.	t.	p
I- Laser	1.5	± 1.02	I _{vs} II	2.402	< 0.05
II-Antiand.	2.5	± 0.93	II _{vs} III	5.137	< 0.01
III-Both	0.75	± 0.27	I _{vs} III	2.032	< 0.05

$P < 0.05$ i.e. significant

$P < 0.01$ i.e. highly significant

Side effects of laser treatment in group I and III (28 cases) were hyperpigmentation in 6 cases (21.2%), transient burning sensation in 2 cases (7.2%) and in 20 cases (71.6%) there were no side effects. (Table 14).

Table (14) : Side effects of laser among cases of group I and group III (28 cases).

Side effects St. gp	Burning sensation		Hyperpigmentation		No side effects		Total	
	No	%	No	%	No	%	No	%
gp I and III	2	7.2	6	21.2	20	71.6	28	100.0

No i.e. number

Side effects of antiandrogen in group II and III (16 cases) were headache in 4 cases (25%), irregular bleeding in 4 cases (25%), increased body weight in 4 cases (25%) and nausea in 4 cases (25%). No side effects were observed in 6 cases (37.5%). (Table 15).

Table (15) : Side effects of antiandrogen among cases of group II and group III (16 cases).

Side effects St. gp	Group II and III	
	No	%
Headache	4	25%
Irregular bleeding	4	25%
Nausea	4	25%
Weight gain	4	25%
No side effects	6	37.5%

No i.e. number

Table (A) : clinical data of hirsute cases

No.	Age (y)	Marital Status	Duration (y)	FHR/m	Menstr.H	Family H
1	20.00	unm.	3	4	1	+
2	20.00	unm.	2	4	1	-
3	41.00	m.	5	8	1	+
4	27.00	unm.	9	8	1	-
5	29.00	m.	6	11	1	+
6	34.00	m.	7	12	1	-
7	23.00	unm.	5	12	1	+
8	32.00	m.	7	4	1	-
9	22.00	m.	10	4	1	+
10	25.00	unm.	9	8	1	-
11	20.00	unm.	3	4	1	+
12	20.00	unm.	2	9	1	-
13	31.00	m.	6	8	1	+
14	27.00	unm.	9	8	1	-
15	19.00	m.	6	8	1	+
16	34.00	m.	5	12	1	-
17	23.00	unm.	5	12	1	+
18	32.00	m.	7	4	1	-
19	24.00	m.	10	4	1	+
20	25.00	unm.	9	8	1	-
21	22.00	m.	5	8	1	+
22	28.00	m.	4	4	1	+
23	24.00	m.	4	8	1	+
24	20.00	unm.	9	24	2	+
25	22.00	m.	5	8	1	+
26	30.00	m.	4	4	1	+
27	24.00	m.	4	8	1	+
28	29.00	unm.	3	24	2	+
29	20.00	unm.	2	12	1	-
30	22.00	unm.	8	8	2	+
31	20.00	unm.	10	8	1	-
32	28.00	unm.	2	4	1	+
33	30.00	unm.	7	12	1	-
34	22.00	unm.	8	8	2	+
35	35.00	unm.	6	8	1	-
36	28.00	unm.	2	4	1	+

Marital status :

m = married

unm = unmarried

Family History :

(+) = Positive

(-) = Negative

menstrual history :

1 = Normal menstruation

2 = Menstrual irregularities

Table (B) : Clinical data and hormonal parameters of hirsute cases

No.	L.exam.	U/S	Free T. (n = 0.1 - 0.9 ng/ml)	17 OH Prog. (n= 0.1- 1.0ng/ml)	DHEAS (n=40- 400ng/ml)	Androst. (n= 0.4- 4.5 ng/ml)	Prolact. (n= 2.8-29.2 ng/ml)
1	5	pco	0.78	0.80	500.00	0.96	20.10
2	0	N	0.90	1.00	400.00	1.92	17.20
3	5	pco	0.81	0.78	400.00	0.96	16.70
4	5	N	0.76	0.61	100.00	3.50	15.10
5	0	N	0.81	1.00	80.00	0.90	12.20
6	0	N	0.67	0.20	200.00	3.40	12.20
7	0	pco	0.37	1.00	460.00	0.70	12.20
8	5	N	0.25	0.80	300.00	1.00	10.60
9	0	pco	0.50	0.90	100.00	0.60	22.10
10	0	N	0.70	0.60	200.00	1.90	3.80
11	5	pco	0.78	0.80	500.00	0.96	20.10
12	0	N	0.90	1.00	400.00	0.96	17.20
13	5	pco	0.81	0.78	400.00	1.40	18.10
14	5	N	0.76	0.61	100.00	3.50	15.10
15	0	N	0.81	1.00	80.00	0.90	12.20
16	0	N	0.67	0.20	200.00	3.40	12.20
17	0	pco	0.37	1.00	460.00	0.70	12.20
18	5	N	0.25	0.80	300.00	1.00	10.60
19	0	pco	0.50	0.90	100.00	2.60	22.10
20	0	N	0.70	0.60	200.00	0.60	3.80
21	5	pco	0.76	0.70	270.00	2.50	22.10
22	5	pco	1.20	0.69	250.00	1.50	15.50
23	5	N	0.49	0.80	240.00	2.00	15.50
24	5	pco	0.50	0.70	145.00	1.40	15.50
25	5	pco	0.76	0.70	170.00	2.50	22.10
26	5	pco	1.20	0.69	150.00	0.90	15.50
27	5	N	0.49	0.80	250.00	1.00	15.50
28	5	pco	0.50	0.70	254.00	1.40	15.50
29	5	N	0.67	0.40	170.00	1.60	20.10
30	5	pco	0.99	0.80	160.00	2.50	14.10
31	5	pco	0.96	0.70	250.00	2.50	10.10
32	0	pco	0.45	0.34	70.00	0.80	6.70
33	5	N	0.67	0.80	270.00	1.60	14.20
34	5	pco	0.99	0.90	90.00	2.50	24.10
35	5	pco	0.96	0.20	250.00	2.50	12.10
36	0	pco	0.45	0.84	270.00	0.80	6.70

