RESULTS

The study was carried out on 50 subfertile male patients who suffered from different grades of varicocele. The patients were divided into two groups :

First Group : In which 25 patients were subjected to Palomo varicocelectomy.

Second Group : In which 25 patients were subjected to the inguinal varicocelectomy.

The age of the patients of the first group ranged from 23-35 years with a mean of 27.9 ± 3.5 years while the age of the patients of the second groups ranged from 23-33 years with a mean of 26.5 ± 2.6 years.

The marital duration of the patients of the first group ranged from 3-7 years with a mean of 4.5 ± 1.2 years while the marital duration of the patients of the second group ranged from 3-9 years with a mean of 4.4 ± 1.6 years. All patients of the study were complaining of primary infertility.

Table (5) shows the special habits of the studied cases which include cigarette smoking, cannabis abuse and alcoholic beverages.

Special habits	Palomo		Inguinal		All patients	
	n= 25	%	n= 25	%	n= 50	%
Non-smoker	11	44	13	52	24	48
Mild-smoker(up to 10 cigarettes)	5	20	6	24	11	22
Moderate-smoker (up to cigarettes)	6	24	4	16	10	20
Heavy-smoker (more than 20 cigarettes)	3	12	2	8	5	10
Cannabis	2	8	3	12	5	10
Alcohol	2	8	1	4	3	6

Table (5) : Special habits of the studied cases

Table (6) shows that 26 (52%) of the studied cases were complaining of subjective symptoms in the form of pain and/or heaviness. Only 5 (10%) patients had piles and 3 (6%) patients had varicose veins of the lower limb.

Present history	Palomo		Inguinal		All patients	
	n= 25	%	n= 25	%	n= 50	%
Pain and / or heaviness	12	48	14	56	26	52
Other varicosities						
Piles	2	8	3	12	5	10
Varicose vein. (L. L.)	2	8	1	4	3	6
Both conditions	-	0	-	0		0

Table (6) : Present history of the studied cases.

Table (7) shows that 7 (14%) patients gave a positive past history of a direct trauma to the scrotal region, 6 (12%) patients gave a past history of urethritis and 7 (14%) patients gave a history of treated bilharziasis.

Past history	Palomo		Inguinal		All patients	
	n= 25	%	n= 25	%	n= 50	%
Direct trauma	3	12	4	16	7	14
Urethritis	3	12	3	12	6	12
B	4	16	3	12	7	14

Table (7) : Past history of the studied cases.

Table (8) shows the grades of varicocele of the studied cases. The study included 16 (32%) patients with grade I varicocele, 17 (34%) patients with grade II varicocele and 17 (34%) patients with grade III varicocele.

Grade	Palomo (n=25)			Inguinal (n=25)			All patients (n=50)		
	I	II	III	I	II	III	I	II	III
Number	8	8	9	8	9	8	16	17	17
%	32	32	36	32	36	32	32	34	34

Table (8) : Grades of varicocele of the studied cases.

The preoperative sperm count of cases subjected to Palomo operation ranged from 2 to 35 million/c.c. with a mean of 17.92 ± 9.86 million/c.c. which increased to 31.85 ± 20.84 million/c.c. six months after the operation.

The preoperative sperm count of cases subjected to the inguinal approach ranged from 0.5 to 42 million/c.c. with a mean of 14.96 ± 10.87 million/c.c. which increased to 21.56 ± 16.02 million/c.c. six months after the operation.

The preoperative motility percentage of cases subjected to Palomo operation ranged from 5 to 40% with a mean of 19.8 ± 8.95% which increased to 43 ± 22.51% six months after the operation.

The preoperative motility percentage of cases subjected to the inguinal approach ranged from 5 to 50% with a mean of 22.2 ± 14.15% which increased to 35.8 ± 23.57% six months after the operation.

The preoperative abnormal forms percentage of cases subjected to Palomo operation ranged from 20 to 60% with a mean of 33.6 ± 9.95% which decreased to 27.04 ± 5.94% six months after the operation.

The preoperative abnormal forms percentage of cases subjected to the inguinal approach ranged from 20 to 80% with a mean of 38.2 ± 15.27% which decreased to 33.2 ± 11.8% six months after the operation.

The preoperative S.T. percentage of cases subjected to Palomo operation ranged from 0 to 30% with a mean of 14.56 ± 7.84% which increased to 53.2 ± 20.0% six months after the operation.

The preoperative S.T. percentage of cases subjected to the inguinal approach ranged from 0 to 30% with a mean of 14.0 ± 7.87% which increased to 39.08 ± 20.19% six months after the operation.

Pregnancy rate can be considered as a practical evaluation of success or failure of the technique used for management of varicocele. In fact 11 (44%) wives were able to conceive after their husbands underwent Palomo operation and 8 (32%) wives were able to conceive after their husbands underwent the inguinal varicocelectomy. The over all pregnancy rate of the studied cases was 19 (38%) after one year of follow-up.

Table (9) shows the pregnancy rate after varicocelectomy.

Procedure	Palomo		Inguinal		Total	
	No.	%	No.	%	No.	%
Still infertile	14	56	17	68	31	62
Fertile	11	44	8	32	19	38
Total	25	100	25	100	50	100

Table (9) : Pregnancy rate after varicocelectomy among the studied cases.

Table (10) shows the time at which pregnancy occurred after Palomo operation. Pregnancy occurred 4 months after the operation in 4 cases, after 5 months in 2 cases, after 7 months in 2 cases and after 8 months in 3 cases.

Cases no	Time at which pregnancy occurred after the operation
1	7 th month
4	8 th month
5	4 th month
7	4 th month
10	8 th month
11	7 th month
14	5 th month
19	8 th month
20	5 th month
23	4 th month
25	4 th month

Table (10) :

Table (11) shows the time at which pregnancy occurred after the inguinal approach. Pregnancy occurred 4 months after the operation in 2 cases, after 5 months in 2 cases, after 7 months in 3 cases and after 8 months in one case.

Cases no	Time at which pregnancy occurred after the operation
1	8 th month
4	4 th month
7	5 th month
13	5 th month
18	7 th month
19	4 th month
22	7 th month
24	7 th month

Table (11) :

Statistical Analysis

Statistical analysis of the results consisted of the following:

(A) The relationship between the preoperative findings of the cases of the study (age , marital duration , presence or absence of varicosities , past history of bilharziasis , grade of varicocele and the preoperative semen parameters) and the pregnancy rate after both Palomo and the inguinal approaches .

(B) Patients whose wives became pregnant were compared with those who failed to achieve pregnancy as regard the semen parameters and swelling test percentage, six months after the operation.

(C) Effects of varicocelectomy on semen parameters and S.T. percentage of :

- All cases subjected to Palomo operation (25 Patients).
- All cases subjected to the inguinal approach (25 Patients).
- Cases in which ***pregnancy occurred*** after Palomo operation (11 patients) and after the inguinal approach (8 patients).
- Cases in which ***no pregnancy occurred*** after Palomo operation (14 patients) and after the inguinal approach (17 patients).

(D) Relationship between the grade of varicocele and post-operative semen parameters and fertilizing capacity.

(A) The relationship between the preoperative findings of the studied cases of the study and the pregnancy rate after either Palomo or the inguinal approach.

To detect if there is any relationship between the preoperative seminal parameters, the swelling test, and the outcome of successful surgery as a guide for future selection of cases for surgery, the patients were divided into two groups, the first group in which pregnancy occurred (11 patients after Palomo operation and 8 patients after the inguinal approach) and the second group in which no pregnancy had occurred (14 patients after Palomo operation and 17 patients after the inguinal approach). The two groups were compared as regard the different parameters and characteristics.

Table (12) shows the relationship between the age of the patients and pregnancy rate after varicocelectomy.

Fertility	Palomo (n=25)			Inguinal (n = 25)			All patients (n=50)		
	No	x̄	S.D	No	x̄	S.D	No	x̄	S.D
Still infertile	14	28.43	3.76	17	26.47	2.98	31	27.35	3.43
Fertile	11	27.27	3.26	8	26.63	1.77	19	27	2.69
t	1.12			0.17			0.4		
p	> 0.05			> 0.05			> 0.05		

Table (12)

Table (12) showed that there was no significant relationship between the group in which pregnancy occurred and the group in which no pregnancy occurred (P> 0.05).

Table (13) shows the relationship between the marital duration and the pregnancy rate after varicocelectomy.

Fertility	Palomo (n=25)			Inguinal (n=25)			All patients (n=50)		
	No	x̄	S.D	No	x̄	S.D	No	x̄	S.D
Still infertile	14	4.57	1.34	17	4.65	1.87	31	4.61	1.63
Fertile	11	4.55	1.13	8	4	0.93	19	4.32	1.06
t	0.05			1.16			0.76		
p	> 0.05			> 0.05			> 0.05		

Table (13)

There was no significant relationship between the group in which pregnancy occurred and the other group with no pregnancy (P> 0.05).

Table (14) shows the relationship between the presence of varicosities and pregnancy rate after varicocelectomy.

Varicosities	Palomo (n=25)		Inguinal (2=25)		All patients (n=50)	
	Absent	Present	Absent	Present	Absent	Present
Still infertile	12	2	15	2	27	4
Fertile	9	2	6	2	15	4
Fisher exact test	0.07		0.71		0.58	
p	> 0.05		> 0.05		> 0.05	

Table (14)

There was no significant relationship between the group in which pregnancy occurred and the other group with no pregnancy (P> 0.05).

