

## RESULTS

This work was done on 40 patients all of them were suffering from anovulatory infertility due to PCOD, hypergonadotrophic hypogonadism or hyperprolactinemia.

Table (1) shows the age distribution among the studied groups, the age of patients of studied first group ranged between 20 – 39 years with a mean value of  $26.6 \pm 3.2$  years, while that of the second group ranged between 21 – 28 years with a mean value of  $28.2 \pm 5.3$  years. The age of the third group ranged between 20.5 – 39 years with the mean value of  $27.9 \pm 4.1$  years. The age of the fourth group ranged between 22 – 38.5 years with a mean value of  $25.7 \pm 3.72$  years.

There was no significant difference between the four studied groups regarding the age.

Regarding the duration of infertility (Table 2), the first group included 10 patients ranged between 2 – 10 years with a mean value of  $5.66 \pm 1.33$  years. The second group included 10 patients ranged between 3 – 13 years of infertility with a mean value  $7.23 \pm 2.9$  years. The third group ranged between 4 – 9.5 years of infertility with a mean value  $6.11 \pm 1.98$  years. The fourth group ranged between 3.5 – 10.5 years with a mean value  $6.73 \pm 2.76$  years.

There was no statistically significant difference in the duration of infertility between the studied groups.

Regarding the types of infertility (Table 3), primary infertility included 24 patients (60%), while secondary infertility included 16 patients (40%) of patients.

Regarding the ovulation response to the methods of induction of ovulation (Table 4) and Figure (I) shown. In the first group ovulation response was demonstrated in 5 patients (50%), response was demonstrated in 4 patients (40%). In the third group ovulation response was demonstrated in 4 patients (40%) and in the fourth group ovulation response was demonstrated in 6 patients (60%).

There was significant difference between the studied groups.

Regarding the folliculometry in 6 cycles was done during the follow-up in relation to the methods of induction of ovulation (Table 5). In 190 cycles to the women of all groups shown that gradually increased in the folliculometry in the last 4, 5 and 6 cycles than first cycle.

Group I, regarding the mean value of the first cycle it was  $6.37 \pm 2.92$ mm while the mean value of the sixth cycle was  $18 \pm 7.06$ mm.

Group II, regarding the mean value of the first cycle it was  $6.0 \pm 2.39$ mm while the mean value of the fifth cycle was  $18 \pm 6.76$ mm.

Group III, regarding the mean value of folliculometry in the first cycle it was  $8.50 \pm 4.03$ mm, while the mean value of the fourth cycle was  $20.0 \pm 8.78$ mm.

Group IV, regarding the mean value of the first cycle it was  $12.5 \pm 2.88\text{mm}$ , while the mean value of the fourth cycle was  $20.1 \pm 3.67\text{mm}$ .

There was statistically significant and highly significant difference between the folliculometry in the first cycle, fourth cycle and sixth cycle.

Figure II, shown that gradually increased the folliculometry in 4 cycles during follow-up in Group IV, regarding the mean value of the first cycle was  $12.5 \pm 2.88\text{mm}$ . In the second cycle the mean value of ovarian response was  $14.1 \pm 3.35\text{mm}$ . In the third cycle the mean value was  $16.7 \pm 3.33\text{mm}$ . While in the fourth cycle the mean value was  $20.1 \pm 3.67\text{mm}$ .

There was highly significant difference between ovulation response in the first cycle, second, third, and fourth cycle, this was due to the increase of the dose in a stepwise manner to 4.5 ampoules of pergonal depending on the individual ovarian response in Group IV.

Table 6 and Figure III, regarding the occurrence of pregnancy among the studied groups. In the first protocol of ovulation induction the occurrence of pregnancy was (20%) of 10 women. In the second protocol of ovulation induction the occurrence of pregnancy was (10%) in 10 patients. In the third protocol of ovulation induction the occurrence of pregnancy was (20%) in 10 patients. While the occurrence of pregnancy in the fourth protocol of ovulation induction was (30%) in 10 patients.

There was no significant difference between the studied groups.

