ANALYSIS OF RESULTS

Fifty cases represented the material of this study, they were divided into two groups:

Group I : The control group included 10 healthy children. There were 4 females (40%) and 6 males (60%). Their ages ranged between (5-12) years (mean ± S.D : 8.9 ± 2.424) as show in table I .

Group II: Forty children presenting with acute respiratory tract infection. There were 18 females (45%) and 22 males (55%). Their ages ranged between (5-12) years (mean ± S.D.: 8.9 ± 2.134). The ages of the patients and the control group were matched, and the duration of illness of all patients was from 5-15 days. The main presenting symptoms were : Cough in 100%, fever in 90%, headache in 42.5%, Sore throat in 30%, nasal congestion in 10%, abdominal pain in 2%.

The main presenting signs were: fine rales in 42.5%, wheezes in 20% , bronchial breathing in 12% as shown in table 2.

Table (1): Clinical and Laboratory findings among controls

Pt.No.	Age in years	Sex	IgG
1	5	M	0.020
2	6	M	0.046
3	7	F	0.060
4	8	F	0.110
5	9	M	0.081
6	9	F	0.109
7	10	M	0.120
8	11	M	0.175
9	12	M	0.189
10	12	F	0.120
Mean	8.9		0.103
S.D.	2.424		0.053

S.D. = Standard deviation.

IgG antibody titre ranged from 0.020 to 0.189 with a mean of (0.103 ± 0.053).

Table (2): Clinical and Laboratory findings among cases.

Pt.No.	Sex	Age	IgG	Sample	Symptoms
1	F	5	0.020	5	Cough, fever, headache,sore throat.
2	M	7	0.056	7	Cough, wheezes.
3	M	8	0.081	9	Cough, headache, malaie, Fine rales.
4	F	9	0.109	7	Cough, fever.
5	M	11	0.112	10	Cough, fever, wheezes.
6	F	11	0.115	12	Cough, fever, sore throat.
7	F	10	0.117	7	Fever, cough, headache
8	M	8	0.120	5	Fever, cough, headache, fine rales.
9	F	12	0.120	10	Cough, sore throat.
10	M	8	0.121	5	Cough, wheezes.
11	F	9	0.127	6	Cough, fine rales.
12	F	6	0.154	7	Cough, sore throat.
-	M	5	0.165	8	Fever, cough, wheezes.
14	F	7	0.175	7	Cough, headache, malaise, nasal cong.
15	F	7	0.292	12	Cough, headache, fine rales.
16	M	10	0.304	10	Fever, cough, bronchial breathing.
17	F	10	0.304		Fever, cough, fine rales.
18	M	11	0.314	9	Cough,headache,wheezes.
19	F	11	0.351	10	Headache, cough, sora throat, fine rales.
20	F	7	0.365	12	Cough, nasal congestion.
21	F	6	0.384	11	Fever, cough, fine rales.
22	M	9	0.391	8	Fever, cough, abdominal pain, fine rales.
23	M	10	0.413	14	Cough, headache, bronchial breathing.
24	M	10	0.420	9	Fever, cough.
25	F	12	0.439	10	Fever, cough. headache, bronchial, breathing.
26	M	12	0.445	9	Cough, fine rales.
27	M	12	0.502	14	Cough, headache, sore hroat, fine rales
28	M	11	0.503	15	Cough, headache, fine rales.
29	F	12	0.504	15	Cough, wheezes, nanal congestion.
30	M	5	0.179	9	Fever, cough, sore throat.
31	F	7	0.181	9	Fever, cough, headache, wheezes.
32	M	7	0.182	7	Fever, cough, nasal congestion, sore throat.
33	M	8	0.182	9	Cough, fine rales, malaise.
34	M	7	0.189	9	Fever, cough, bronchial breathing.
35	M	8	0.225	11	Cough, headache.
36	M	11	0.241	7	Fever, cough, sore throat.
37	F	9	0.241	9	Fever, cough,fine rales, abd. pain.
38	M	11	0.262	8	Fever, cough,fine rales, sore throat.
39	F	8	0.265	9	Cough, fine rales .
40	M	9	0.270	7	Fever, cough, wheezes.
Mean		8.9	0.249		
S.D.		2.134	0.134		

S.D. = Standard deviation.
IgG antibody titre ranged from 0.020 to 0.504 with a mean of (0.249 $\pm$ 0.134).