Table (15) shows the relationship between the presence of bilharziasis and pregnancy rate after varicocelectomy.

Past history of B	Palomo (n=25)		Inguinal (n=25)		All patients (n=50)	
	B-ve	B+ve	B-ve	B+ve	B-ve	B+ve
Still infertile	12	2	15	2	27	4
Fertile	9	2	7	1	16	3
Fisher exact test	0.07		0.003		0.08	
p	> 0.05		> 0.05		> 0.05	

Table (15)

Table (15) showed that there was no significant relationship between the group in which pregnancy occurred and the other group with no pregnancy (P> 0.05).

Table (16) shows the relationship between the grade of varicocele and pregnancy rate after varicocelectomy .

Grade	Palomo (n=25)			Inguinal (n=25)			All patients (n=50)		
	I	II	III	I	II	III	I	II	III
Still infertile	5	4	5	6	6	5	11	10	10
Fertile	3	4	4	2	3	3	5	7	7
Fisher exact test	0.255			0.299			0.46		
p	> 0.05			> 0.05			> 0.05		

Table (16)

There was no significant relationship between the group in which pregnancy occurred and the other group with no pregnancy (P> 0.05), i.e. the grade of varicocele has no relation to the outcome of surgery.

Table (17) shows the preoperative seminal parameters and swelling test percentage among the studied cases according to the grade of varicocele.

Grade	I (n =15)		II (n =18)		III (n =17)		F	P
Semen parameters	X̄	S.D.	X̄	S.D.	X̄	S.D.		
Count (million/c.c).	16.4	11.23	16.61	10.96	16.29	9.58	0.001	>0.05
Motility %	20.33	11.25	23.06	14.46	19.41	9.17	0.44	>0.05
Abnormal forms %	34.67	12.46	36.11	14.61	36.76	12.24	0.104	>0.05
Swelling test %	13.2	9.03	13.67	7.05	15.88	7.55	0.551	>0.05

Table (17)

No significant difference was detected, i.e. the grade of varicocele had no relationship to the preoperative seminal parameters or fertilizing capacity($P > 0.05$).

Table (18) shows the preoperative semen parameters and S.T. percentage of cases subjected to Palomo operation, in relation to pregnancy rate after the operation.

Fertility	No	Count/c.c.		Motility%		Ab.F.%		S.T.%	
		X̄	S.D.	X̄	S.D.	X̄	S.D.	X̄	S.D.
Still infertile	14	11.43	7.84	14.64	7.46	37.14	11.55	11.07	7.12
Fertile	11	26.18	4.38	26.36	5.95	29.09	4.91	19.0	6.54
t		5.58		4.25		2.16		2.86	
p		<0.01		<0.01		<0.05		<0.05	

Table (18) showed the following:

Count (million/c.c) :

The mean preoperative sperm count for those who achieved pregnancy was 26.18±4.38 million/c.c. and for those who failed to achieve pregnancy was 11.43±7.84 million/c.c. This difference was statistically significant (P<0.01).

Motility percentage :

The mean preoperative motility percentage for those who achieved pregnancy was 26.36±5.95% and for those who failed to achieve pregnancy was 14.64±7.64% . This difference was statistically significant (P<0.01).

Abnormal forms percentage :

The mean preoperative abnormal forms percentage for those who achieved pregnancy was 29.09±4.91% and for those who failed to achieve pregnancy was 37.14±11.55% . This difference was statistically significant (P<0.05).

Swelling test percentage :

The mean preoperative swelling test percentage for those who achieved pregnancy was 19.0±6.54% and for those who failed to achieve pregnancy was 11.07±7.12%. This difference was statistically significant (P<0.05).

Table (19) shows the preoperative semen parameters and S.T. percentage of cases subjected to the inguinal approach, in relation to pregnancy rate after the operation.

Fertility	No	Count/c.c.		Motility%		Ab.F.%		S.T.%	
		$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Still infertile	17	9.53	7.49	18.53	14.77	40.59	17.4	10.0	5.86
Fertile	8	26.5	7.27	30.0	9.26	33.13	7.99	22.5	3.55
t		5.33		2.01		1.15		5.54	
P		<0.01		<0.05		<0.05		<0.05	

Table (19) showed the following:

Count (million/c.c) :

The mean preoperative sperm count for those who achieved pregnancy was 26.5±7.27 million/c.c. and for those who failed to achieve pregnancy was 9.53±7.49 million/c.c. This difference was statistically significant (P<0.01).

Motility percentage :

The mean preoperative motility percentage for those who achieved pregnancy was 30.0±9.26% and for those who failed to achieve pregnancy was 18.53±14.77% . This difference was statistically significant (P<0.05).

Abnormal forms percentage :

The mean preoperative abnormal forms percentage for those who achieved pregnancy was 33.13±7.99% and for those who failed to achieve pregnancy was 40.59±17.4% . This difference was statistically significant (P<0.05).

Swelling test percentage :

The mean preoperative swelling test percentage for those who achieved pregnancy was 22.5±3.55% and for those who failed to achieve pregnancy was 10.0±5.86%. This difference was statistically significant (P<0.05).

Tables (20,21,22 and 23) show the comparison between the preoperative semen parameters and swelling test percentage in both Palomo and the inguinal approaches for those who achieved pregnancy and these who failed to achieve pregnancy.

Count (million/c.c) :

Fertility	Palomo			Inguinal			t	P
	No	$\bar{X}$	S.D.	No	$\bar{X}$	S.D.		
Still infertile	14	11.43	7.84	17	9.53	7.49	0.67	>0.05
Fertile	11	26.18	4.38	8	26.5	7.27	0.12	>0.05

Table (20)

Motility percentage :

Fertility	Palomo			Inguinal			t	p
	No	$\bar{X}$	S.D.	No	$\bar{X}$	S.D.		
Still infertile	14	14.64	7.46	17	18.53	14.77	0.89	>0.05
Fertile	11	26.36	5.95	8	30	9.26	1.04	>0.05

Table (21)

Abnormal Forms percentage :

Fertility	Palomo			Inguinal			t	p
	No	$\bar{X}$	S.D.	No	$\bar{X}$	S.D.		
Still infertile	14	37.14	11.55	18	40.59	17.4	0.63	>0.05
Fertile	11	29.09	4.91	7	33.13	7.99	1.36	>0.05

Table (22)

Swelling test percentage :

Fertility	Palomo			Inguinal			t	p
	No	$\bar{X}$	S.D.	No	$\bar{X}$	S.D.		
Still infertile	14	11.07	7.12	18	10	5.86	0.46	>0.05
Fertile	11	19	6.54	7	22.5	3.55	1.37	>0.05

Table (23)

Tables 20,21,22 and 23 showed that there were no statistically significant difference in the preoperative count, motility percentage, abnormal forms percentage or swelling test percentage in patients operated upon by Palomo or inguinal approach ($P > 0.05$) .

Table (24) shows the preoperative seminal parameters and swelling test percentage in both the still infertile and fertile groups for all patients (50 patients)

Semen parameters	Still infertile (n = 31)		Fertile (n = 19)		t	p
	$\bar{X}$	S.D.	$\bar{X}$	S.D.		
Count (million/c.c.)	10.39	7.58	26.32	5.59	7.92	<0.01
Motility %	16.77	12.01	27.38	7.51	3.62	<0.01
Abnormal forms%	39.09	14.91	30.79	6.51	2.27	<0.01
Swelling test %	10.48	6.37	20.47	5.64	5.61	<0.01

Table (24) showed a statistically significant difference in the preoperative count, motility percentage , abnormal forms percentage and swelling test percentage in the group in which pregnancy occurred than the other group ($p>0.01$) i.e. the better the preoperative semen parameters and swelling test percentage , the higher the pregnancy rate.

(B) Patients whose wives became pregnant were compared with those who failed to achieve pregnancy as regard the semen parameters and swelling test percentage, six months after the operation.

Table (25) shows the effect of Palomo operation on semen parameters and S.T. percentage in cases in which pregnancy occurred and in cases in which no pregnancy occurred six months after the operation.

Fertility	No	Count/ c.c.		Motility%		Ab.F %		S.T. %	
		$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Still infertile	14	15.94	12.03	26.43	12.47	30.36	5.71	39.64	8.87
Fertile	11	52.09	7.02	65.91	7.35	22.82	2.71	70.45	4.82
t		8.83		9.28		4.03		10.35	
P		<0.01		<0.01		<0.01		<0.01	

This table showed that there was a marked improvement in all semen parameters and swelling test percentage six months after the operation in cases in which pregnancy occurred.

Count (million/c.c) :

The mean sperm count in cases in which pregnancy occurred was 52.09±7.02 million/c.c. and it was 15.94±12.03 million/c.c in cases in which no pregnancy occurred. This difference was statistically highly significant ($P<0.01$).

Motility percentage :

The mean motility percentage in cases in which pregnancy occurred was 65.91±7.35% and it was 26.43±12.47% in cases in which no pregnancy occurred. This difference was statistically highly significant (P<0.01).

Abnormal forms percentage :

The mean abnormal forms percentage in cases in which pregnancy occurred was 22.82±2.71% and it was 30.36±5.71% in cases in which no pregnancy occurred. This difference was statistically highly significant (P<0.01).

Swelling test percentage :

The mean swelling test percentage in cases in which pregnancy occurred was 70.45±4.82% and it was 39.64±8.87% in cases in which no pregnancy occurred. This difference was statistically highly significant (P<0.01).