**Table (1): Age Distribution Among the Studied Groups**

Age St. gps	Mean	SD	Range	F-Test	P-Value
Group I	26.6	3.2	20-29	0.63	2.3 Not Significant
Group II	28.2	5.3	21-38		
Group III	27.9	4.1	20.5-39		
Group IV	25.7	3.72	22-38.5		

There was no age difference between the studied groups.

**Table (2): Distribution of the Studied Groups According to Duration of Infertility**

Duration St. gps	Mean	SD	Range	F-Test	P-Value
Group I	5.66	1.33	2-10	1.32	0.65 Not Significant
Group II	7.23	2.9	3-13		
Group III	6.11	1.98	4-9.5		
Group IV	6.73	2.76	3.5-10.5		

There was no age difference between the studied groups.

**Table 3: Types of Infertility Among the Studied Patients**

Types of Infertility	No.	%
Primary Infertility	24	60.0
Secondary Infertility	16	40.0
Total	40	100.0

**Table 4: Methods of Induction of Ovulation In Relation to Ovulation Response**

No. of Mature & Nonmature Follicle St. gps	Ovulation		No. Ovulation		Total		Chi2	P-Value
	No.	%	No.	%	No.	%		
Group I	5	50.0	5	50.0	10	100	2.45	0.049*
Group II	4	40.0	6	60.0	10	100		
Group III	4	40.0	6	60.0	10	100		
Group IV	6	60.0	4	40.0	10	100		

\* = Significant.

**Table (5): Folliculometry in 6 Cycles During Follow-up In Relation to Induction of Ovulation**

St. gps Follicul-ometry	Clomid	Clomid + Tamoxifen	Pergonal	Clomid + Pergonal	F-Test	P- Value
	Mean±SD	Mean±SD	Mean±SD	Mean±SD		
Cycle 1	6.37±2.92	6.0±2.39	8.50±4.03	12.5±2.88	8.21	<0.01**
Cycle 2	8.62±3.33	8.50±2.78	10.9±3.72	14.1±3.35	5.73	<0.01**
Cycle 3	10.6±3.54	10.7±3.70	18±5.19	16.7±3.33	4.90	<0.01**
Cycle 4	13.7±4.03	15±5.34	20±8.78	20.1±3.67	5.82	<0.01**
Cycle 5	18±5.12	18±6.76	----	----	0.34	<0.05*
Cycle 6	18±7.06	----	----	----	----	----

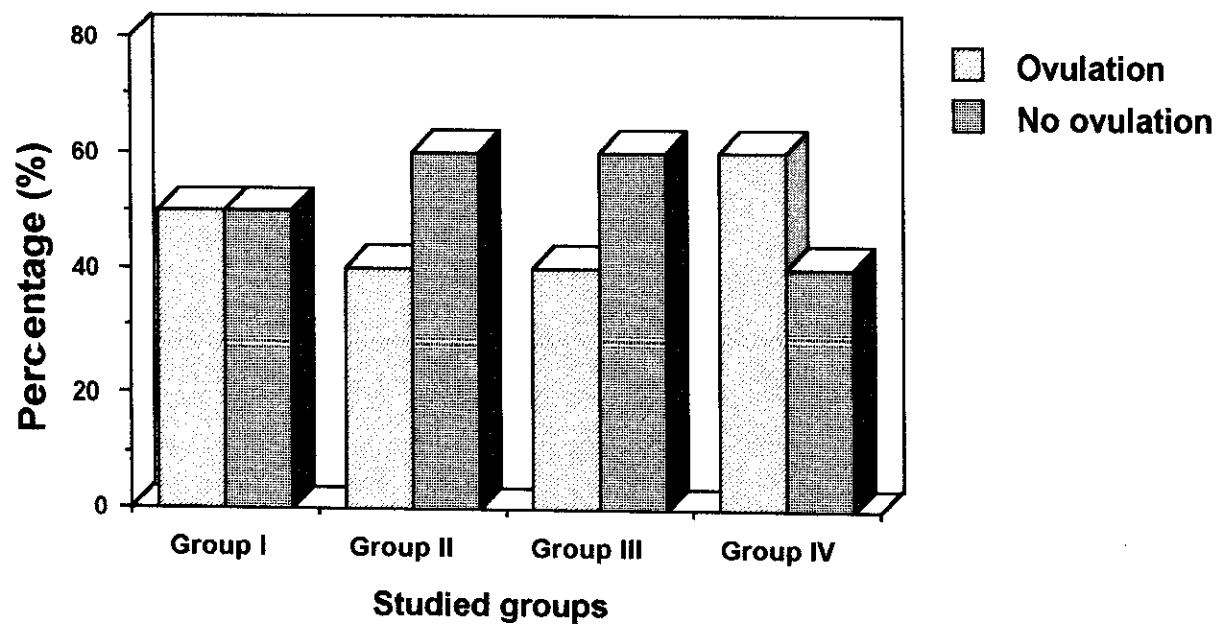
\* = Significant.