Local examination

0 = Hirsutism only

5 = Hirsutism + Acne + Seborrhea.

U/S examination

N = Normal U/S

pco = Polycystic ovary

Table (C) : Frequency of hair removal/m after 3,6, and 12 months of treatment

No.	3m	6m	12m
1	2.00	0.75	1.00
2	4.00	2.00	2.00
3	4.00	4.00	4.00
4	4.00	0.75	0.50
5	4.00	2.00	2.00
6	2.00	4.00	0.75
7	4.00	2.00	1.00
8	2.00	0.75	1.00
9	4.00	2.00	0.75
10	4.00	2.00	2.00
11	2.00	0.75	1.00
12	4.00	2.00	2.00
13	4.00	4.00	4.00
14	4.00	0.75	0.50
15	4.00	2.00	2.00
16	2.00	4.00	0.75
17	4.00	2.00	1.00
18	2.00	0.75	1.00
19	4.00	2.00	0.75
20	4.00	2.00	2.00
21	8.00	4.00	2.00
22	4.00	4.00	2.00
23	8.00	4.00	4.00
24	12.00	4.00	2.00
25	8.00	4.00	2.00
26	4.00	4.00	2.00
27	8.00	4.00	4.00
28	12.00	4.00	2.00
29	4.00	2.00	1.00
30	4.00	2.00	1.00
31	4.00	0.75	0.50
32	2.00	0.75	0.50
33	4.00	2.00	1.00
34	4.00	2.00	1.00
35	4.00	0.75	0.50
36	2.00	0.75	0.50

Table (D) : Side effects of laser and antiandrogen

No	Laser	Antiandrogen
1	0.00	-
2	0.00	-
3	0.00	-
4	0.00	-
5	0.00	-
6	0.00	-
7	0.00	-
8	0.00	-
9	2.00	-
10	2.00	-
11	0.00	-
12	0.00	-
13	0.00	-
14	0.00	-
15	1.00	-
16	0.00	-
17	0.00	-
18	0.00	-
19	2.00	-
20	2.00	-
21	-	1.00
22	-	5.00
23	-	0.00
24	-	0.00
25	-	1.00
26	-	5.00
27	-	0.00
28	-	0.00
29	1.00	2.00
30	0.00	3.00
31	0.00	0.00
32	0.00	4.00
33	2.00	2.00
34	2.00	3.00
35	0.00	0.00
36	0.00	4.00

Side effects of laser

0 = no side effects
 1 = burning sensation
 2 = hyperpigmentation.

Side effects of antiandrogen

0 = no side effects
 1 = irregular bleeding
 2 = headache and increased body weight
 3 = irregular bleeding and increased body weight
 4 = headache and nausea
 5 = nausea and increased body weight

Chart. (1) : comparison between the studied groups regarding the age.

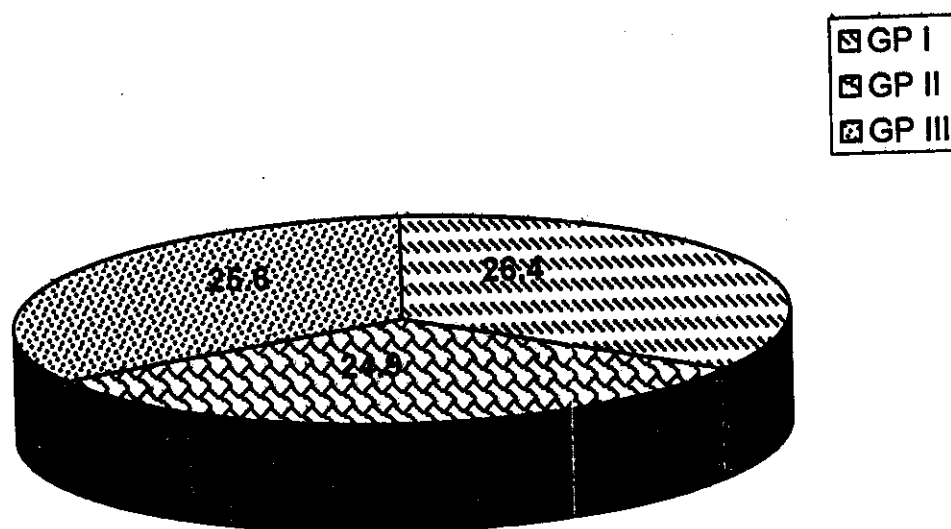


Chart (2) : Comparison between cases with duration of hirsutism less than 5 years and 5 years or more in group I as regard FHR/m before treatment.

