

R E S U L T S

R E S U L T S

Results of the in vitro test

(leucocyte migration inhibition test)

The leucocyte migration inhibition test was performed on the control and pathological groups using the crude extract of adult nasal mucosa as antigen. The suitable concentration of antigen to be used in our work, was 200 microgram per ml. This was the highest non toxic concentration that did not lead to non specific inhibition of migration of leucocytes of the normal control group (migration percent about 100).

. Data obtained from the control group : (Table 1).

The migration percent ranged between 92 and 108, with a mean of 102.07 ± 1.97 (table 3). None of the controls showed leucocyte migration inhibition. Photo (5) showed the result of normal migration.

. Data obtained from the group of atrophic rhinitis : (Table 2)

Our pathological group consisted of 20 patients with atrophic rhinitis : 14 females and 6 males. The age ranged from 15 to 35 years. The duration of the disease was from 5 months up to 25 years.

The individual results given in table (2) showed that 18 cases had a leucocyte migration inhibition ranging between (23-83%) which is much below the lower limit of normal (92%). Only case number 11 had normal migration percent

(99%) and case number 15 showed stimulation of leucocyte migration (129%) which is above the upper limit of normal (108%).

The mean migration percent was 58.58 ± 5.86 (table 3) compared to the normal mean 102.07 ± 1.97 ; this group showed statistically significant inhibition of leucocyte migration. Photo (6) showed the result of inhibition of migration and photo (7) showed the result of stimulation of migration.

- The relation between the leucocyte migration percent and sex (table 4, Fig. 3), severity of the disease (table 4, Fig. 3), age (table 4, Fig. 4) and the duration of the disease (Fig. 5), was found to be of statistical insignificance (for sex $t = 0.64$, $P > 0.05$; for severity $t = 0.45$, $P > 0.05$; for age $r = 0.40$, $P > 0.05$; for the duration of the disease $r = 0.36$, $P > 0.05$).

- Results of the spontaneous rosette test :

- . The total leucocytic count, percentage of lymphocytes, total lymphocytic count and the proportions of cells forming rosettes are shown in table (2). They were mentioned to calculate the absolute number of T-lymphocytes per cu mm.
- . The mean value of the absolute number of lymphocytes per cu mm in atrophic rhinitis group was 587.55 ± 227.46 cu mm. compared to the mean of the control group (1383.08 ± 186.92). This value shows a statistically significant reduction in the absolute number of T-lymphocytes/cu mm. ($t = 9.54$, $P > 0.001$) (Table 5).

- . The relation between the absolute number of T-lymphocytes/cmm and sex (Table 5, Fig. 6), severity of the disease (Table 5, Fig. 7), age (Table 5, Fig. 8) and duration of the disease (Fig. 9), was found to be of statistical insignificance (for sex $t = 0.85$, $P > 0.05$; for severity $t = 0.99$, $P > 0.05$; for age $r = - 0.1$, $P > 0.05$; for the duration of the disease $r = - 0.11$, $P > 0.05$).

There is no evidence for a significant correlation between the absolute number of lymphocyte^s/cmm and the migration percent in our group of patients (Fig. 10) ($r = - 0.13$, $P > 0.05$).

Table (1)
Individual results of the leucocyte migration inhibition test and the spontaneous rosette test in the control group

Case No.	Age in years	Sex		Migration percent %	Total leucocytic count	% of lymphocytes	Total lymphocytic count	T lymphocyte % (R.F.I.%)	Absolute T-lymphocyte count (/cmm).
		Male	Female						
1	15		F	92	7900	30%	2370	61%	1445
2	30		F	108	8500	25%	2125	63%	1458
3	27	M		102	7000	32%	2240	60%	1344
4	37		F	95	7600	30%	2280	62%	1433
5	19		F	103	8100	28%	2268	56%	1272
6	33	M		104	6000	40%	2400	64%	1536
7	25	M		92	6500	35%	2310	58%	1339
8	40		F	108	7300	25%	1825	60%	1095
9	21		F	106	8200	33%	2706	65%	1759
10	17		F	106	6900	31%	2139	55%	1177