\*\*= Highly Significant.

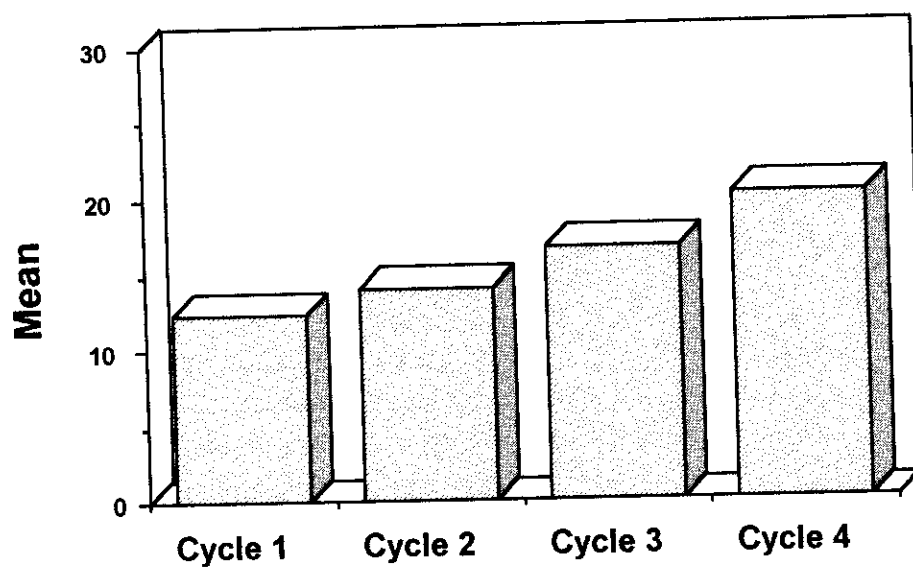
**Table (6): Distribution of Studied Groups According to Occurance of Pregnancy**

Outcome St. gps	Responders		No Responders		Total		Chi2	P- Value
	No.	%	No.	%	No.	%		
Group I	2	20.0	8	80.0	10	100	1.66	0.54
Group II	1	10.0	9	90.0	10	100		
Group III	2	20.0	8	80.0	10	100		
Group IV	3	30.0	7	70.0	10	100		

