Results

This prospective study included 40 patients, who were diagnosed as having infertility and were undergoing intracytoptasmic sperum injection (ICSI).

All included patients had a normal husband's semen analysis and were completed the study.

The patients undergoing ICSI were randomly divided into 2 groups:

Group (1): (the study group): It include 20 infertile patients (17 primary and 3 secondary) who received a combination of 400 mg Pentoxifylline (Trental®, sanofi-aventis, Egypt) and 400 IU Tocopherol (Vitamine E, mepaco-medifood –Egypt) twice/day. This combination was continued for 3 months. We then proceeded to the cycle of embryo transfer and the treatment was discontinued at the time of the transfer.

Group (2): (the control group) it include 20 in fertile patients (17 primary and 3 secondary) who did not receive Pentoxifylline and Tocopherol.

Results of the study are shown in the following tables and graphs.

Table (1) shows the mean age ± SD standard deviations of both groups

Age (years) / ***Groups***	Mean ± SD	***(t)***	***P***
Study	28.9 ± 4.6	0.04	>0.05
Control	29.3 ± 4.4		

There was no statistically significant differences between both groups regarding mean age (p> 0.05).

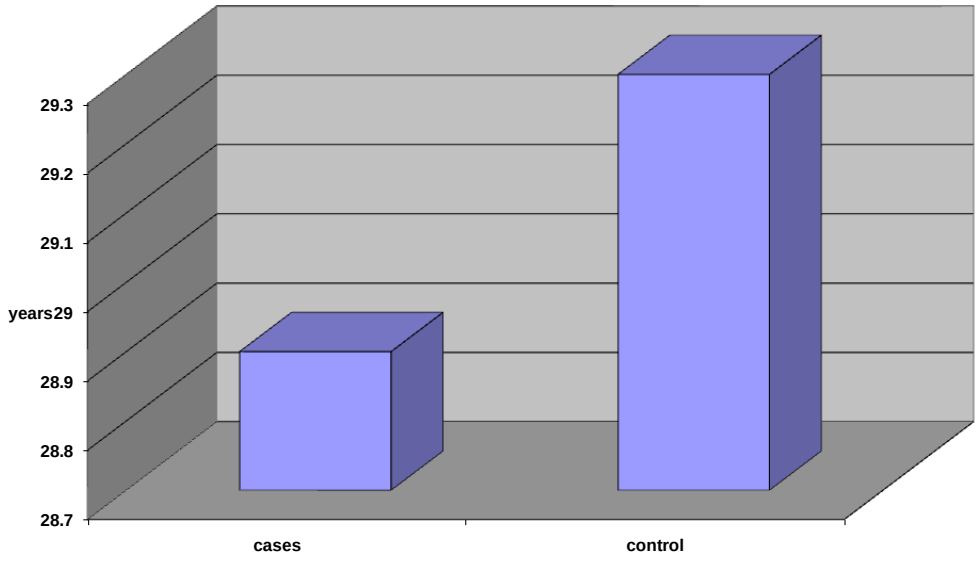

Fig.(3) means of ages of the study groups

Table (2) shows Means ± SD of infertility duration (years) in both groups

Infertility duration (years) / *Groups*	mean± SD	*(t)*	*P*
Study	5.3 ± 1.6	0.22	>0.05
Control	5.4 ± 1.3		

There were no statistically significant difference between both groups regarding mean infertility duration (p>0.05).