Table (3):Comparison between the mean values of IgG antibody titre in patients and control groups.

Unpaired t-Test X_1: GROUP Y_2:Ig G

DF:	Unpaired Value:	Prob.(2-tail):
48	3.347	.0016

Group:	Count:	Mean:	Std.Dev:	Std.Error
CASE	40	.249	.134	.021
CONTROL	10	.103	.053	.017

Std.Dev. = Standard deviation .....

P< 0.001 (highly significant).

The mean value of IgG antibody titre in patients group was (.249±.134) and this value is significantly higher than that of the mean value of the control group.

Table (4):IgG antibody titre in negative and positive control group.

Unparied t-Test X_1 : Recorde of Ig G conclusion Y_1: Ig G

DF:	Unpaired Value:	Prob.(2-tail):
8	-3.513	.0079

Group:	Count:	%	Mean:	Std.Dev:	Std.Error
NEGATIVE	8	80	.083	.038	.013
POSITIVE	2	20	.182	.01	.007

$P < 0.001$ significant

- Two (20%) of the control group had an antibody titre within the positive range, from 0.175 to 0.189 with a mean of (.182 $\pm$ .01) which may indicate prior exposure to Mycoplasma pneumoniae infections.
- Eight (80%) of the control group had an antibody titre within the negative range, from 0.020 to 0.120 with a mean of (.083 $\pm$ .038).

Table (5):Comparison between the mean values of IgG antibody titre in negative and positive patients group.

Unpaired t-Test X_1 : Recorde of Ig G conclusion Y_1: Ig G

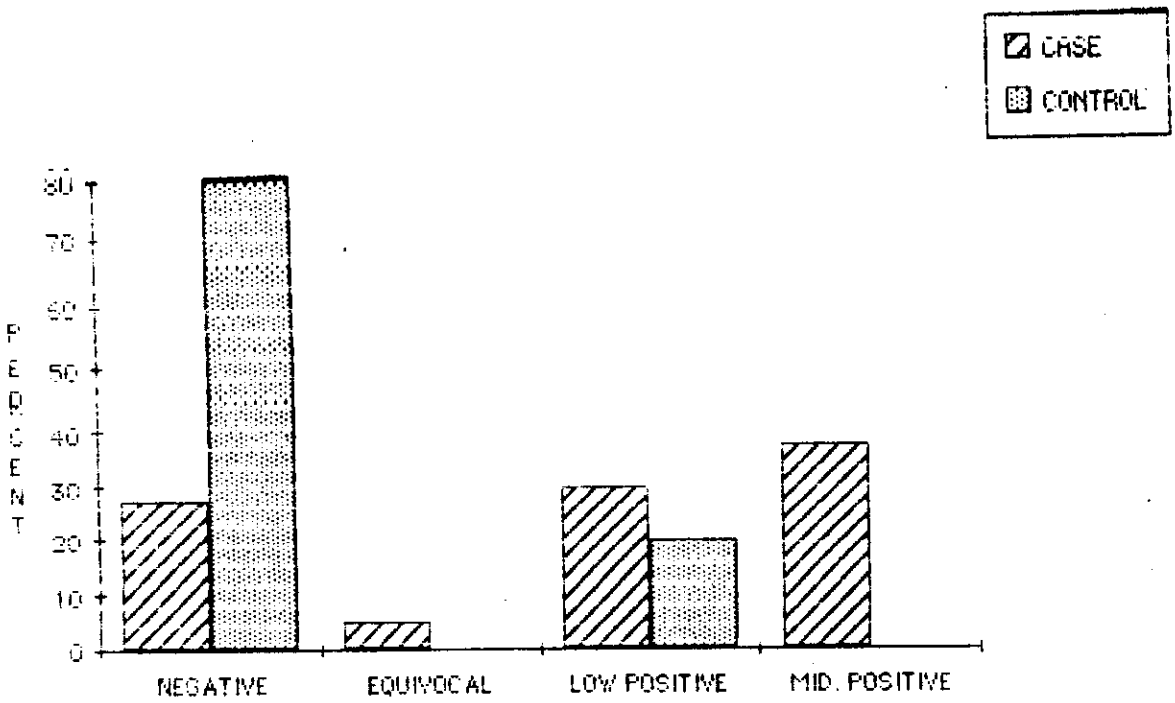
DF:	Unpaired Value:	Prob.(2-tail):
36	-6.489	.0001