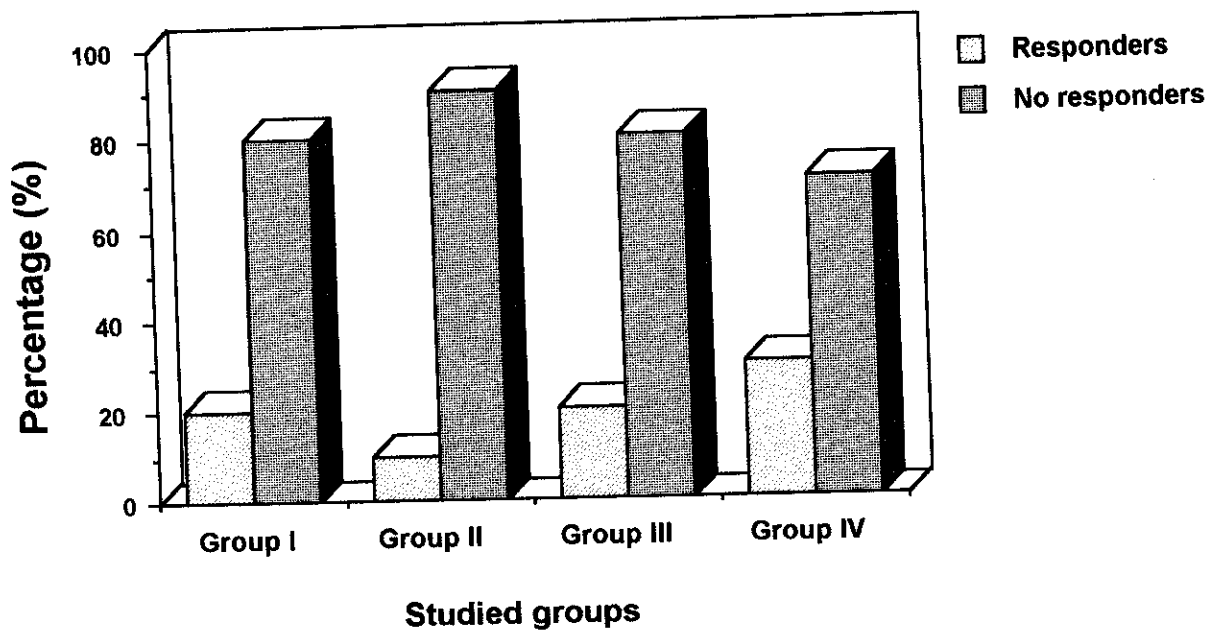
There was no statistical significant difference between studied groups.



**Fig ( I ): Ovulation response among the studied groups**

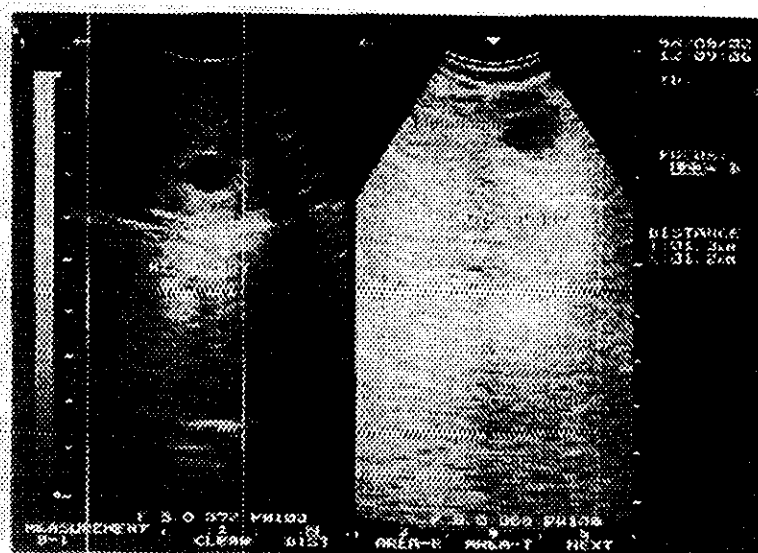


**Fig (II): Folliculometry in 4 cycles during follow up in group four**

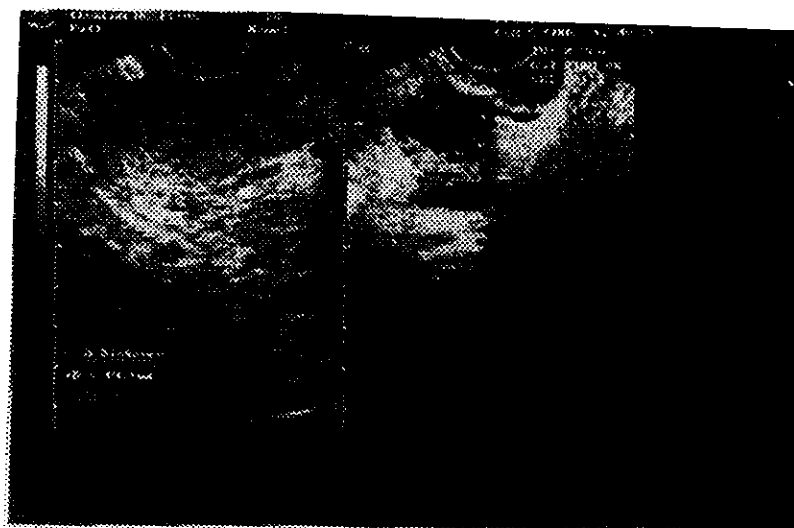


**Fig (III): Occurrence of pregnancy among the studied groups**

a)



b)