These result showed that pregnancy is related to marked improvement in all semen parameters and S.T. percentage after the operation.

Table (26) shows the effect of the inguinal approach on semen parameters and S.T. percentage in cases in which pregnancy occurred and in cases in which no pregnancy occurred six months after the operation.

Fertility	No	Count/c.c.		Motility%		Ab.F %		S.T. %	
		$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Still infertile	17	12.94	11.32	25.83	20.02	36.47	12..96	26.18	6.97
Fertile	8	39.88	4.82	51.43	4.76	26.25	3.54	66.5	4.81
t	6.4			4.59		2.17		14.72	
p	<0.01			<0.01		<0.01		<0.01	

This table showed that there was a marked improvement in all semen parameters and swelling test percentage six months after the operation in cases in which pregnancy occurred.

Count (million/c.c) :

The mean sperm count in cases in which pregnancy occurred was 39.88±4.82 million/c.c. and it was 12.94±11.32 million/c.c in cases in which no pregnancy occurred. This difference was statistically highly significant ($P<0.01$).

Motility percentage :

The mean motility percentage in cases in which pregnancy occurred was 51.43±4.76% and it was 25.83±20.02% in cases in which no pregnancy occurred. This difference was statistically highly significant ($P<0.01$).

Abnormal forms percentage :

The mean abnormal forms percentage in cases in which pregnancy occurred was 26.25±3.54% and it was 36.47±12.96% in cases in which no pregnancy occurred. This difference was statistically highly significant (P<0.01).

Swelling test percentage :

The mean swelling test percentage in cases in which pregnancy occurred was 66.5±4.81% and it was 26.18±6.97% in cases in which no pregnancy occurred. This difference was statistically highly significant (P<0.01).

These result showed that pregnancy is related to marked improvement in all semen parameters and S.T. percentage after the operation.

Tables (27,28,29 and 30) show the comparison between the effect of Palomo operation and the effect of the inguinal approach on semen parameters and S.T. percentage 6 months after the operation in cases in which pregnancy occurred and in cases in which no pregnancy occurred.

Count/c.c. :

Fertility	Palomo			Inguinal			t	p
	No	$\bar{X}$	S.D.	No	$\bar{X}$	S.D.		
Still infertile	14	15.94	12.03	17	12.94	11.32	0.71	>0.05
Fertile	11	52.09	7.02	8	39.88	4.82	4.23	<0.01

Table (27)

Motility percentage :

Fertility	Palomo			Inguinal			t	p
	No	$\bar{X}$	S.D.	No	$\bar{X}$	S.D.		
Still infertile	14	26.43	12.47	17	25.83	20.02	0.51	>0.05
Fertile	11	65.91	7.35	8	51.43	4.76	5.21	<0.01

Table (28)

Abnormal forms percentage :

Fertility	Palomo			Inguinal			t	p
	No	$\bar{X}$	S.D.	No	$\bar{X}$	S.D.		
Still infertile	14	30.36	5.71	17	36.47	12.96	1.64	>0.05
Fertile	11	22.82	2..71	8	26.25	3.54	2.40	<0.05

Table (29)

Swelling test percentage :

Fertility	Palomo			Inguinal			t	p
	No	$\bar{X}$	S.D.	No	$\bar{X}$	S.D.		
Still infertile	14	39.64	8.87	17	26.18	6.97	4.79	>0.01
Fertile	11	70.45	4.82	8	66.5	4.81	1.77	<0.05

Table (30)

Tables 27,28,29 and 30 showed the following :

A statistically significant improvement in all semen parameter and swelling test percentage in cases in which pregnancy occurred after Palomo than the inguinal approach ($P<0.05$).

Insignificant improvement in all semen parameters and swelling test percentage in cases in which pregnancy did not occur after Palomo than the inguinal approach ($P > 0.05$).

Table (31) shows the effect of varicocelectomy on semen parameters and S.T. percentage in cases in which pregnancy occurred and in cases in which no pregnancy occurred six months after the operation for all cases of the study.

Seminal Parameters	Still infertile (n=31)		Fertile (n=19)		t	p
	X-	S.D.	X-	S.D.		
Count /c.c.	14.30	11.55	46.95	8.65	10.62	<0.01
Motility %	24.84	15.57	64.21	6.51	10.44	<0.01
Ab.F %	33.71	10.64	24.26	3.46	3.74	<0.05
Swelling test%	32.26	10.31	68.79	5.09	14.36	<0.01

Table (31) showed :

A significant improvement in all semen parameters and swelling test percentage six months after varicocelectomy in cases in which pregnancy occurred than in cases in which pregnancy did not occur ($P< 0.01$).

(C) Effects of varicocelectomy on semen parameters and S.T. percentage of :

- All cases subjected to Palomo operation (25 Patients).

- All cases subjected to the inguinal approach (25 Patients).

- Cases in which *pregnancy occurred* after Palomo operation (11 patients) and after the inguinal approach (8 patients).

- Cases in which *no pregnancy occurred* after Palomo operation (14 patients) and after the inguinal approach (17 patients).

Table (32) shows the semen parameters and S.T. percentage of all cases subjected to Palomo operation (25 patients). The semen parameters and S.T. percentage were compared preoperatively, 3 and 6 months after the operation.

Case Number	Preoperative				After 3 months				After 6 months			
	Count/ C.C.	Motil %	Ab. F. %	S.T. %	Count/ C.C.	Motil %	Ab. F. %	S.T. %	Count/ C.C.	Motil %	Ab. F. %	S.T. %
1	24	20	25	10	18	45	20	40	45	55	20	70
2	4	10	20	0	10	10	25	10	16	10	20	30
3	9	10	35	0	5	20	30	10	8	20	30	35
4	26	25	30	25	30	40	25	30	52	60	20	70
5	24	30	25	20	24	65	25	65	52	70	25	72
6	12	5	40	20	18	20	40	10	12	20	35	30
7	23	20	30	23	30	60	25	65	50	70	20	74
8	18	30	25	10	12	40	25	20	22	45	30	30
9	2	20	30	15	4	30	30	25	10	30	30	40
10	30	25	40	10	25	40	25	30	55	75	25	60
11	22	20	25	30	20	40	20	50	40	55	25	70
12	5	5	40	10	1	15	30	20	5	15	25	40
13	17	25	30	10	15	40	30	20	23	40	25	40
14	35	40	35	20	30	60	25	70	60	65	25	78
15	2	20	60	10	10	40	50	20	20	50	40	60
16	20	15	30	10	25	20	30	25	35	25	30	40
17	8	10	50	15	3	10	40	30	5	15	35	50
18	8	10	50	20	4	15	35	30	10	20	30	40
19	32	25	25	10	25	40	25	30	57	60	20	65
20	21	30	30	20	25	70	20	60	47	70	20	70
21	16	15	50	20	19	20	40	40	25	20	40	50
22	30	10	30	15	30	20	25	30	42	20	30	40
23	22	25	25	19	35	60	20	62	65	70	25	71
24	6	20	30	0	2	40	30	10	10	40	25	30
25	26	30	30	22	30	70	25	63	50	75	20	75

Table (32)

* Count (million/c.c)
* Ab.F. = Abnormal forms
* Motil. = Motility
* S.T. = Swelling Test

Table (33) shows the mean of the semen parameters and S.T. percentage of all cases subjected to Palomo operation (25 patients). The semen parameters and S.T. percentage were compared preoperatively, 3 and 6 months after the operation.

	No	Count/c.c.		Motility %		Ab.F%		S.T.%	
		X-	S.D.	X-	S.D.	X-	S.D.	X-	S.D.
Preoperative	25	17.92	9.86	19.8	8.95	33.6	9.95	14.56	7.84
After 3 months	25	18.0	10.70	37.2	18.93	28.6	7.43	34.6	19.56
After 6 months	25	31.85	20.84	43.8	22.51	27.04	5.94	53.2	20

Table (33)

Tables (32 and 33) showed the following :

Count (million/c.c.) :

The preoperative sperm count ranged from 2 to 35 million/c.c. with a mean of 17.92 ± 9.86 million/c.c.

Three months after the operation, the count ranged from 1 to 35 million/c.c with a mean of 18.0 ± 10.70 million/c.c.

There was no significant change in the sperm count 3 months after the operation ($P>0.05$).

Six months after the operation, the count ranged from 5 to 65 million/c.c. with a mean of 31.85 ± 20.84 million/c.c.

There was a significant increase in the count 6 months after the operation ($P<0.05$).

Motility percentage :

The preoperative motility percentage ranged from 5 to 40%. with a mean of 19.8 ± 8.95% .

Three months after the operation, the motility percentage ranged from 10 to 70% with a mean of 37.2 ± 18.93% .

There was a significant increase in the motility percentage 3 months after the operation ($P<0.05$).

Six months after the operation, the motility percentage ranged from 10 to 75%. with a mean of 43.8 ± 22.51% .

There was a significant increase in the motility percentage 6 months after the operation ($P<0.05$).

Abnormal forms percentage :

The preoperative abnormal forms percentage ranged from 20 to 60%. with a mean of 33.6 ± 9.95% .

Three months after the operation, the abnormal forms percentage ranged from 20 to 50% with a mean of 28.6 ± 7.43% .

There was a significant decrease in the abnormal forms percentage 3 months after the operation ($P<0.05$).