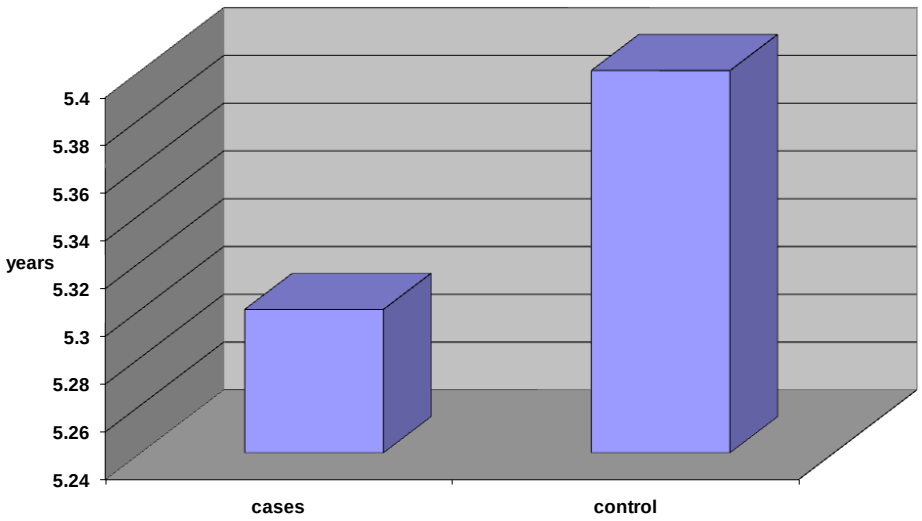

Fig.(4) means of infertility duration of the study groups

Table (3) shows Means ± SD of baseline of endometrial thickness (mm) before treatment with PTX and TCP

End. Thick.(mm) / ***Groups***	mean± SD	***(t)***	***P***
Study	7.5 ± 1.6	0.95	> 0.05
Control	6.99 ± 1.8		

There were no statistically significant difference between both groups concerning baseline endometrial thickness before treatment (p> 0.05) with PTX and TCP

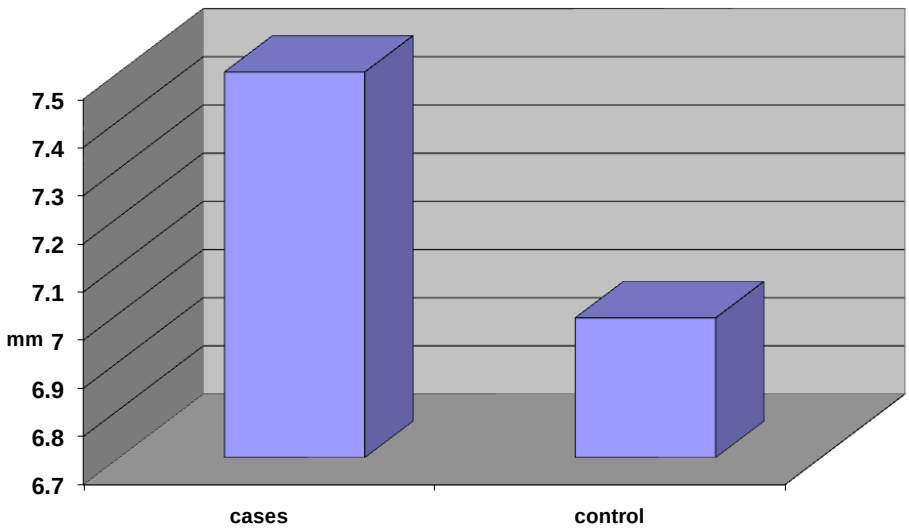

Fig.(5) means of endometrial thickness of the study groups

Table (4) shows the mean ± SD of endometrial thickness (mm) at the time of embryo transfer after treatment with PTX and TCP

End. Thick (mm) / ***Groups***	Mean ± SD	***(t)***	***P***
Study	8.7 ± 1.8	2.12	<0.05
Control	7.7 ± 1.1		

There were statistically significant thicker endometrium in the study group that received PTX and TCP.