Group:	Count:	%	Mean:	Std.Dev:	Std.Error
NEGATIVE	11	27.5	.1	.034	.01
POSITIVE	27	67.5	.316	.109	.021

$P < 0.001$ significant

- Twenty seven (67.5%) of the patients group had an antibody titre within the positive range, from 0.175 to 0.504 with a mean of ($.316 \pm .109$) which may indicate the frequency of Mycoplasma pneumoniae infections.
- Eleven (27.5%) of the patient group had an antibody titre within the negative range, from 0.020 to 0.127 with a mean of ($0.1 \pm .034$), this value is Lower than that of the mean value of the positive cases.

Fig. 1 : percentage of cases and controls as correlated to the level of IgG.



- Eleven (27.5%) of the patients had an antibody titre within the negative range, while 27 (67.5%) had an antibody titre within the positive range, 12 (30%) had a low positive antibody titre, 15 (37.5%) had a mid positive antibody titre and 2 (5%) had an equivocal titre.

- Two (20%) of the control group had an antibody titre within the negative range, while 8 (80%) had an antibody titre within the low positive range.

Table (6):Comparison between the mean values of IgG antibody titre in the control group whose ages < 8 years and the control group whose ages ≥ 8 years.

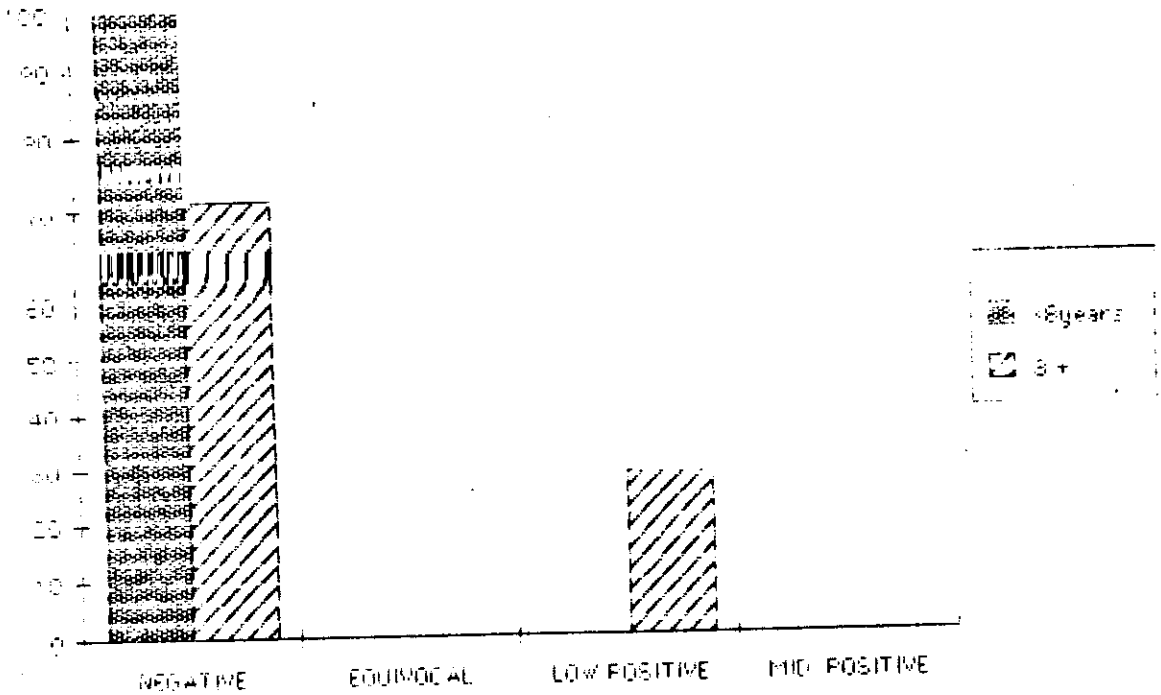
Unpaired t-Test X_i : AGE GROUP Y_i : Ig G

DF:	Unpaired Value:	Prob.(2-tail):
8	-3.614	.0068

Group:	Count:	Mean:	Std.Dev:	Std.Error
< 8 years	3	.042	.02	.012
8 +	7	.129	.039	.015

Three (30%) of the control group whose ages ranged from 5-7 years had an antibody titre from .020 to 0.060 with a mean of (.042 $\pm$ .02), while 7 (70%) of the control group whose ages ranged from 8-12 years had an antibody titre from 0.110 to 0.189 with a mean of (.129 $\pm$ .039).