Six months after the operation, the abnormal forms percentage ranged from 20 to 40%. with a mean of 27.04 ± 5.94% .

There was a significant decrease in the abnormal forms percentage 6 months after the operation ($P<0.05$).

Swelling test percentage:

The preoperative swelling test percentage ranged from 0 to 30%. with a mean of 14.56 ± 7.84% .

Three months after the operation, the swelling test percentage ranged from 10 to 70% with a mean of 34.6 ± 19.56% .

There was a significant increase in the swelling test percentage 3 months after the operation ($P<0.05$).

Six months after the operation, the swelling test percentage ranged from 30 to 78%. with a mean of 53.2 ± 20.0% .

There was a significant increase in the swelling test percentage 6 months after the operation ($P<0.01$).

Table (34) shows the semen parameters and S.T. percentage of all cases subjected to the inguinal approach (25 patients). The semen parameters and S.T. percentage were compared preoperatively, 3 and 6 months after the operation.

case number	Preoperative				After 3 months				After 6 months			
	Count/ C.C.	Motil %	Ab.F. %	S.T. %	Count/ C.C.	Motil %	Ab.F. %	S.T. %	Count/ C.C.	Motil %	Ab.F. %	S.T. %
1	22	20	25	20	18	45	25	30	40	60	25	63
2	15	45	25	10	20	50	25	10	30	50	25	50
3	0.5	5	40	10	1	30	40	30	1	35	35	40
4	22	30	40	25	20	55	30	60	35	60	30	70
5	2	5	20	0	6	5	20	10	4	5	25	20
6	4	10	80	10	4	5	70	20	3	5	70	20
7	20	40	30	23	18	55	25	64	42	65	25	71
8	31	30	50	10	25	50	40	20	32	60	35	30
9	12	35	30	20	3	10	30	25	2	20	35	30
10	1.5	5	70	0	7	15	60	20	6	15	50	30
11	12	10	60	10	18	15	50	20	22	15	55	30
12	15	5	40	0	12	15	35	10	30	15	40	20
13	28	30	40	30	25	55	25	65	37	65	25	72
14	3	10	30	10	3	10	25	20	3	10	20	20
15	9	25	25	20	0.5	20	25	30	1	25	30	40
16	12	50	30	10	17	60	25	10	22	60	30	20
17	14	15	30	15	16	20	30	15	20	10	30	30
18	21	40	40	20	27	50	40	40	40	60	30	61
19	31	40	40	20	28	60	30	60	35	70	25	70
20	2	10	50	10	4	20	40	20	3	20	40	30
21	8	20	40	10	10	25	40	15	10	30	35	25
22	42	20	30	22	35	40	30	32	50	55	30	60
23	11	5	50	10	8	5	50	10	11	5	45	20
24	25	20	20	20	30	40	25	30	40	60	20	65
25	10	30	20	15	7	20	20	25	20	20	20	20

Table (34)

Table (35) shows the mean of the semen parameters and S.T. percentage of all cases subjected to the inguinal approach (25 patients). The semen parameters and S.T. percentage were compared preoperatively, 3 and 6 months after the operation.

	No	Count/c.c.		Motility %		Ab.F %		S.T.%	
		$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Preoperative	25	14.96	10.87	22.2	14.15	38.2	15.27	14.0	7.87
After 3months	25	14.50	10.09	31.0	19.42	34.6	12.41	27.64	17.38
After 6months	25	21.56	16.02	35.8	23.57	33.2	11.8	39.08	20.19

Table (35)

Tables (34 and 35) showed the following :

Count (million/c.c.) :

The preoperative sperm count ranged from 0.5 to 42 million/c.c. with a mean of 14.96 ± 10.87 million/c.c.

Three months after the operation, the count ranged from 1 to 35 million/c.c with a mean of 14.50 ± 10.09 million/c.c.

There was no significant change in the sperm count 3 months after the operation ($P>0.05$).

Six months after the operation, the count ranged from 1 to 50 million/c.c. with a mean of 21.56 ± 16.02 million/c.c.

There was a significant increase in the count 6 months after the operation ($P<0.05$).

Motility percentage :

The preoperative motility percentage ranged from 5 to 50%. with a mean of 22.2 ± 14.15% .

Three months after the operation, the motility percentage ranged from 5 to 60% with a mean of 31.0 ± 19.42% .

There was a significant increase in the motility percentage 3 months after the operation ($P<0.05$).

Six months after the operation, the motility percentage ranged from 5 to 70%. with a mean of 35.8 ± 23.57% .

There was a significant increase in the motility percentage 6 months after the operation ($P<0.05$).

Abnormal forms percentage :

The preoperative abnormal forms percentage ranged from 20 to 80%. with a mean of 38.2 ± 15.27% .

Three months after the operation, the abnormal forms percentage ranged from 20 to 70% with a mean of 34.6 ± 12.41% .

There was no significant decrease in the abnormal forms percentage 3 months after the operation ($P>0.05$).

Six months after the operation, the abnormal forms percentage ranged from 20 to 70%. with a mean of 33.2 ± 11.8% .

There was a significant decrease in the abnormal forms percentage 6 months after the operation ($P>0.05$).

Swelling test percentage

The preoperative swelling test percentage ranged from 0 to 30%. with a mean of 14.0 ± 7.87% .

Three months after the operation, the swelling test percentage ranged from 10 to 65% with a mean of 27.64 ± 17.38% .

There was a significant increase in the swelling test percentage 3 months after the operation (P<0.05).

Six months after the operation, the swelling test percentage ranged from 20 to 72%. with a mean of 39.08 ± 20.19% .

There was a significant increase in the swelling test percentage 6 months after the operation (P<0.01).

Table (36) shows the comparison between the effect of Palomo operation and the effect of the inguinal approach on the sperm count 3 and 6 months after the operation.

	Palomo			Inguinal			t	p
	No	$\bar{X}$	S.D.	No	$\bar{X}$	S.D.		
Preoperative	25	17.92	9.86	25	14.96	10.87	1.01	>0.05
After 3months	25	18.0	10.70	25	14.50	10.09	1.19	>0.05
After 6months	25	31.85	20.84	25	21.56	16.02	1.96	<0.05

Table (36) showed the following :

The mean preoperative sperm count for cases subjected to Palomo operation was 17.92 ± 9.86 million/c.c. and it was 14.96 ± 10.87 million/c.c. for cases subjected to the inguinal approach.

There was no significant difference in the preoperative sperm count of cases subjected to either Palomo or the inguinal approach (P>0.05).

Three months after Palomo operation, the mean sperm count was 18.0 ± 10.70 million/c.c., and it was 14.50 ± 10.09 million/c.c. after the inguinal approach. This difference was statistically insignificant (P > 0.05).

Six months after Palomo operation, the mean sperm count was 31.85 ± 20.84 million/c.c. and it was 21.56 ± 16.02 million/c.c. after the inguinal approach. There was a statistically significant increase in the count six months after Palomo than the inguinal approach (P<0.05).

Table (37) shows the comparison between the effect of Palomo operation and the effect of the inguinal approach on the motility percentage 3 and 6 months after the operation.

	Palomo			Inguinal			t	p
	No	$\bar{X}$	S.D.	No	$\bar{X}$	S.D.		
Preoperative	25	19.8	9.85	25	22.2	14.15	0.72	>0.05
After 3months	25	37.2	18.93	25	31.0	19.42	1.14	<0.05
After 6months	25	43.8	22.51	25	35.8	23.57	1.23	<0.05

Table (37) showed the following :

The mean preoperative motility percentage for cases subjected to Palomo operation was 19.8 ± 9.85% and it was 22.2 ± 14.15% for cases subjected to the inguinal approach.

There was no significant difference in the preoperative motility percentage of cases subjected to either Palomo or the inguinal approach (P>0.05).

Three months after Palomo operation, the mean motility percentage was 37.2 ± 18.93%, and it was 31.0 ± 19.42% after the inguinal approach.

There was statistically significant increase in the motility percentage after Palomo than the inguinal approach three months after the operation (P<0.05).

Six months after Palomo operation, the mean motility percentage was 43.8 ± 22.51% and it was 35.8 ± 23.57% after the inguinal approach.

There was a statistically significant increase in the motility percentage six months after Palomo than the inguinal approach (P<0.05).

Table (38) shows the comparison between the effect of Palomo operation and the effect of the inguinal approach on the abnormal forms percentage 3 and 6 months after the operation.

	Palomo			Inguinal			t	p
	No	$\bar{X}$	S.D.	No	$\bar{X}$	S.D.		
Preoperative	25	33.6	9.95	25	38.2	15.27	1.26	>0.05
After 3months	25	28.6	7.43	25	34.6	12.41	2.07	<0.05
After 6months	25	27.04	5.94	25	33.2	11.8	2.33	<0.05

Table (38) showed the folowing :

The mean preoperative abnormal forms percentage for cases subjected to Palomo operation was 33.6 ± 9.95% and it was 38.2 ± 15.27% for cases subjected to the inguinal approach.

There was no significant difference in the preoperative abnormal forms percentage of cases subjected to either Palomo or the inguinal approach (P>0.05).

Three months after Palomo operation, the mean abnormal forms percentage was 28.6 ± 7.43%, and it was 34.6 ± 12.41% after the inguinal approach.

There was statistically significant decrease in the abnormal forms percentage after Palomo than the inguinal approach three months after the operation (P<0.05).