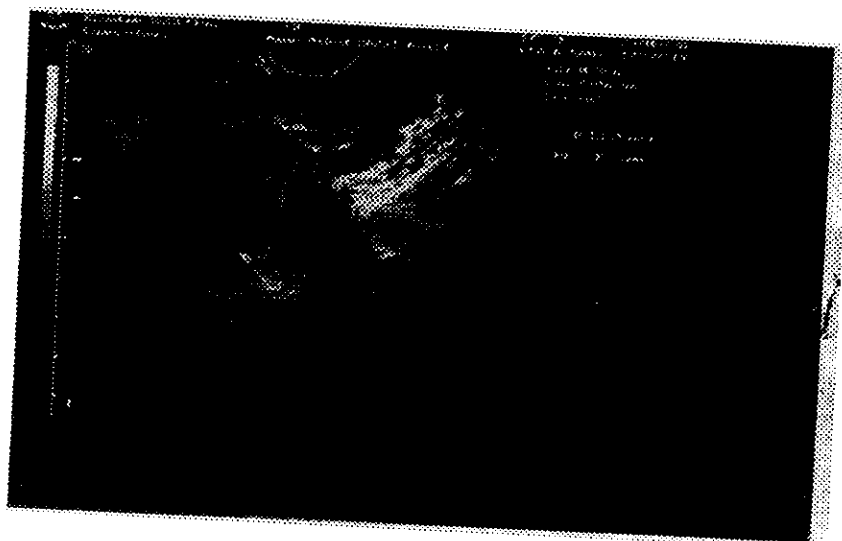
**Figure 8** Ovulation induction in women with primary infertility for 6 years, transvaginal ultrasound monitoring.

- a) Ovulation induction on day 12, of the "1<sup>st</sup> cycle" undertaking of clomiphene citrate 50 mg, the largest follicle has a diameter of 13mm.
- b) Ovulation induction on day 12, of the "2<sup>nd</sup> cycle" undertaking of clomiphene citrate 100 mg, the largest follicle has a diameter of 19.1mm.

a)



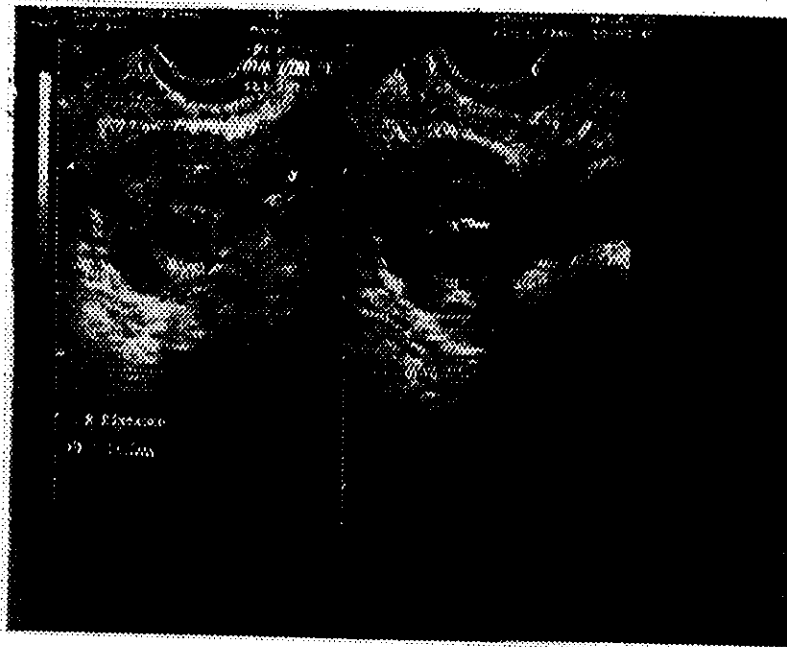
b)