Fig. 2 : Percentage of the control group as correlated to IgG level according to their ages.



Direct correlation between antibody titre and ages of the control group.

Table (7):Comparison between the mean values of IgG antibody titre in the patients group whose ages < 8 years and the patients group whose ages ⩾8 years.

Unparied t-Test X_1 : AGE GROUP Y_1 : Ig G

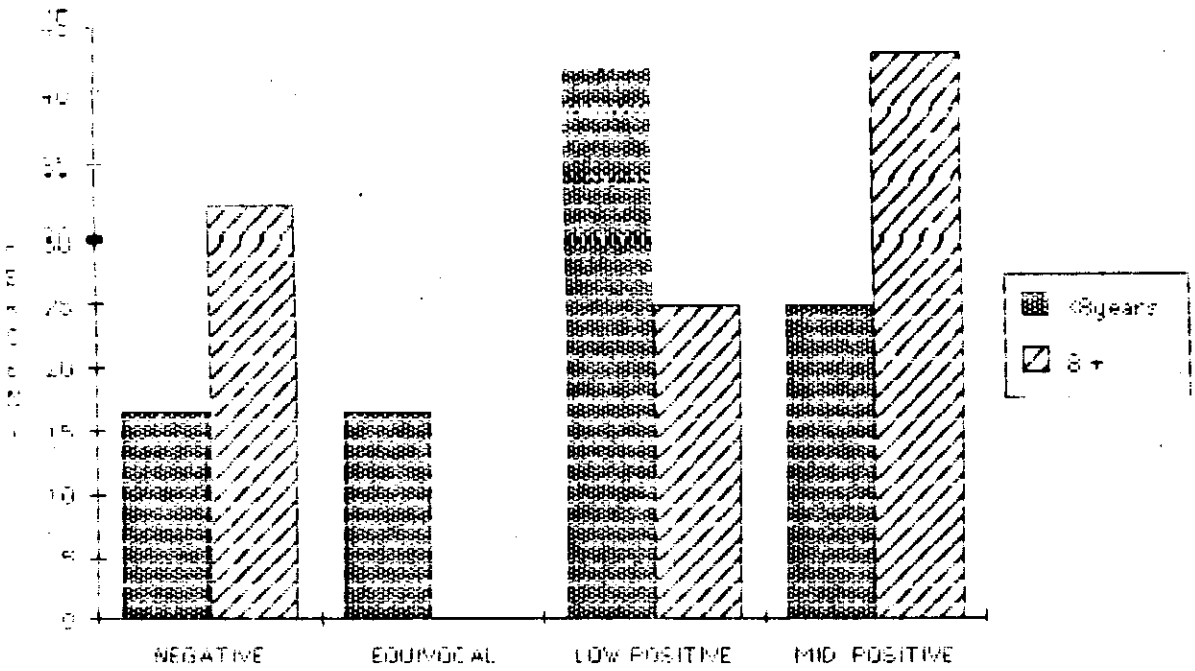
DF:	Unpaired Value:	Prob.(2-tail):
38	-1.687	.0998

Group:	Count:	Mean:	Std.Dev:	Std.Error
< 8 years	12	.195	.108	.031
8 +	28	.271	.139	.026

P. > 0.05 insignificant

Twelve (30%) of the patients group whose ages ranged from 5-7 years had an antibody titre from 0.020 to 0.365 with a mean of (.195 ± .108), while 28 (70%) of the patients group whose ages ranged from 8-12 years had an antibody titre from 0.081 to 0.504 with a mean of (0.271 ± .139), this value was found to be higher than that of the mean value of the patients group whose ages < 8 years but the difference was not statistically significant.

Fig. 3 : Percentage of the patient group as correlated to IgG level according to their ages.



No correlation between antibody titre and ages of the patients group.

Table (8): Comparison between the mean values of IgG antibody titre in patients group whose duration of illness from 5-7 days and patients group whose duration of illness from 8-15 days.