Six months after Palomo operation, the mean abnormal forms percentage was 27.04 ± 5.94% and it was 33.2 ± 11.8% after the inguinal approach. There was a statistically significant decrease in the

motility percentage six months after Palomo than the inguinal approach (P<0.05).

Table (39) shows the comparison between the effect of Palomo operation and the effect of the inguinal approach on the swelling test percentage 3 and 6 months after the operation.

	Palomo			Inguinal			t	p
	No	$\bar{X}$	S.D.	No	$\bar{X}$	S.D.		
Preoperative	25	14.56	7.84	25	14.0	7.87	0.25	>0.05
After 3months	25	34.6	19.56	25	27.64	17.38	1.33	<0.05
After 6months	25	53.2	20	25	39.08	20.19	2.66	<0.05

Table (39) showed the following :

The mean preoperative swelling test percentage for cases subjected to Palomo operation was 14.56 ± 7.84% and it was 14.0 ± 7.87% for cases subjected to the inguinal approach.

There was no significant difference in the preoperative motility percentage of cases subjected to either Palomo or the inguinal approach (P>0.05).

Three months after Palomo operation, the mean swelling test percentage was 34.6 ± 19.56%, and it was 27.64 ± 17.38% after the inguinal approach.

There was statistically significant increase in the swelling test percentage after Palomo than the inguinal approach three months after the operation ($P<0.05$).

Six months after Palomo operation, the mean swelling test percentage was 53.2 ± 20.0% and it was 39.08 ± 20.19% after the inguinal approach. There was a statistically significant increase in the swelling test percentage six months after Palomo than the inguinal approach ($P<0.05$).

Table (40) shows the effect of varicocelectomy on semen parameters and S.T. percentage for all patients (50 patients), preoperatively, 3 and 6 months after the operation.

	No	Count /c.c.		Motility %		Ab.F %		S.T. %	
		$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Preoperative	50	16.44	10.38	21.0	11.78	35.9	12.96	11.28	7.78
After3 months	50	16.25	10.44	34.1	19.24	31.6	10.57	31.12	18.65
After 6months	50	26.7	19.12	39.8	23.17	30.12	9.75	46.14	19.89

This table showed the following :

Count (million/c.c.) :

The preoperative sperm count ranged from 0.5 to 42 million/c.c. with a mean of 16.44 ± 10.38 million/c.c.

Three months after the operation, the count ranged from 1 to 35 million/c.c with a mean of 16.25 ± 10.44 million/c.c.

There was no significant change in the sperm count 3 months after the operation ($P>0.05$).

Six months after the operation, the count ranged from 1 to 65 million/c.c. with a mean of 26.7 ± 19.12 million/c.c.

There was a significant increase in the count 6 months after the operation ($P<0.05$).

Motility percentage :

The preoperative motility percentage ranged from 5 to 50%. with a mean of 21.0 ± 11.78% .

Three months after the operation, the motility percentage ranged from 5 to 70% with a mean of 34.1 ± 19.24% .

There was a significant increase in the motility percentage 3 months after the operation (P<0.01).

Six months after the operation, the motility percentage ranged from 5 to 75%. with a mean of 39.8 ± 23.17% .

There was a significant increase in the motility percentage 6 months after the operation (P<0.01).

Abnormal forms percentage :

The preoperative abnormal forms percentage ranged from 20 to 80%. with a mean of 35.9 ± 12.96% .

Three months after the operation, the abnormal forms percentage ranged from 20 to 70% with a mean of 31.6 ± 10.57% .

There was a significant decrease in the abnormal forms percentage 3 months after the operation (P<0.05).

Six months after the operation, the abnormal forms percentage ranged from 20 to 70%. with a mean of 30.12 ± 9.75% .

There was a significant decrease in the abnormal forms percentage 6 months after the operation (P<0.05).

Swelling test percentage:

The preoperative swelling test percentage ranged from 0 to 30%. with a mean of 11.28 ± 7.78% .

Three months after the operation, the swelling test percentage ranged from 10 to 70% with a mean of 31.12± 18.65% .

There was a significant increase in the swelling test percentage 3 months after the operation ($P<0.01$).

Six months after the operation, the swelling test percentage ranged from 20 to 78%. with a mean of $46.14 \pm 19.89\%$.

There was a significant increase in the swelling test percentage 6 months after the operation ($P<0.01$).

Table (41) shows the effect of varicocelectomy on semen parameters and S.T. percentage in cases in which pregnancy occurred after Palomo operation. The semen parameters and S.T. percentage were compared preoperatively, 3 and 6 months after the operation.

Case No.	Pre-operative				After 3 months				After 6 months			
	Count / C.C.	Motil %	A.b.F. %	S.T.%	Count / C.C.	Motil %	A.b.F. %	S.T.%	Count / C.C.	Motil %	A.b.F. %	S.T.%
1	24	20	25	10	18	45	20	40	45	55	20	70
4	26	25	30	25	30	40	25	30	52	60	20	70
5	24	30	25	20	24	65	25	65	52	70	25	72
7	23	20	30	23	30	60	25	65	50	70	20	74
10	30	25	40	10	25	40	25	30	55	75	25	60
11	22	20	25	30	20	40	20	50	40	55	25	70
14	35	40	35	20	30	60	25	70	60	65	25	78
19	32	25	25	10	25	40	25	30	57	60	20	65
20	21	30	30	20	25	70	20	60	47	70	20	70
23	22	25	25	19	35	60	20	62	65	70	25	71
25	26	30	30	22	30	70	25	63	50	75	20	75

Table (41)

Table (42) shows the mean of semen parameters and S.T. percentage in cases in which pregnancy occurred after Palomo operation. The semen parameters and S.T. percentage were compared preoperatively, 3 and 6 months after the operation.

	No	Count /c.c.		Motility %		Ab.F %		S.T. %	
		$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Preoperative	11	26.18	4.38	26.36	5.95	29.09	4.91	19.0	6.54
After 3 months	11	27.45	4.57	53.64	12.67	23.18	2.52	51.36	15.95
After 6 months	11	52.09	7.02	65.91	7.35	22.82	2.71	70.45	4.82

Table (42)

Tables (41 and 42) showed the following:

Count (million/c.c.) :

The preoperative sperm count ranged from 21 to 35 million/c.c. with a mean of 26.18 ± 4.38 million/c.c.

Three months after the operation, the count ranged from 18 to 35 million/c.c with a mean of 27.45 ± 4.57 million/c.c.

There was no significant change in the sperm count 3 months after the operation ($P>0.05$).

Six months after the operation, the count ranged from 40 to 65 million/c.c. with a mean of 52.09 ± 7.02 million/c.c.

There was a significant increase in the count 6 months after the operation ($P<0.01$).

Motility percentage :

The preoperative motility percentage ranged from 20 to 40%. with a mean of 26.36 ± 5.95% .

Three months after the operation, the motility percentage ranged from 40 to 70% with a mean of 53.64 ± 12.67% .

There was a significant increase in the motility percentage 3 months after the operation ($P<0.01$).

Six months after the operation, the motility percentage ranged from 55 to 75%. with a mean of 65.91 ± 7.35% .

There was a significant increase in the motility percentage 6 months after the operation ($P<0.01$).

Abnormal forms percentage :

The preoperative abnormal forms percentage ranged from 25 to 40%. with a mean of 29.09 ± 4.91% .

Three months after the operation, the abnormal forms percentage ranged from 20 to 25% with a mean of 23.18 ± 2.52% .

There was a significant decrease in the abnormal forms percentage 3 months after the operation ($P<0.01$).

Six months after the operation, the abnormal forms percentage ranged from 20 to 25%. with a mean of 22.82 ± 2.71% .

There was a significant decrease in the abnormal forms percentage 6 months after the operation ($P<0.01$).

Swelling test percentage:

The preoperative swelling test percentage ranged from 10 to 25%. with a mean of 19.0 ± 6.54% .

Three months after the operation, the swelling test percentage ranged from 30 to 70% with a mean of 51.36 ± 15.95% .

There was a significant increase in the swelling test percentage 3 months after the operation ($P<0.01$).

Six months after the operation, the swelling test percentage ranged from 60 to 78%. with a mean of 70.45 ± 4.82% .

There was a significant increase in the swelling test percentage 6 months after the operation ($P<0.01$).

Table (43) shows the effect of varicocelectomy on semen parameters and S.T. percentage in cases in which pregnancy occurred after the inguinal approach. The semen parameters and S.T. percentage were compared preoperatively, 3 and 6 months after the operation.

Case No.	Pre-operative				After 3 months				After 6 months			
	Count / C.C.	Motil %	A.b.F. %	S.T.%	Count / C.C.	Motil %	A.b.F. %	S.T.%	Count / C.C.	Motil %	A.b.F. %	S.T.%
1	22	20	25	20	18	45	25	30	40	60	25	63
4	22	30	40	25	20	55	30	60	35	60	30	70
7	20	40	30	23	18	55	25	64	42	65	25	71
13	28	30	40	30	25	55	25	65	37	65	25	72
18	21	40	40	20	27	50	40	40	40	60	30	61
19	31	40	40	20	28	60	30	60	35	70	25	70
22	42	20	30	22	35	40	30	32	50	55	30	60
24	25	20	20	20	35	40	25	30	40	60	20	65

Table (43)

Table (44) shows the mean of semen parameters and S.T. percentage in cases in which pregnancy occurred after the inguinal approach. The semen parameters and S.T. percentage were compared preoperatively, 3 and 6 months after the operation.