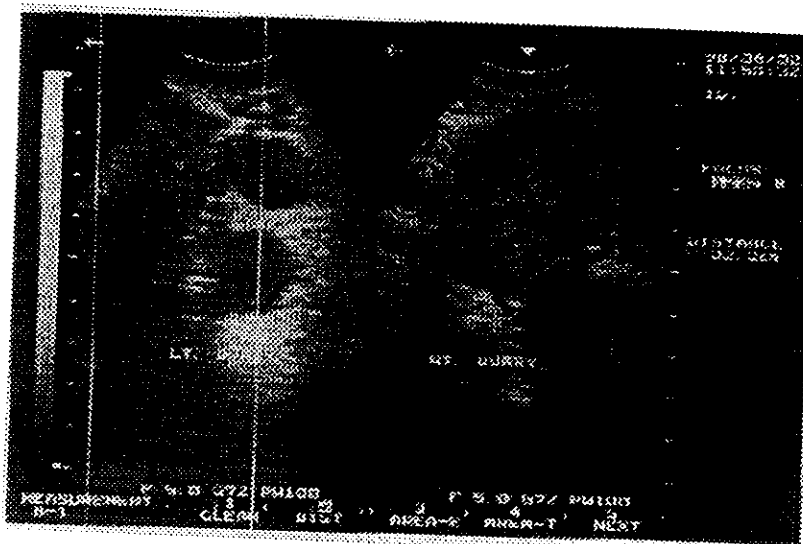
**Figure 9** Ovulation induction in women with primary infertility for 6 years, transvaginal ultrasound monitoring.

- a) Ovulation induction on day 12, of the "1<sup>st</sup> cycle" undertaking of clomiphene citrate and tamoxifen 10mg, the largest follicle has a diameter of 13.2mm.
- b) Ovulation induction on day 14, of the "2<sup>nd</sup> cycle" undertaking of clomiphene citrate and tamoxifen, the largest follicle has a diameter of 15.2mm.

a)

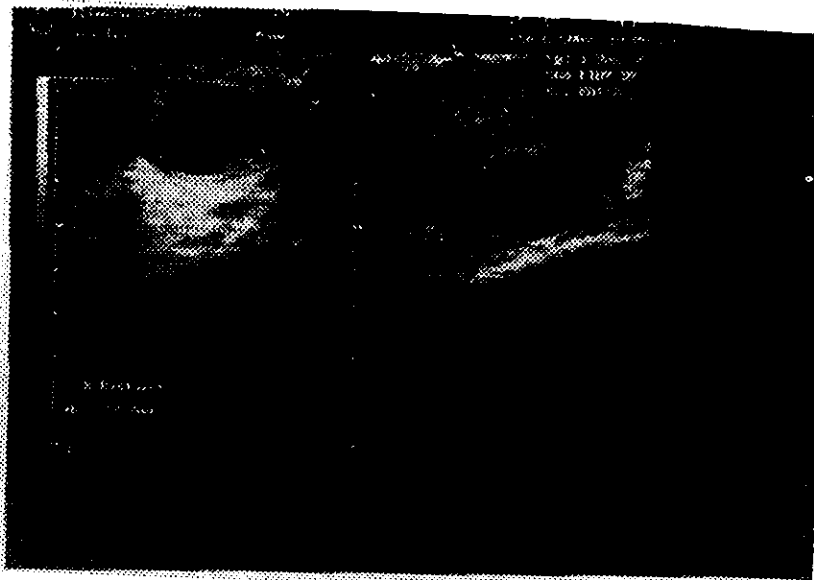


b)



**Figure 10** Ovulation induction in women with primary infertility, transvaginal ultrasound monitoring.

- a) Ovulation induction of the "1<sup>st</sup> cycle", with pergonal 5 ampoules, the largest follicle has a diameter of 11.6mm.
- b) Ovulation induction of the "3<sup>rd</sup> cycle", pergonal increase from day 8 to 3 ampoules / day the largest follicle has a diameter of 22mm.



**Figure 11** Ovulation induction in a polycystic ovary, transvaginal ultrasound monitoring on day 12, of the "4<sup>th</sup> cycle" undertaking of clomiphene citrate 50 mg and pergonal 5 ampoules the largest follicle has a diameter of 22.7mm.