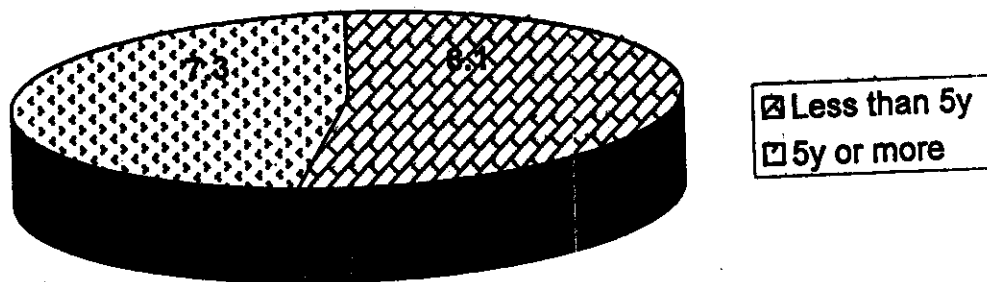


Chart (3) : Comparison between cases with duration of hirsutism less than 5 years (8 cases) and 5 years or more (12 cases) as regards frequency of HR/m after 3,6 and 12 months of treatment

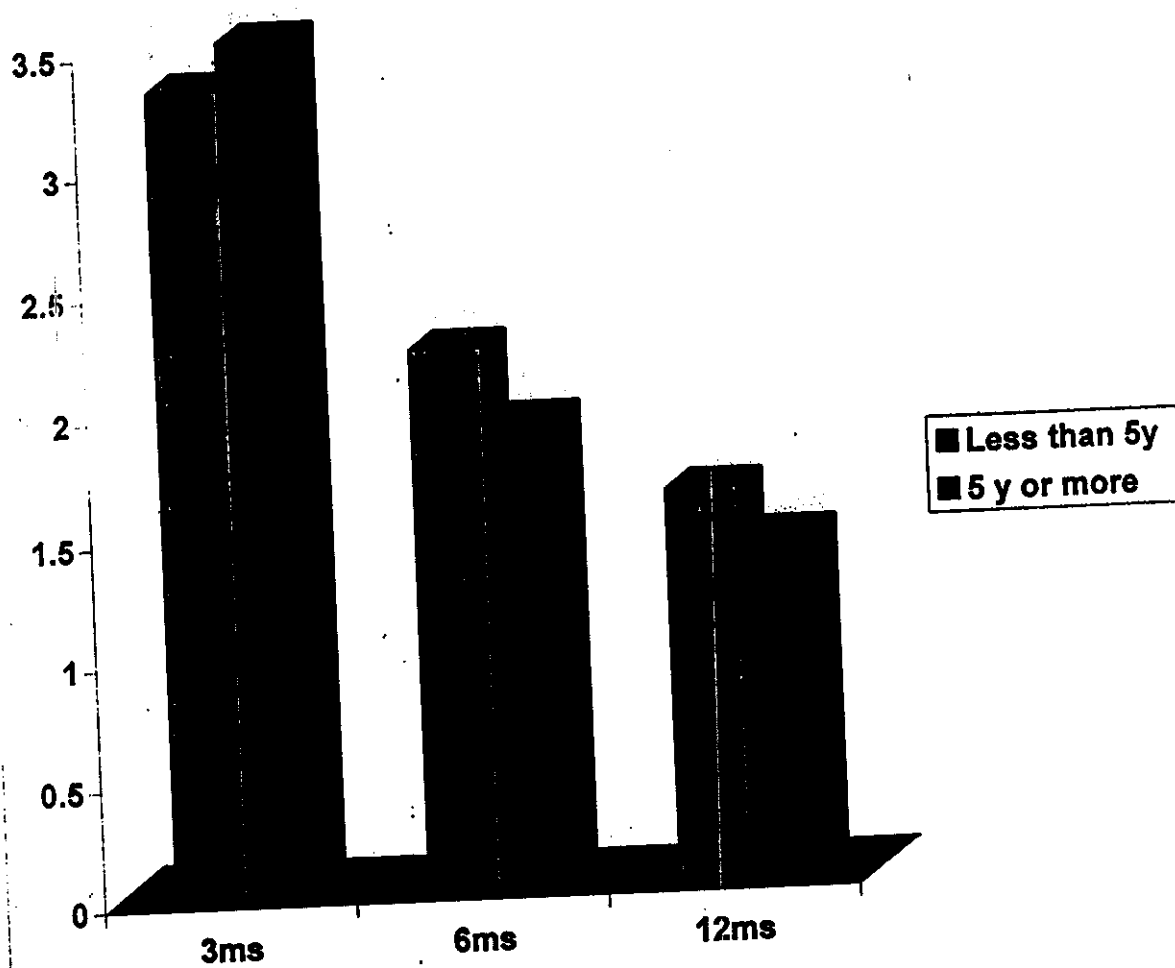
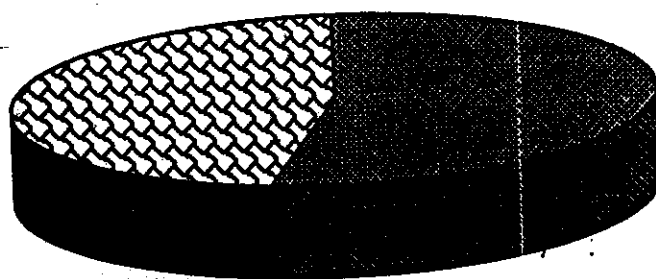


Chart (4) : Comparison between Idlopathic hirsute cases (12 cases) and cases with PCOS (8 cases) in group las regards FHR/m before treatment.