	No	Count /c.c.		Motility %		Ab.F %		S.T. %	
		$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Preoperative	8	26.5	7.27	30.0	9.26	33.13	7.99	22.5	3.55
After 3 months	8	24.75	5.47	50.0	7.56	30.0	5.35	47.63	16.04
After 6months	8	39.87	4.82	61.88	4.58	26.25	3.54	66.50	4.81

Table (44)

Tables (43 and 44) showed the following:

Count (million/c.c.) :

The preoperative sperm count ranged from 20 to 42 million/c.c. with a mean of 26.5 ± 7.27 million/c.c.

Three months after the operation, the count ranged from 18 to 35 million/c.c with a mean of 24.75 ± 5.47 million/c.c.

There was no significant change in the sperm count 3 months after the operation ($P>0.05$).

Six months after the operation, the count ranged from 35 to 50 million/c.c. with a mean of 39.87 ± 4.82 million/c.c.

There was a significant increase in the count 6 months after the operation ($P<0.01$).

Motility percentage :

The preoperative motility percentage ranged from 20 to 40%. with a mean of 30.0 ± 9.26% .

Three months after the operation, the motility percentage ranged from 45 to 60% with a mean of 50.0 ± 7.56% .

There was a significant increase in the motility percentage 3 months after the operation ($P<0.01$).

Six months after the operation, the motility percentage ranged from 55 to 70%. with a mean of 61.88 ± 4.58% .

There was a significant increase in the motility percentage 6 months after the operation ($P<0.01$).

Abnormal forms percentage :

The preoperative abnormal forms percentage ranged from 25 to 40%. with a mean of 33.13 ± 7.99% .

Three months after the operation, the abnormal forms percentage ranged from 25 to 40% with a mean of 30.0 ± 5.35% .

There was a significant decrease in the abnormal forms percentage 3 months after the operation ($P<0.05$).

Six months after the operation, the abnormal forms percentage ranged from 20 to 30%. with a mean of 26.25 ± 3.54% .

There was a significant decrease in the abnormal forms percentage 6 months after the operation ($P<0.05$).

Swelling test percentage

The preoperative swelling test percentage ranged from 20 to 30%. with a mean of 22.5 ± 3.55% .

Three months after the operation, the swelling test percentage ranged from 30 to 65% with a mean of 47.63 ± 16.04% .

There was a significant increase in the swelling test percentage 3 months after the operation (P<0.01).

Six months after the operation, the swelling test percentage ranged from 60 to 72%. with a mean of 66.5 ± 4.81% .

There was a significant increase in the swelling test percentage 6 months after the operation (P<0.01).

Table (45) shows the comparison between the effect of Palomo operation and the effect of the inguinal approach on the sperm count in cases in which pregnancy occurred.

	Palomo			Inguinal			t	p
	No	$\bar{X}$	S.D.	No	$\bar{X}$	S.D.		
Preoperative	11	26.18	4.38	8	26.5	7.27	0.12	>0.05
After 3months	11	27.45	4.57	8	24.75	5.47	1.14	>0.05
After 6months	11	52.09	7.02	8	39.87	4.82	4.23	<0.01

Table (45) showed the following :

The mean preoperative sperm count for cases subjected to Palomo operation was 26.18 ± 4.38 million/c.c. and it was 26.5 ± 7.27 million/c.c. for cases subjected to the inguinal approach.

There was no significant difference in the preoperative sperm count of cases subjected to either Palomo or the inguinal approach ($P>0.05$).

Three months after Palomo operation, the mean sperm count was 27.45 ± 4.57 million/c.c., and it was 24.75 ± 5.47 million/c.c. after the inguinal approach. This difference was statistically insignificant ($P > 0.05$).

Six months after Palomo operation, the mean sperm count was 52.09 ± 7.02 million/c.c. and it was 39.87 ± 4.82 million/c.c. after the inguinal approach. There was a statistically significant increase in the count six months after Palomo than the inguinal approach ($P<0.01$).

Table (46) shows the comparison between the effect of Palomo operation and the effect of the inguinal approach on the motility percentage in cases in which pregnancy occurred .

	Palomo			Inguinal			t	p
	No	$\bar{X}$	S.D.	No	$\bar{X}$	S.D.		
Preoperative	11	26.36	5.95	8	30.0	9.26	1.04	> 0.05
After 3months	11	53.64	12.67	8	50.0	7.56	0.78	< 0.05
After 6months	11	65.91	7.35	8	61.88	4.58	1.36	< 0.05

Table (46) showed the following :

The mean preoperative motility percentage for cases subjected to Palomo operation was 26.36 ± 5.95% and it was 30.0 ± 9.26% for cases subjected to the inguinal approach.

There was no significant difference in the preoperative motility percentage of cases subjected to either Palomo or the inguinal approach (P>0.05).

Three months after Palomo operation, the mean motility percentage was 53.64 ± 12.67%, and it was 50.0 ± 7.56% after the inguinal approach.

There was statistically significant increase in the motility percentage after Palomo than the inguinal approach three months after the operation (P<0.05).

Six months after Palomo operation, the mean motility percentage was 65.91± 7.35% and it was 61.88 ± 4.58% after the inguinal approach.

There was a statistically significant increase in the motility percentage six months after Palomo than the inguinal approach (P<0.05).

Table (47) shows the comparison between the effect of Palomo operation and the effect of the inguinal approach on the abnormal forms percentage in cases in which pregnancy occurred.

	Palomo			Inguinal			t	p
	No	$\bar{X}$	S.D.	No	$\bar{X}$	S.D.		
Preoperative	11	29.09	4.91	8	33.13	7.99	1.36	>0.05
After 3months	11	23.18	2.52	8	30.0	5.35	3.35	<0.01
After 6months	11	22.82	2.71	8	26.25	3.54	2.40	<0.01

Table (47) showed the following :

The mean preoperative abnormal forms percentage for cases subjected to Palomo operation was 29.09 ± 4.91% and it was 33.13 ± 7.99% for cases subjected to the inguinal approach.

There was no significant difference in the preoperative abnormal forms percentage of cases subjected to either Palomo or the inguinal approach (P>0.05).

Three months after Palomo operation, the mean abnormal forms percentage was 23.18 ± 2.52%, and it was 30.0 ± 5.35% after the inguinal approach.

There was statistically significant decrease in the abnormal forms percentage after Palomo than the inguinal approach three months after the operation (P<0.01).

Six months after Palomo operation, the mean abnormal forms percentage was 22.82 ± 2.71% and it was 26.25 ± 3.54% after the inguinal approach.

There was a statistically significant increase in the abnormal forms percentage six months after Palomo than the inguinal approach (P<0.01).

Table (48) shows the comparison between the effect of Palomo operation and the effect of the inguinal approach on the S.T. percentage in cases in which pregnancy occurred .

	Palomo			Inguinal			t	p
	No	$\bar{X}$	S.D.	No	$\bar{X}$	S.D.		
Preoperative	11	19.0	6.54	8	22.5	3.55	1.37	>0.05
After 3months	11	51.36	15.95	8	47.63	16.04	0.50	<0.05
After 6months	11	70.45	4.82	8	66.50	4.81	1.77	<0.05

Table (48) showed the following :

The mean preoperative S.T. percentage for cases subjected to Palomo operation was 19.0 ± 6.54% and it was 22.5 ± 3.55% for cases subjected to the inguinal approach.

There was no significant difference in the preoperative S.T. percentage of cases subjected to either Palomo or the inguinal approach ($P>0.05$). Three months after Palomo operation, the mean S.T percentage was 51.36 ± 15.95%, and it was 47.63 ± 16.04% after the inguinal approach.

There was statistically significant decrease in the S.T. percentage after Palomo than the inguinal approach three months after the operation ($P<0.05$).

Six months after Palomo operation, the mean S.T. percentage was 70.45 ± 4.82% and it was 66.50 ± 4.81% after the inguinal approach.

There was a statistically significant increase in the S.T. percentage six months after Palomo than the inguinal approach ($P<0.05$).

Table (49) shows the effect of varicocelectomy on semen parameters and S.T. percentage in cases in which no pregnancy occurred after Palomo operation. The semen parameters and S.T. percentage were compared preoperatively, 3, 6, 9 and 12 months after the operation.

Case No.	Pre-operative				After 3 months				After 6 months				After 9 months				After 12 months			
	Count / c.c.	Motil %	A.N.F. %	S.T.%	Count / c.c.	Motil %	A.N. F.%	S.T. %	Count / c.c.	Motil %	A.N.F. %	S.T. %	Count /c.c.	Motil %	A.N.F. %	S.T. %	Count /c.c.	Motil %	A.N.F. %	S.T. %
2	4	10	20	0	10	10	25	10	16	10	20	30	18	10	20	10	12	10	20	10
3	9	10	35	0	5	20	30	10	8	20	30	35	10	25	30	10	8	20	35	10
6	12	5	40	20	18	20	40	10	12	20	35	30	10	20	35	10	10	10	40	10
8	18	30	25	10	12	40	25	20	22	45	30	30	20	45	25	10	20	45	25	10
9	2	20	30	15	4	30	30	25	10	30	30	40	10	25	25	30	6	20	30	20
12	5	5	40	10	1	15	30	20	5	15	25	40	5	10	25	20	5	5	30	10
13	17	25	30	10	15	40	30	20	23	40	25	40	23	45	25	20	20	30	25	10
15	2	20	60	10	10	40	50	20	20	50	40	60	20	60	35	50	8	50	30	30
16	20	15	30	10	25	20	30	25	35	25	30	40	28	20	30	20	22	15	25	20
17	8	10	50	15	3	10	40	30	5	15	35	50	5	10	30	30	5	10	35	20
18	8	10	50	20	4	15	35	30	10	20	30	40	8	20	30	20	8	15	30	15
21	16	15	50	20	19	20	40	40	25	20	40	50	22	20	35	30	20	15	30	20
22	30	10	30	15	30	20	25	30	42	20	30	40	38	30	30	30	32	25	30	20
24	6	20	30	0	2	40	30	10	10	40	25	30	12	40	25	10	10	35	25	10

Table (49)

Table (50) shows the mean of semen parameters and S.T. percentage in cases in which no pregnancy occurred after Palomo operation. The semen parameters and S.T. percentage were compared preoperatively, 3, 6, 9 and 12 months after the operation.

