

## RESULTS

### *Descriptive Statistics :*

**1- Age :** The age of the patients ranged between 21 and 45, mean (33.07  $\pm$  5.44) .

Table (1) shows the mean age and standard deviation for each group.

No significant difference was found between the 3 groups.

Table (1) ( Mean - SD . dev.) for each group and comparison of the 3 groups.

Group	No.	Mean	SD. Dev.	SD Err.
Varicocele	23	32.91	5.52	1.15
Infection	7	31.71	5.35	2.02
Others	13	34.08	5.59	1.55
Group	T		P	
Varicocele / Infection	0.51		0.62	
Varicocele / Others	0.61		0.55	
Infection / Others	0.92		0.38	

**2- Volume :**

The semen volume of the patients ranged between 0.5 ml and 8ml, mean is  $(3.15 \pm 1.61)$ .

Table (2) shows the mean volume and SD. dev. for each group.

No significant difference was found between the 3 groups.

Table (2) : Volume (Mean - SD. dev) for each group and comparison of the 3 groups:

Group	No.	Mean	SD. Dev.	SD Err.
Varicocele	23	3.49	1.66	0.35
Infection	7	2.71	1.22	0.46
Others	13	2.78	1.68	0.47
Group	T		P	
Varicocele / Infection	1.14		0.26	
Varicocele / Others	1.23		0.23	
Infection / Others	0.09		0.93	

**3- Count :**

The semen count of the patients ranged between 10-46, mean is  $(22.77 \pm 10.46)$ .

Table (3) shows the mean count and SD dev. for each group.

No significant difference was found between the 3 groups:

Table (3) : Count (Mean - SD dev.) for each group and comparison of the 3 groups:

Group	No.	Mean	SD. Dev.	SD Err.
Varicocele	23	24.00	9.78	2.04
Infection	7	23.29	12.58	4.76
Others	13	20.31	10.90	3.02
Group	T		P	
Varicocele / Infection	0.16		0.88	
Varicocele / Others	1.04		0.30	
Infection / Others	0.55		0.59	

**4- Motility :**

Sperm motility of the patients ranged between 0.00 - 80, mean (38.95  $\pm$  18.88).

Table (4) shows the mean motility and SD deviation for each group.

No significant difference was found between the 3 groups:

Table (4) Motility (Mean - SD dev.) for each group and comparison of the 3 groups.

Group	No.	Mean	SD. Dev.	SD Err.
Varicocele	23	41.10	20.56	4.29
Infection	7	39.10	19.51	7.38
Others	13	35.11	16.13	4.47
Group	T		P	
Varicocele / Infection	0.29		0.78	
Varicocele / Others	0.86		0.40	
Infection / Others	0.39		0.70	

### 5- Spermatogenic cells: ( Fig. 1)

The spermatogenic cells in the semen of the patients ranged between 0.00 - 85.00 Mean ( $5.02 \pm 12.98$ ).

Table (5) shows the mean spermatogenic cells and SD dev. for each group. No significant difference was found between the 3 groups.

Table (5) : Spermatogenic cells (Mean - SD dev.) for each group and comparison of the 3 groups:

Group	No.	Mean	SD. Dev.	SD Err.
Varicocele	23	6.30	17.41	3.62
Infection	7	3.71	4.89	1.85
Others	13	3.46	3.97	1.10
Group		T	P	
Varicocele / Infection		0.39	0.70	
Varicocele / Others		0.58	0.57	
Infection / Others		0.13	0.90	

### 6. Abnormal forms :

The abnormal forms in the semen of the patients ranged between 12 and 85, mean (42.09 + 12.97) Table (6) shows the mean abnormal forms and SD. dev. For each group. No significant difference was found between the 3 groups.

Table (6) Abnormal forms (Mean - SD. dev.) For each group and comparison of the 3 groups:

Group	No.	Mean	SD. Dev.	SD Err.
Varicocele	23	42.70	14.92	3.11
Infection	7	36.30	10.60	4.00
Others	13	44.15	1.00	2.77
Group	T		P	
Varicocele / Infection	1.05		0.30	
Varicocele / Others	0.31		0.76	
Infection / Others	1.65		0.12	

### 7- Multiple Anomalies :

The multiple anomalies in the semen of the patients ranged between 0.00 and 17, mean ( $6.93 \pm 4.45$ ). Table 7 shows the mean multiple anomalies and standard deviation for each group. No significant difference was found between the 3 groups.