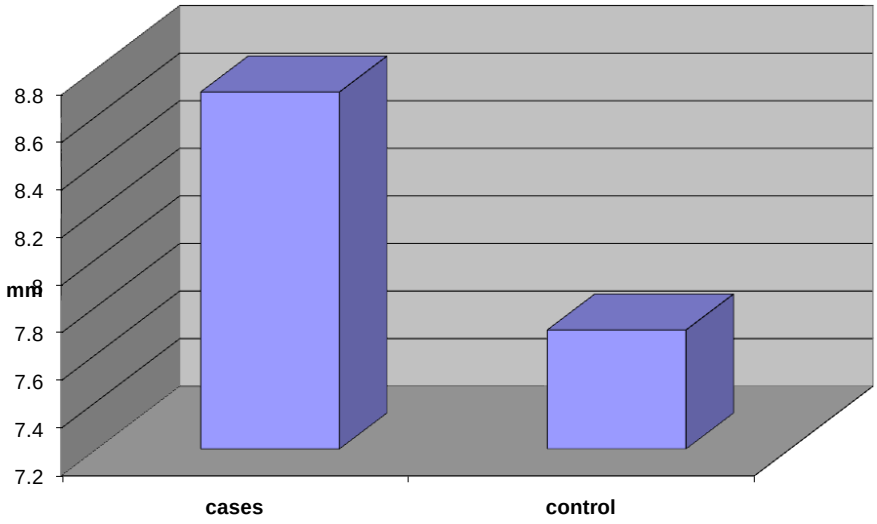

Fig.(6) means of endometrial thickness after ttt of the study groups

Table (5) shows the mean ± SD of endometrial thickness (mm) before and after treatment by PTX and TCP among study groups

End. Thick (mm)	Mean ± SD	$(\bar{X})$ ***of the difference***	***Paired (t)***	***P***
Before treatment	7.5 ± 1.6	1.2 ± 0.79	6.8	<0.001
After treatment	8.7 ± 2.1			

There was a highly statistically significant more endometrial thickness after treatment (p<0.001).

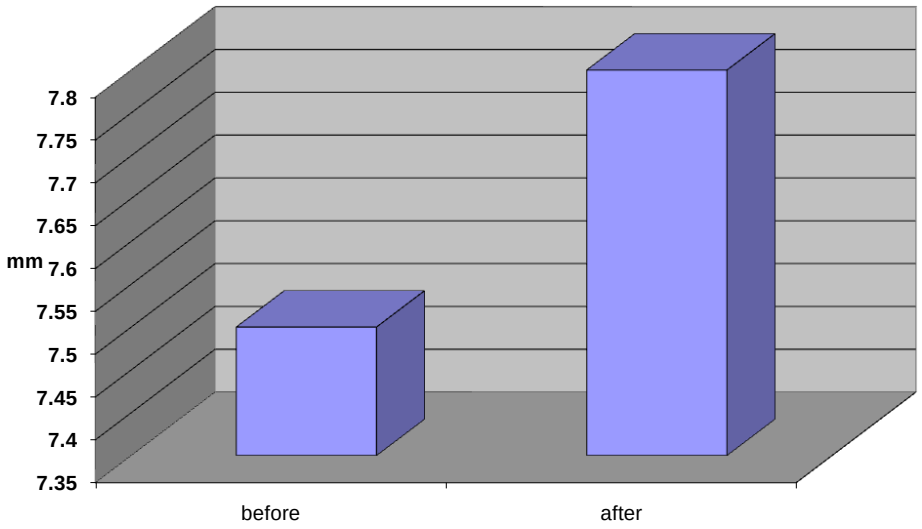

Fig.(7) means of endometrial thickness before and after ttt of the study groups

Table (6) shows the mean ± SD of endometrial thickness (mm) before cycle according to pregnancy in the patients who got pregnant compared to those who did not in the study and control groups.

End. Thick.(mm) / Groups	No pregnancy		Pregnancy		t	p
	no	mean± SD	no	mean± SD		
Study	8	6.7±1.4	12	8.1±1.6	2.07	<0.05
Control	12	5.9 ±1.5	8	8.6±0.8	5.22	<0.001

The mean ± SD of endometrial thickness before the cycle was statistically significant higher among pregnant females than among non-pregnant females in the study group ($p<0.05$) and in the control group ($p<0.001$).