	No	Count /c.c.		Motility %		Ab.F %		S.T. %	
		$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Preoperative	14	11.43	7.84	14.64	7.46	37.14	11.55	11.07	7.12
After 3 months	14	11.26	9.06	21.43	9.29	32.86	7.26	21.43	9.29
After 6 months	14	15.94	12.03	26.43	12.47	30.36	5.71	39.64	8.87
After 9 months	14	16.36	9.52	27.14	15.15	28.57	4.57	21.43	11.67
After12 months	14	13.29	8.13	21.79	13.67	29.28	5.14	15.36	6.34
F, P	0.854, >0.05			0.970, >0.05		0.988 , >0.05		0.824,>0.05	

Table (50)

Where F is analysis of variance .

Tables (49 and 50) showed the following :

Count (million/c.c.) :

The preoperative sperm count ranged from 2 to 30 million/c.c., with a mean of 11.43 ± 7.84 million/c.c.

Three months after the operation, the count ranged from 1 to 30 million/c.c. with a mean of 11.26 ± 9.06 million/c.c.

Six months after the operation, the count ranged from 5 to 42 million/c.c. with a mean of 15.94 ± 12.03 million/c.c.

Nine months after the operation, the count ranged from 5 to 38 million/c.c. with a mean of 16.36 ± 9.52 million/c.c.

Twelve months after the operation, the count ranged from 5 to 32 million/c.c. with a mean of 13.29 ± 8.13 million/c.c.

There was no statistically significant difference ($p > 0.05$), but the sperm count reached a peak at 6-9 months postoperative and then declined again.

Motility percentage :

The preoperative motility percentage ranged from 5 to 30%, with a mean of 14.64 ± 7.46% .

Three months after the operation, the motility percentage ranged from 10 to 40% with a mean of 21.43 ± 9.29% .

Six months after the operation, the motility percentage ranged from 10 to 50% with a mean of 26.43 ± 12.47% .

Nine months after the operation, the motility percentage ranged from 10 to 60%. with a mean of 27.14 ± 15.15% .

Twelve months after the operation, the motility percentage ranged from 5 to 50%. with a mean of 21.79 ± 13.67%.

There was no statistically significant difference ($p > 0.05$), but improvement occurred starting three months after the operation, reached a peak at 6-9 months postoperative and then declined again.

Abnormal forms percentage :

The preoperative abnormal forms percentage ranged from 20 to 60%, with a mean of 37.14 ± 11.55% .

Three months after the operation, the abnormal forms percentage ranged from 25 to 50% with a mean of 32.86 ± 7.26% .

Six months after the operation, the abnormal forms percentage ranged from 20 to 40% with a mean of 30.36 ± 5.71% .

Nine months after the operation, the abnormal forms percentage ranged from 20 to 35%. with a mean of 28.57 ± 4.57% .

Twelve months after the operation, the abnormal forms percentage ranged from 20 to 40%. with a mean of 29.28 ± 5.14%.

There was no statistically significant difference ($p > 0.05$), but improvement occurred starting three months after the operation, reached a peak at 6-9 months postoperative and then declined again.

Swelling test percentage :

The preoperative swelling test percentage ranged from 0 to 20%, with a mean of 11.07 ± 7.12% .

Three months after the operation, the swelling test percentage ranged from 10 to 40% with a mean of 21.43 ± 9.29% .

Six months after the operation, the swelling test percentage ranged from 30 to 60% with a mean of 39.64 ± 8.87% .

Nine months after the operation, the swelling test percentage ranged from 10 to 50%. with a mean of 21.43 ± 11.67% .

Twelve months after the operation, the swelling test percentage ranged from 10 to 30%. with a mean of 15.36 ± 6.43%.

There was no statistically significant difference ($p > 0.05$), but improvement occurred starting three months after the operation, reached a peak at 6-9 months postoperative and then declined again.

Table (51) shows the effect of vasovasectomy on semen parameters and S.T. percentage in cases in which no pregnancy occurred after the inguinal approach. The semen parameters and S.T. percentage were compared preoperatively, 3, 6, 9 and 12 months after the operation.

Case No.	Pre-operative				After 3 months				After 6 months				After 9 months				After 12 months			
	Count /C.C.	Motil. %	A.b.F. %	S.T.%	Count /C.C.	Motil. %	A.b.F. %	S.T.%	Count /C.C.	Motil. %	A.b.F. %	S.T.%	Count /C.C.	Motil. %	A.b.F. %	S.T.%	Count /C.C.	Motil. %	A.b.F. %	S.T.%
2	15	45	25	10	20	50	25	10	30	50	25	20	25	50	25	10	18	40	25	10
3	0.5	5	40	10	1	30	40	30	1	35	35	40	1	15	35	20	1	5	30	10
5	2	5	20	0	6	5	20	10	4	5	25	20	6	5	30	15	4	5	35	0
6	4	10	80	10	4	5	70	20	3	5	70	20	4	5	75	10	4	5	80	10
8	31	30	50	10	25	50	40	20	32	60	35	30	25	55	35	10	25	40	35	10
9	12	35	30	20	3	10	30	25	2	20	35	30	2	5	30	20	2	5	30	10
10	1.5	5	70	0	7	15	60	20	6	15	50	30	5	20	55	15	4	10	60	10
11	12	10	60	10	18	15	50	20	22	15	55	30	18	15	45	10	16	10	50	10
12	15	5	40	0	12	15	35	10	30	15	40	20	22	5	35	15	18	5	30	15
14	3	10	30	10	3	10	25	20	3	10	20	20	3	10	20	10	2	10	20	0
15	9	25	25	20	0.5	20	25	30	1	25	30	40	1	15	25	20	1	10	30	15
16	12	50	30	10	17	60	25	10	22	60	30	20	21	65	30	10	17	60	25	0
17	14	15	30	15	16	20	30	15	20	10	30	30	21	15	25	10	20	10	25	10
20	2	10	50	10	4	20	40	20	3	20	40	30	4	40	35	20	2	10	35	10
21	8	20	40	10	10	25	40	15	10	30	35	25	9	20	35	15	8	15	30	10
23	11	5	50	10	8	5	50	10	11	5	45	20	12	5	50	10	9	5	50	10
25	10	30	20	15	7	20	20	25	20	20	20	20	20	30	20	15	12	20	25	15

Table (51)

Table (52) shows the mean of semen parameters and S.T. percentage in cases in which no pregnancy occurred after the inguinal approach. The semen parameters and S.T. percentage were compared preoperatively, 3, 6, 9 and 12 months after the operation.

	No	Count /c.c.		Motility %		Ab.F %		S.T. %	
		$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Preoperative	17	9.53	7.49	18.33	14.77	40.59	17.4	10.0	5.86
After 3 months	17	9.5	7.3	22.06	16.59	36.76	14.25	18.24	6.83
After 6 months	17	12.94	11.32	23.53	18.01	36.47	12.96	26.18	6.97
After 9 months	17	11.71	9.16	22.06	19.21	35.59	14.02	13.82	4.16
After 12 months	17	9.59	7.93	15.59	11.9	36.18	15.46	9.12	4.76
F, P	0.754, >0.05			0.822, >0.05		0.975, >0.05		0.754, >0.05	

Table (52)

Tables (51 and 52) showed the following :

Count (million/c.c.) :

The preoperative sperm count ranged from 0.5 to 31 million/c.c., with a mean of 9.53 ± 7.49 million/c.c.

Three months after the operation, the count ranged from 0.5 to 25 million/c.c. with a mean of 9.5 ± 7.3 million/c.c.

Six months after the operation, the count ranged from 1 to 32 million/c.c. with a mean of 12.94 ± 11.32 million/c.c.

Nine months after the operation, the count ranged from 1 to 35 million/c.c. with a mean of 11.71 ± 9.16 million/c.c.

Twelve months after the operation, the count ranged from 1 to 25 million/c.c. with a mean of 9.59 ± 7.93 million/c.c.

There was no statistically significant difference ($p > 0.05$), but the sperm count reached a peak at 6-9 months postoperative and then declined again.

Motility percentage :

The preoperative motility percentage ranged from 5 to 50%, with a mean of 18.33 ± 14.77% .

Three months after the operation, the motility percentage ranged from 5 to 60% with a mean of 22.06 ± 16.59% .

Six months after the operation, the motility percentage ranged from 5 to 60% with a mean of 23.53 ± 18.01% .

Nine months after the operation, the motility percentage ranged from 5 to 65%. with a mean of 22.06 ± 19.21% .