Unpaired t-Test X_1 : Recorde of DAY OF SAMP. Y_1 : Ig G

DF:	Unpaired Value:	Prob.(2-tail):
38	-3.873	.0004

Group:	Count:	Mean:	Std.Dev:	Std.Error
5 - 7 days	12	.141	.07	.02
8 - 15	28	.295	.129	.024

P < 0.001 significant.

Twelve (30%) of the patients group had a duration of illness from 5-7 days and an antibody titre from 0.020 to 0.241 with a mean of (.141 $\pm$ .07). The rest of the patients (70%) had a duration of illness from 8-15 days and an antibody titre from .081 to 0.504 with a mean of (0.295 $\pm$ 0.129), this value is significantly higher than that of the mean value of the patients group whose duration of illness less than 8 days.

Table (9): The mean value of IgG antibody titre in the patient group with duration of illness from 5-7 days and the control group.

Unparied t-Test X_1 : Group Y_1 : Ig G

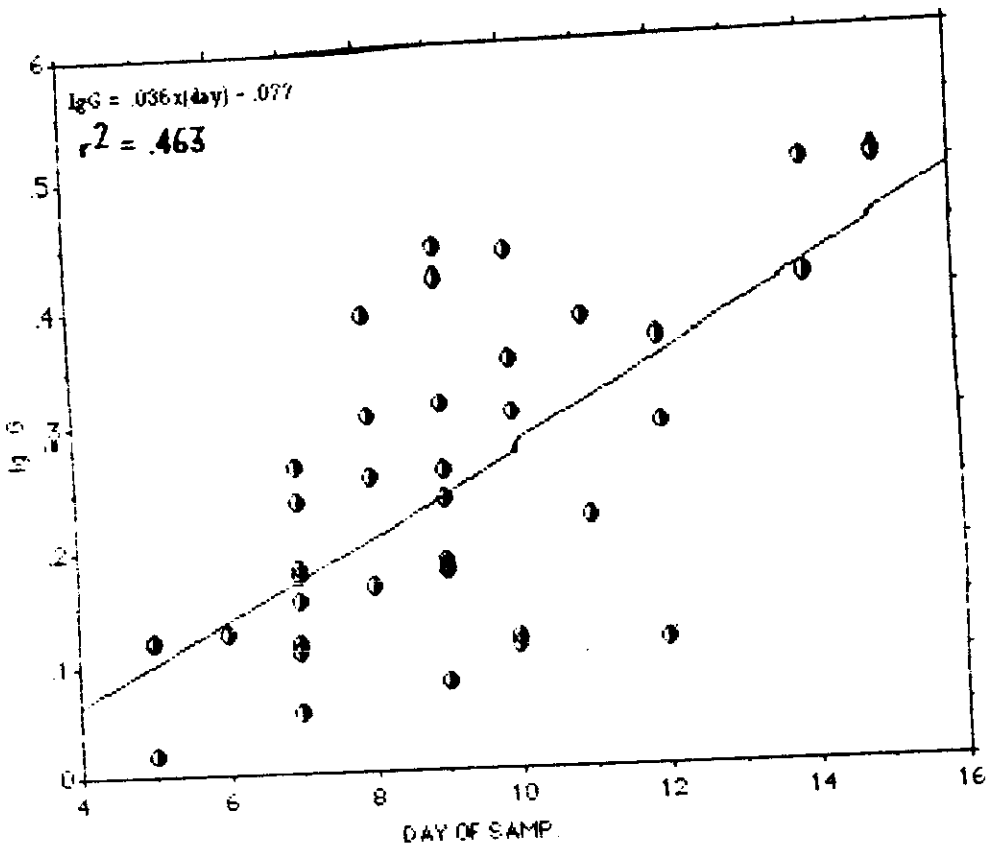
DF:	Unpaired Value:	Prob.(2-tail):
28	1.484	.1755

Group:	Count:	Mean:	Std.Dev:	Std.Error
CASE	12	.141	.87	.82
CONTROL	18	.183	.853	.817

$P > 0.05$ non significant

No significant difference was found between the IgG antibody titre of the patients group whose duration of illness from 5-7 days and that of the control group.

Fig.4: Relation ship between IgG levels and sample day among cases.



direct correlation between the antibody titre and day of sample.