■ Idlopathic hirsute cases

■ PCOS (8 cases)

Chart (5) : Comparison between Idiopathic hirsute cases and cases with PCOS in group I as regards FHR/m after 3, 6 and 12 months of laser therapy

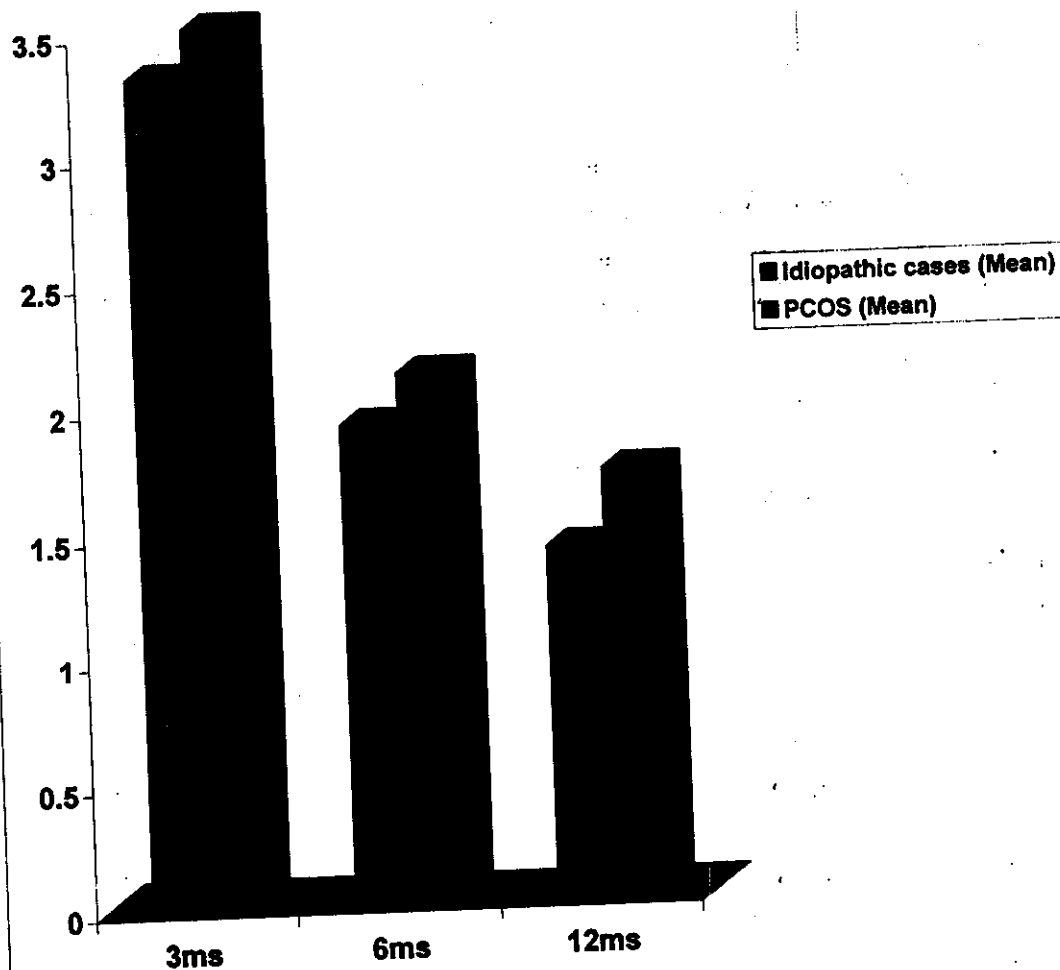


Chart (6) : Frequency of hair removal/month among the studied groups before treatment