Twelve months after the operation, the motility percentage ranged from 5 to 60%. with a mean of 15.59 ± 11.9%.

There was no statistically significant difference ($p > 0.05$), but improvement occurred starting three months after the operation, reached a peak at 6-9 months postoperative and then declined again.

Abnormal forms percentage :

The preoperative abnormal forms percentage ranged from 20 to 80%, with a mean of 40.59 ± 17.4% .

Three months after the operation, the abnormal forms percentage ranged from 20 to 70% with a mean of 36.76 ± 14.25% .

Six months after the operation, the abnormal forms percentage ranged from 20 to 70% with a mean of 36.47 ± 12.96% .

Nine months after the operation, the abnormal forms percentage ranged from 20 to 75%. with a mean of 35.59 ± 14.02% .

Twelve months after the operation, the abnormal forms percentage ranged from 20 to 80%. with a mean of 36.18 ± 15.46%.

There was no statistically significant difference ($p > 0.05$), but improvement occurred starting three months after the operation, reached a peak at 6-9 months postoperative and then declined again.

Swelling test percentage :

The preoperative swelling test percentage ranged from 0 to 20%, with a mean of 10.0 ± 5.86% .

Three months after the operation, the swelling test percentage ranged from 10 to 30% with a mean of 18.24 ± 6.83% .

Six months after the operation, the swelling test percentage ranged from 20 to 40% with a mean of 26.18 ± 6.97% .

Nine months after the operation, the swelling test percentage ranged from 10 to 20%. with a mean of 13.82 ± 4.16% .

Twelve months after the operation, the swelling test percentage ranged from 0 to 15%. with a mean of 9.12 ± 4.76%.

There was no statistically significant difference ($p > 0.05$), but improvement occurred starting three months after the operation, reached a peak at 6-9 months postoperative and then declined again.

Table (53) shows the Comparison between the effect of Palomo operation and the effect of the inguinal approach on the sperm count in cases in which no pregnancy occurred.

	Palomo			Inguinal			t	p
	No	$\bar{X}$	S.D.	No	$\bar{X}$	S.D.		
Preoperative	14	11.43	7.84	17	9.53	7.49	0.69	>0.05
After 3 months	14	11.26	9.06	17	9.5	7.3	0.59	>0.05
After 6 months	14	15.94	12.03	17	12.94	11.32	0.71	>0.05
After 9 months	14	16.36	9.52	17	11.71	9.16	1.38	>0.05
After 12 months	14	13.29	8.13	17	9.59	7.93	1.28	>0.05

Table (53)

This table showed an increase in the count (million/c.c.) after Palomo than the inguinal approach 3, 6, 9 and 12 months after the operation, however this increase was insignificant (0>0.05).

Table (54) shows the Comparison between the effect of Palomo operation and the effect of the inguinal approach on the motility percentage in cases in which no pregnancy occurred.

	Palomo			Inguinal			t	p
	No	$\bar{X}$	S.D.	No	$\bar{X}$	S.D.		
Preoperative	14	14.64	7.46	17	18.33	14.77	0.89	>0.05
After 3 months	14	21.43	9.29	17	22.06	16.59	0.13	>0.05
After 6 months	14	26.43	14.47	17	23.53	18.01	0.51	>0.05
After 9months	14	27.14	15.15	17	22.06	19.21	0.82	>0.05
After 12 months	14	21.79	13.67	17	15.59	15.9	1.71	>0.05

Table (54)

This table showed an increase in the motility percentage after Palomo than the inguinal approach 3, 6, 9 and 12 months after the operation, however this increase was insignificant (0>0.05).

Table (55) shows the Comparison between the effect of Palomo operation and the effect of the inguinal approach on the abnormal forms percentage in cases in which no pregnancy occurred.

	Palomo			Inguinal			t	p
	No	$\bar{X}$	S.D.	No	$\bar{X}$	S.D.		
Preoperative	14	37.14	11.55	17	40.59	17.4	0.063	>0.05
After 3months	14	32.86	7.26	17	36.76	14.25	0.98	>0.05
After 6months	14	30.36	5.71	17	36.47	12.96	1.64	>0.5
After 9months	14	28.57	4.57	17	35.59	14.02	1.94	>0.05
After 12 months	14	29.28	5.14	17	36.18	15.46	1.88	>0.05

Table (55)

This table showed an increase in the abnormal forms percentage after Palomo than the inguinal approach 3, 6, 9 and 12 months after the operation, however this increase was insignificant (0>0.05).

Table (56) shows the Comparison between the effect of Palomo operation and the effect of the inguinal approach on the S.T. percentage in cases in which no pregnancy occurred

	Palomo			Inguinal			t	p
	No	$\bar{X}$	S.D.	No	$\bar{X}$	S.D.		
Preoperative	14	11.07	7.12	17	10.0	5.86	0.46	>0.05
After 3months	14	21.43	9.29	17	18.24	6.83	1.07	>0.05
After 6months	14	39.64	8.87	17	26.18	6.97	4.74	>0.01
After 9months	14	21.43	11.67	17	13.82	4.16	2.32	>0.05
After 12months	14	15.36	6.34	17	9.12	4.76	3.06	>0.05

Table (56)

This table showed an increase in the S.T. after Palomo than the inguinal approach 3, 6, 9 and 12 months after the operation, however this increase was insignificant (0>0.05).

(D) Relationship between the grade of varicocele and postoperative semen parameters and fertlizing capacity .

Table (57) shows the relation of the grade of varicocele to postoperative semen parameters and S.T. after Palomo operation.

Grade	I (n=7)		II (n=9)		III (n=9)		F	p
Seminal parameters	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.		
After 3 months								
Count / c.c.	20.14	9.96	18.11	13.27	16.22	9.26	0.248	>0.05
Motility %	45.71	18.13	34.44	24.68	33.33	11.46	0.99	>0.05
Abnormal forms %	26.43	3.78	27.22	5.65	31.67	10.31	1.244	>0.05
Swelling test %	40.71	22.99	35.56	22.25	28.89	13.64	0.719	>0.05
After 6 months								
Count / c.c	35.29	17.94	33.11	24.29	27.91	21.02	0.255	>0.05
Motility %	49.29	19.02	41.11	29.97	42.22	17.7	0.276	>0.05
Abnormal forms %	25.71	4.49	26.11	4..86	29.0	7.76	0.759	>0.05
Swelling test %	53.14	19.96	52.56	17.38	53.89	16.91	0.012	>0.05
After 9 months								
Count / c.c	11.57	12.08	8.44	12.63	8.0	8.78	0.226	>0.05
Motility %	19.29	20.3	9.44	11.30	17.78	21.08	0.741	>0.05
Abnormal forms %	15.0	14.14	15.0	14.58	17.44	16.81	0.073	>0.05
Swelling test %	11.43	12.15	11.11	12.69	13.33	17.32	0.61	>0.05
After 12 months								
Count / c.c	9.71	10.48	6.89	10.34	6.22	6.89	0.304	>0.05
Motility %	15.71	17.42	7.78	9.39	13.89	17.81	0.626	>0.05
Abnormal forms %	15.0	14.14	16.67	16.39	17.22	16.79	0.04	>0.05
Swelling test %	8.57	8.99	7.78	8.33	9.44	10.74	0.07	>0.05

Table (57)

Table (57) showed that there was no statistically significant relationship between the grade of varicocele and postoperative semen parameters or S.T. ($p>0.05$).

Table (58) shows the relation of the grade of varicocele to postoperative semen parameters and S.T. after the inguinal approach .

Grade	I (n=8)		II (n=9)		III (n=8)		F	P
Seminal parameters	X̄	S.D.	X̄	S.D.	X̄	S.D.		
After 3 months								
Count / c.c	11.81	9.91	16.11	11.12	15.38	9.84	0.408	>0.05
Motility %	29.38	18.6	32.78	22.38	30.63	19.17	0.062	>0.05
Abnormal forms %	35.0	15.54	35.56	15.5	33.13	9.61	0.081	>0.05
Swelling test %	26.88	17.51	26.78	16.92	29.38	19.9	0.054	>0.05
After 6 months								
Count / c.c	18.88	17.31	23.78	18.25	21.75	13.6	0.186	>0.05
Motility %	35.0	23.78	37.78	24.64	34.38	25.28	0.047	>0.05
Abnormal forms %	33.13	8.84	35.56	16.29	30.63	9.04	0.350	>0.05
Swelling test %	39.38	19.09	36.89	20.96	41.25	22.8	0.092	>0.05
After 9 months								
Count / c.c	7.5	10.16	8.11	10.17	8.25	8.76	0.014	>0.05
Motility %	14.38	18.02	16.67	23.98	13.75	15.29	0.053	>0.05
Abnormal forms %	26.88	18.7	25.0	24.62	20.63	19.71	0.184	>0.05
Swelling test %	11.88	7.99	7.78	6.67	8.75	7.91	0.675	>0.05
After 12 months								
Count / c.c	6.63	9.50	6.89	7.8	6.38	7.25	0.003	>0.05
Motility %	9.38	12.94	14.44	21.13	7.5	7.56	0.475	>0.05
Abnormal forms %	27.5	19.64	25.56	26.39	20.63	18.79	0.207	>0.05
Swelling test %	7.5	6.54	4.44	5.27	6.88	5.94	0.642	>0.05

Table (58)

This table showed that there was no statistically significant relationship between the grade of varicocele and postoperative semen parameters or S.T. ($p>0.05$).