Table (7) Multiple anomalies (Mean - SD dev.) In each group and comparison of the 3 groups:

Group	No.	Mean	SD. Dev.	SD Err.
Varicocele	23	6.00	4.80	1.00
Infection	7	6.00	1.83	0.69
Others	13	7.39	4.98	1.38
Group	T		P	
Varicocele / Infection	0.51		0.61	
Varicocele / Others	0.25		0.80	
Infection / Others	0.70		0.49	

### 7- Multiple Anomalies :

The multiple anomalies in the semen of the patients ranged between 0.00 and 17, mean ( $6.93 \pm 4.45$ ). Table 7 shows the mean multiple anomalies and standard deviation for each group. No significant difference was found between the 3 groups.

Table (7) Multiple anomalies (Mean - SD dev.) In each group and comparison of the 3 groups:

Group	No.	Mean	SD. Dev.	SD Err.
Varicocele	23	6.00	4.80	1.00
Infection	7	6.00	1.83	0.69
Others	13	7.39	4.98	1.38
Group	T		P	
Varicocele / Infection	0.51		0.61	
Varicocele / Others	0.25		0.80	
Infection / Others	0.70		0.49	

### 8- Cytoplasmic Droplets (CPD) :(Fig. 2)

The CPD in the semen of the patients ranged between 0.00 and 11.00, mean ( $3.51 \pm 2.83$ ) Table (8) shows the mean CPD and SD. dev. for each group. No significant difference was found between the 3 groups.

Table (8) CPD (mean-SD dev.) in each group and comparison of the 3 groups.

Group	No.	Mean	SD. Dev.	SD Err.
Varicocele	23	2.91	2.88	0.56
Infection	7	4.86	3.19	1.20
Others	13	3.85	2.44	0.68
Group		T	P	
Varicocele / Infection		1.53	0.14	
Varicocele / Others		0.99	0.33	
Infection / Others		0.80	0.44	

### 9- Bent Necks :(Fig. 4)

The bent necks in the semen of the patients ranged between 0.00 and 12.00, Mean ( $3.72 \pm 2.71$ ) Table (9) shows the mean bent necks and SD dev. for each group.

No significant difference was found between the 3 groups :Table (9) : Bent necks (Mean - SD. dev.) for each group and comparison between the 3 groups :

Group	No.	Mean	SD. Dev.	SD Err.
Varicocele	23	3.48	2.78	0.58
Infection	7	2.29	1.11	0.42
Others	13	4.92	2.84	0.79
Group	T		P	
Varicocele / Infection	1.10		0.28	
Varicocele / Others	1.49		0.15	
Infection / Others	2.34		0.03	

### 10. Tapered Heads :(Fig.5)

The tapered heads in the semen of the patients ranged between 0.00-45.00, mean ( $14.72 \pm 10.97$ ) Table (10) shows the mean tapered heads and SD. dev. In each group, no significant difference was found between the 3 groups, but the percentage of tapered heads is higher in the varicocele group (16.7) than in the infection group (9.86) and others (13.85). This may be due to the fact that the number of patients in the infection group and others group is small compared with the varicocele group.

Table (10) Tapered heads (Mean - SD.dev.) In each group and comparison of the 3 groups:

Group	No.	Mean	SD. Dev.	SD Err.
Varicocele	23	16.70	10.48	2.19
Infection	7	9.86	8.59	3.25
Others	13	13.85	12.64	3.52
Group	T		P	
Varicocele / Infection	1.57		0.13	
Varicocele / Others	0.73		0.47	
Infection / Others	0.74		0.47	

**11- Coiled Tails :(Fig. 4)**

The coiled tails in the semen of the patients ranged between 1.00 and 43.00, mean ( $16.07 \pm 10.09$ ) Table (10) shows the mean coiled tails and SD. dev. In each group.

No significant difference was found between the 3 groups. This may be due to the fact that the number of patients is small in the infection group as compared with the varicocele group.

Table (11) : Coiled tails (Mean - SD dev.). in each group and comparison of the 3 groups:

Group	No.	Mean	SD. Dev.	SD Err.
Varicocele	23	14.44	11.22	2.34
Infection	7	13.71	8.51	3.22
Others	13	20.23	7.88	2.18
Group		T	P	
Varicocele / Infection		0.16	0.88	
Varicocele / Others		1.64	0.11	
Infection / Others		1.72	0.10	

## 12- Amorphous :

The amorphous shapes in the semen of the patients ranged between 0.00 and 12.00, mean (1.16 and 1.90). Table (12) shows the mean amorphous cells and SD. dev. In each group, no significant difference was found between the 3 groups.

Table (12): Amorphous (mean - SD dev) for each group and comparison of the 3 groups:

Group	No.	Mean	SD. Dev.	SD Err.
Varicocele	23	1.44	2.49	0.52
Infection	7	0.57	0.59	0.20
Others	13	1.00	0.91	0.25
Group		T	P	
Varicocele / Infection		0.90	0.37	
Varicocele / Others		0.60	0.55	
Infection / Others		1.13	0.27	