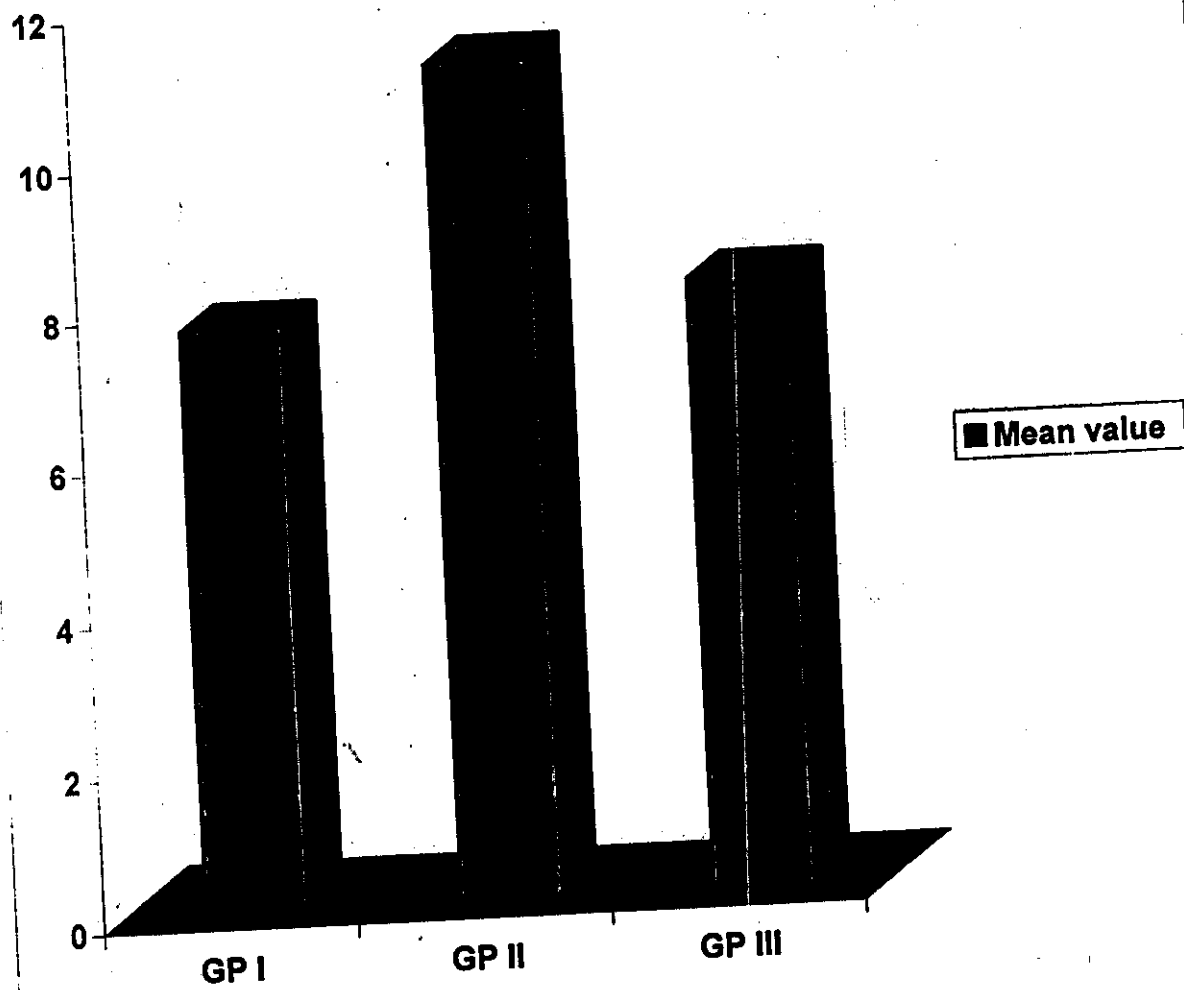


Chart (7) : Effect of laser on frequency of hair removal/m in group I (20 cases).