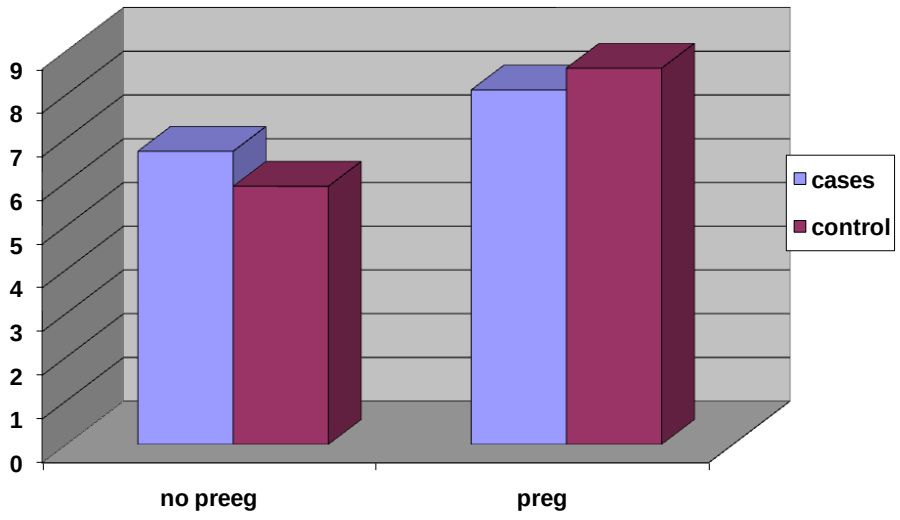

Fig.(8) means of endometrial thickness before cycle acoording to clinical pregnancy

Table (7) shows the mean ± SD of endometrial thickness (mm) after cycle according to pregnancy in the patients who got pregnant compared to those who did not in the study and control groups.

End. Thick.(mm) / Groups	No pregnancy		Pregnancy		t	p
	no	mean± SD	no	mean± SD		
Study	8	7.4 ±1.4	12	9.6 ±2.04	2.86	<0.01
Control	12	6.4±1.6	8	9.7 ± .04	5.59	<0.001

The mean ± SD of endometrial thickness after cycle was statistically significant higher among pregnant females than among non pregnant females in the study group (p<0.01) and also in control group (p<0.001).

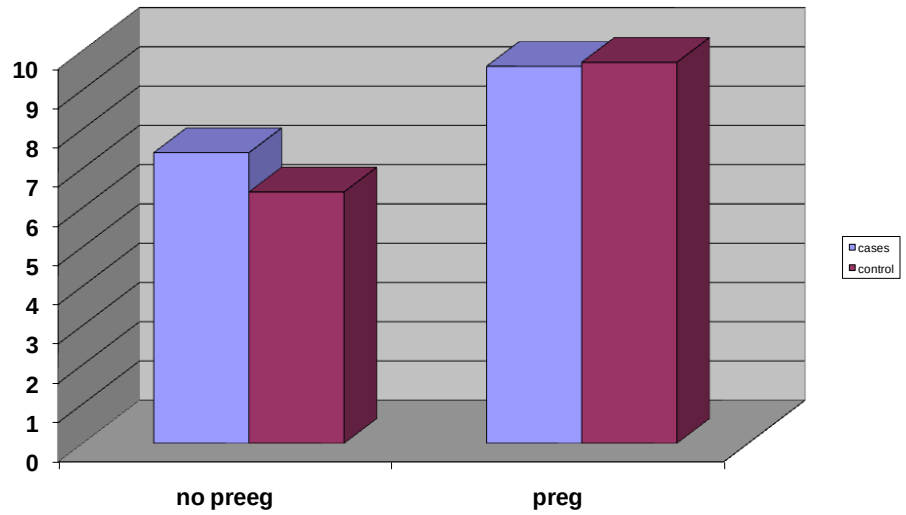

Fig.(9) means of endometrial thickness after cycle acoording to clinical pregnancy

Table (8) shows the mean ± SD of endometrial thickness (mm) before cycle and the type of infertility in the study and control groups.

End. Thick.(mm) / Groups	Primary		Scendary		t	p
	no	mean± SD	no	mean± SD		
Study	17	7.6± 1.7	3	6.8±1.2	0.99	>0.05
Control	17	6.7 ±1.8	3	8.9±0.2	4.87	<0.05

The mean ± SD of endometrial thickness before cycle was lower with secondary infertility than with primary infertility in study group, but this difference was not statistically significant (p>0.05). However in the control group the mean endometrial thickness was statistically significant higher with secondary infertility (p<0.05).