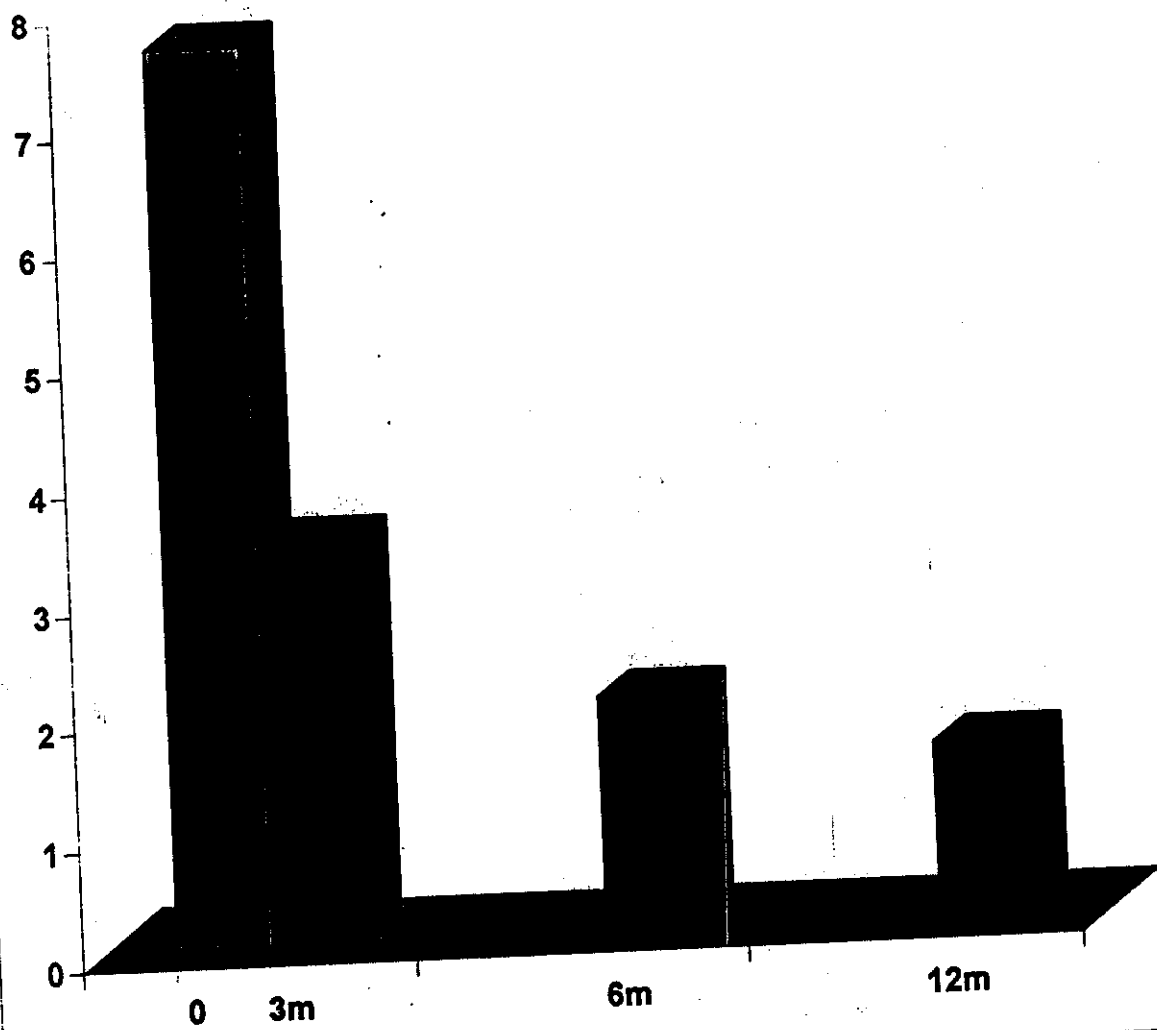


Chart (8) : Effect of antiandrogen on frequency of hair removal /m in group II (8 cases)

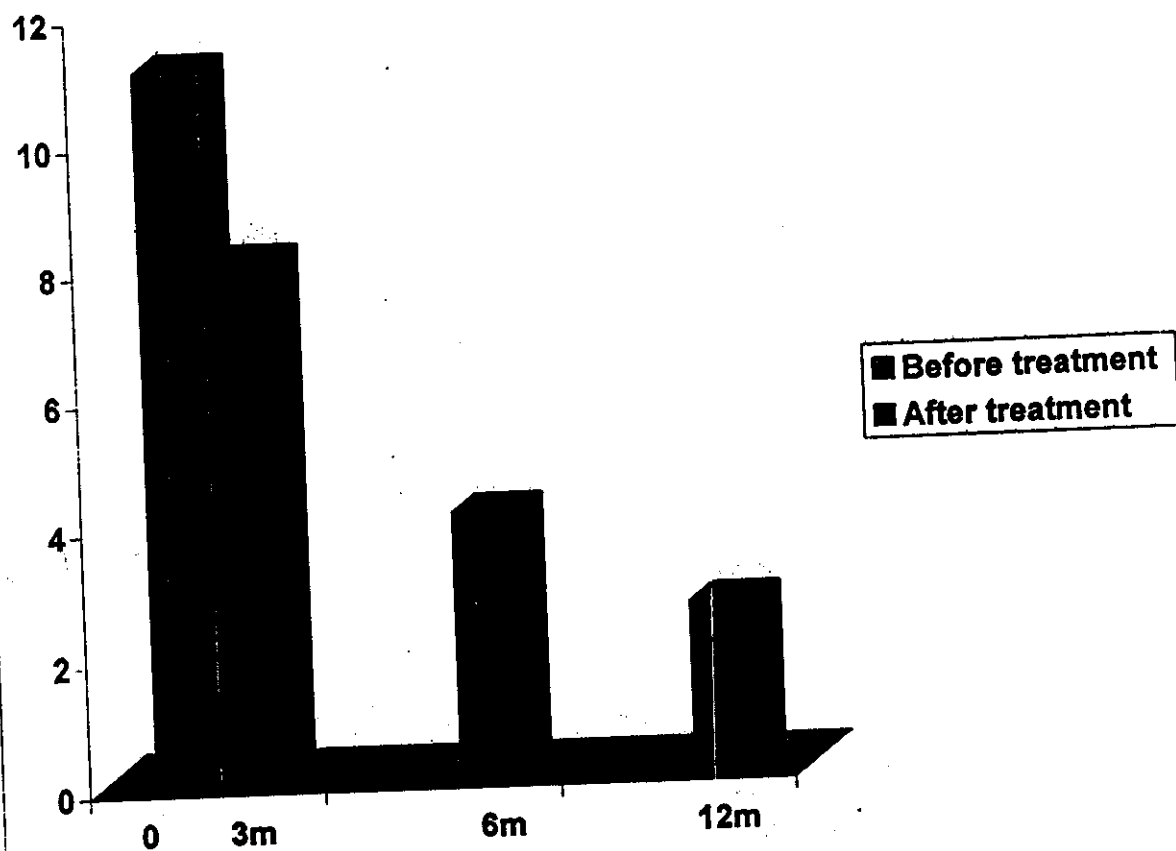


Chart (9) : Effect of both laser and antiandrogen on frequency of hair removal/m in group III (8 cases)

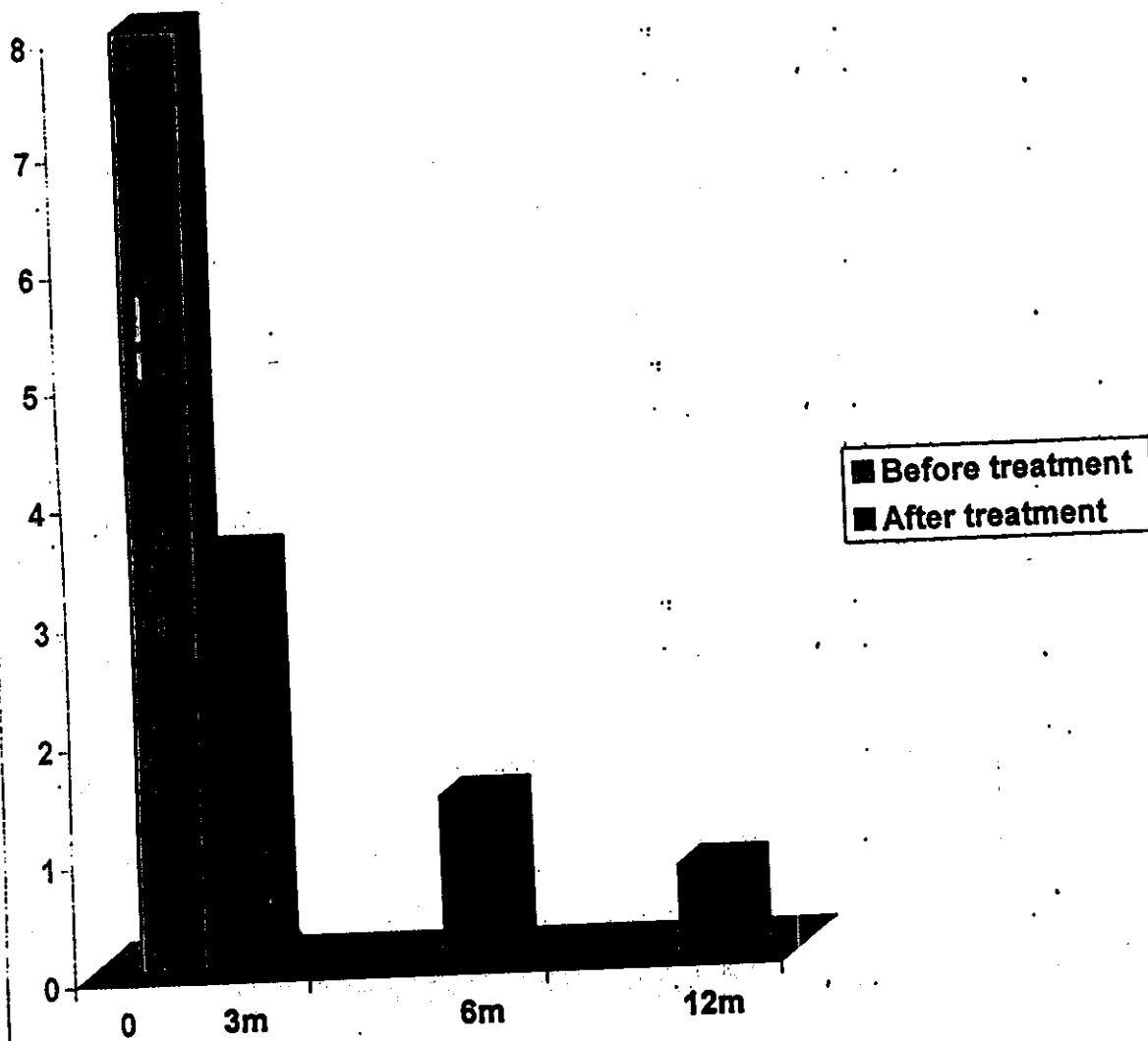


Chart (10) : Comparison between the studied groups as regards frequency of hair removal/m after 3 months of treatment