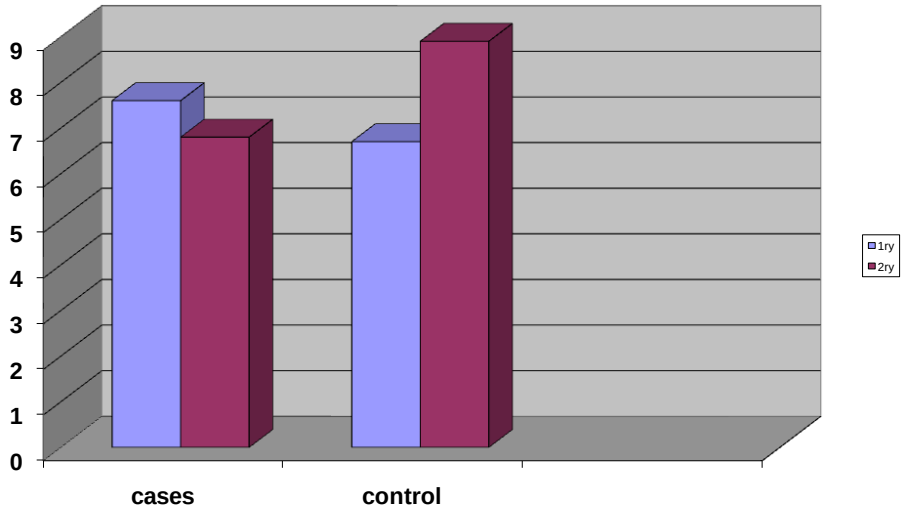

Fig.(10) means of endometrial thickness before cycle acoording to type of infertility

Table (9) shows the mean ± SD of endometrial thickness (mm) at the time of embryo transfer and type of infertility in the study and control groups.

End. Thick.(mm) / Groups	Primary		Scendary		t	p
	no	mean± SD	no	mean± SD		
Study	17	8.8± 2.2	3	8 ± 1.4	0.83	>0.05
Control	17	7.3±2.1	3	9.9 ± 0.6	2.06	<0.05

The mean ± SD of endometrial thickness at the time of embryo transfer was less with secondary infertility than with primary infertility in study group, but this difference was not statistically significant (p>0.05). However in the control group the mean endometrial thickness was statistically significant more with secondary infertility (p<0.05).

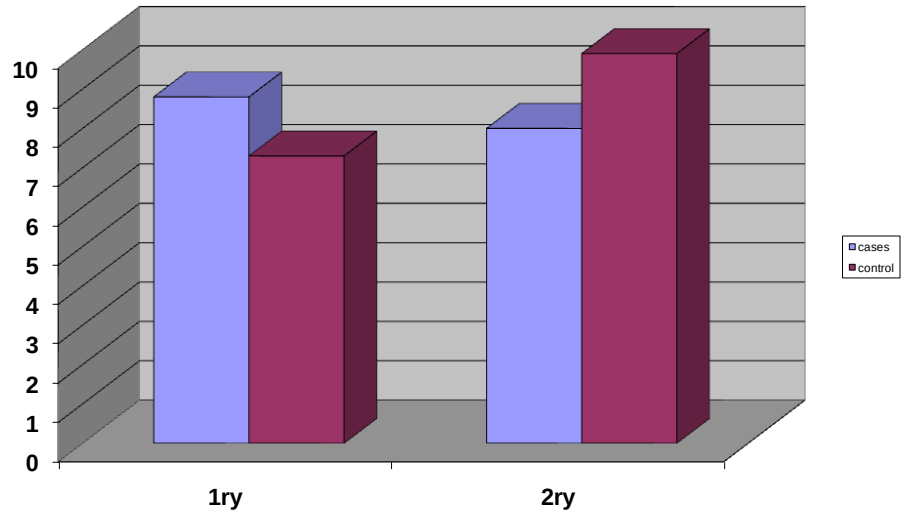

Fig.(11) Means of endometrial thickness at embryo transfer