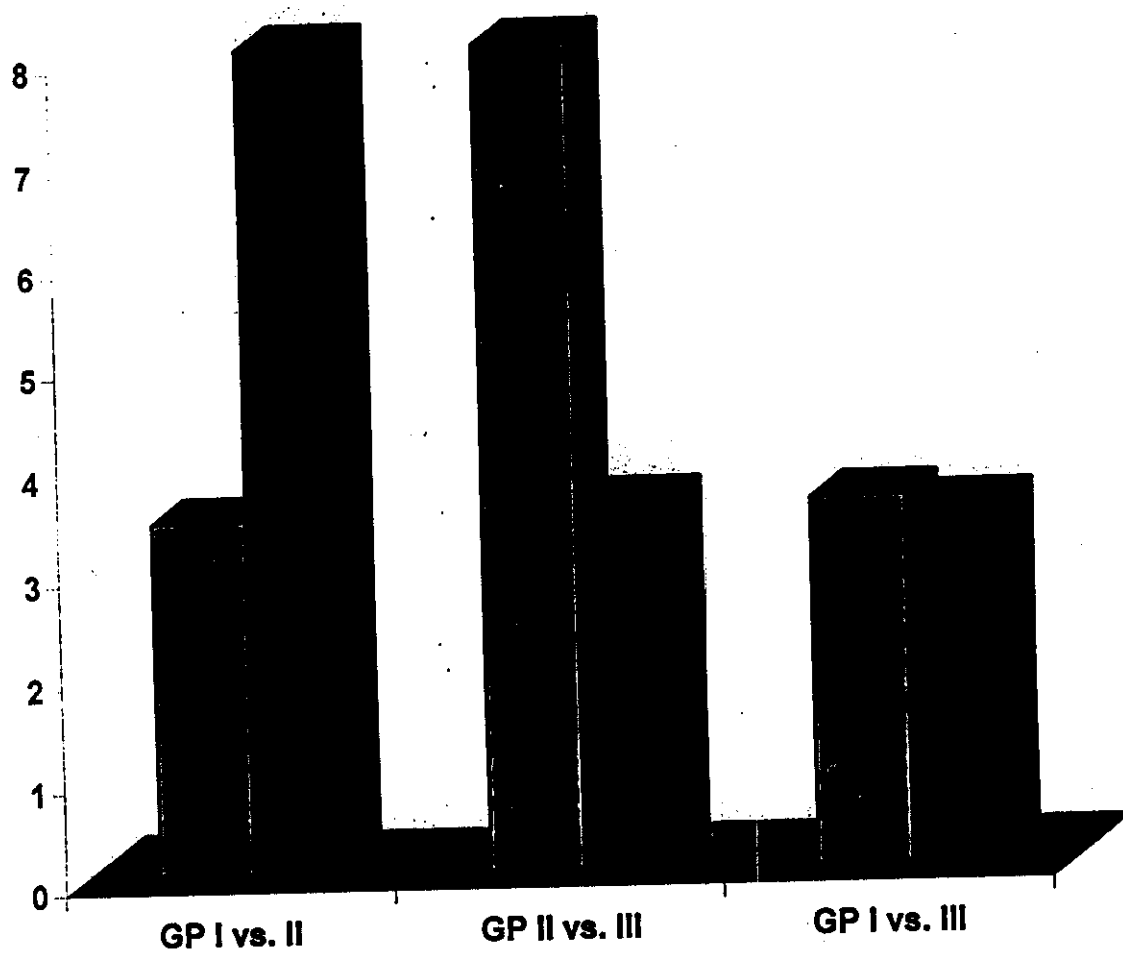


Chart (11) : Comparison between the studied groups as regards frequency of hair removal/m after 6 months of treatment

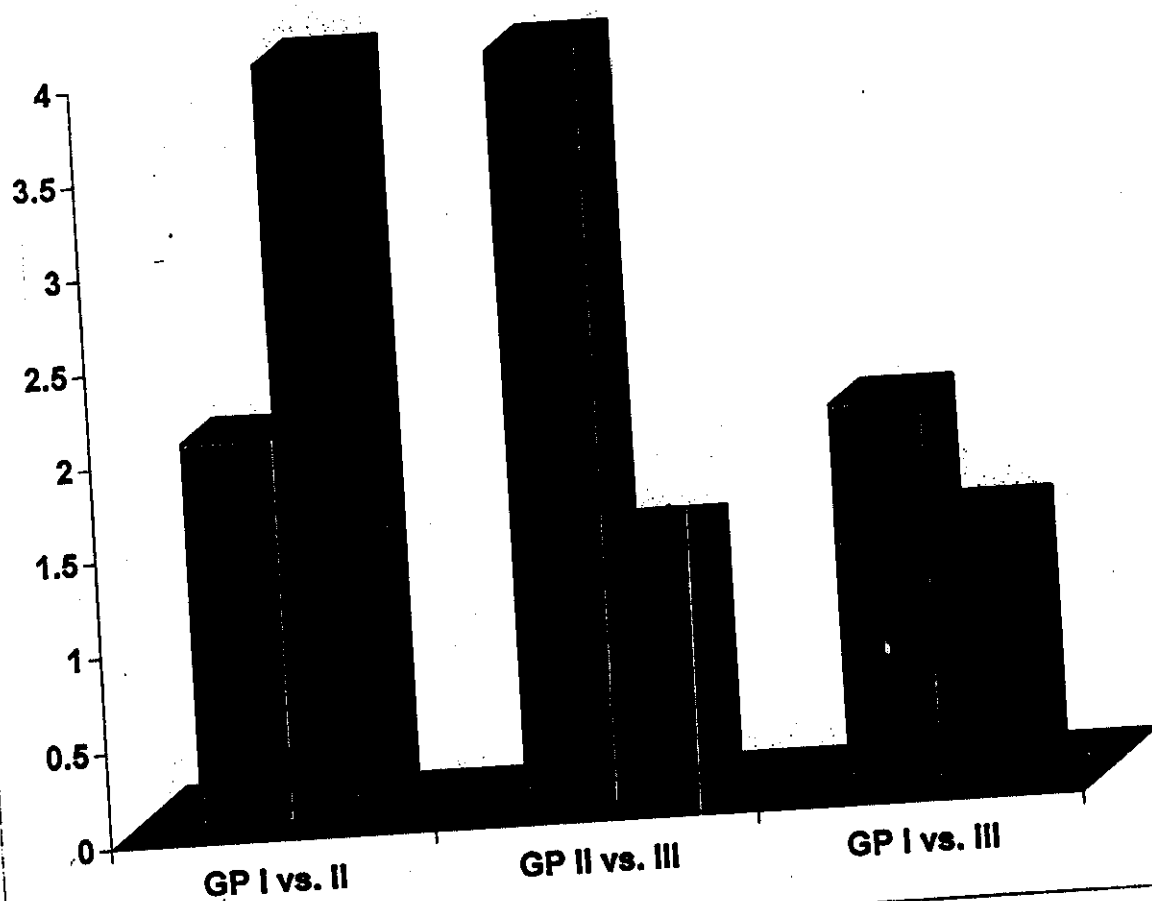


Chart (12) : Comparison between the studied groups as regard frequency of hair removal/m after 1 year of treatment