Table (2)
Individual results of the leucocyte migration inhibition test and the spontaneous rosette test in cases of atrophic rhinitis

Case No.	Age in years	Sex		Duration of the disease in yrs.	Family history	Severity of the disease		Migration percent	Total leucocytic count	% of lymphocytes	Total lymphocyte count	T-lymphocyte % (RFI%)	Absolute T-lymphocyte count (C.M.)
		Male	Female			Mild	Severe						
1	15	M		4	+ve		+	28	3400	27%	918	37.5%	344
2	35		F	20	-ve		+	74	5200	32%	1664	40.2%	656
3	30		F	6	-ve		+	38	4300	30%	1290	49.2%	629
4	20		F	4	-ve		+	48	5200	30%	1560	36.7%	572
5	30		F	3	-ve		+	48	6200	23%	1426	57.9%	825
6	18	M		5	+ve	+		82	5800	20%	1160	41.9%	486
7	24		F	10	+ve	+		44	4100	44%	1804	52.2%	941
8	22		F	2	-ve	+		48	4800	22%	1056	27%	285
9	19	M		3	+ve		+	23	5600	26%	1456	35%	509
10	35		F	15	-ve		+	66	6800	23%	1564	16.9%	264

Table (2)

(Cont.)

Case No.	Age in years	Sex		Duration of the disease in Yrs.	Family history	Severity of the disease		Migration percent	Total leucocytic count	% of lymphocytes	Total lymphocytic count	T-lymphocyte % (RPI%)	Absolute T-lymphocyte count (/cmm)
		Male	Female			Mild	Severe						
11	26		F	20	+ve	+		99	5800	22%	1276	17.3%	220
12	27	M		10	-ve		+	65	6400	22%	1408	36.2%	509
13	29	M		22	-ve		+	83	5200	24%	1248	70 %	873
14	30		F	25	+ve	+		62	4800	30%	1440	34.7%	499
15	30		F	1	-ve		+	129	4400	25%	1100	52.7%	579
16	17		F	2	-ve	+		49	1400	20%	2800	36 %	1008
17	18		F	2	-ve	+		69	5400	28%	1512	44.5%	672
18	18		F	1	-ve		+	31	5600	30%	1680	51 %	856
19	25		F	2	-ve		+	44	4600	31%	1426	42% %	598
20	20	M		3	-ve	+		35	5800	29%	1392	29 %	403

(Table 3)
Summary of the results of the leucocyte migration inhibition test and the spontaneous rosette test in both the control and the disease groups

Test	Group	Mean	S.E.M.	Normal range of single observation	
				Minimum	Maximum
Migration percent	Control	102.07%	1.97%	92%	108%
	Atrophic Rhinitis	58.58%	5.86%	23%	83%
Spontaneous rosette test	Control	1383.08/cmm	59.12/cmm	1095/cmm	1759/cmm
	Atrophic Rhinitis	587.55/cmm	50.86/cmm	220/cmm	1008/cmm

Table (4)

Total leucocyte migration percent in the group of atrophic rhinitis as compared statistically with the normal controls, and correlation between the migration percent to sex, severity and age in the disease group

	Migration percent		Sex		Severity		Age in years		
	Control group	Atrophic rhinitis	Female	Male	Mild	Moderate severe	10-20	20-30	30-40
Mean %	102.07%	23.58%	61.06%	52.78%	61.30%	55.76%	47.4%	58.39%	70.01%
S.E.M.	1.97%	5.86%	7.04%	11.14%	7.61%	8.57%	9.94%	7.81%	13.06%
Statistical comparison	$t = 5.13$ $P < 0.001$ H.S.		$t = 0.64$ $P > 0.05$ H.S.		$t = 0.45$ $P > 0.05$ H.S.		$r = 0.40$ $P > 0.05$ H.S.		

H.S. = Highly significant

H.S. = Not significant.

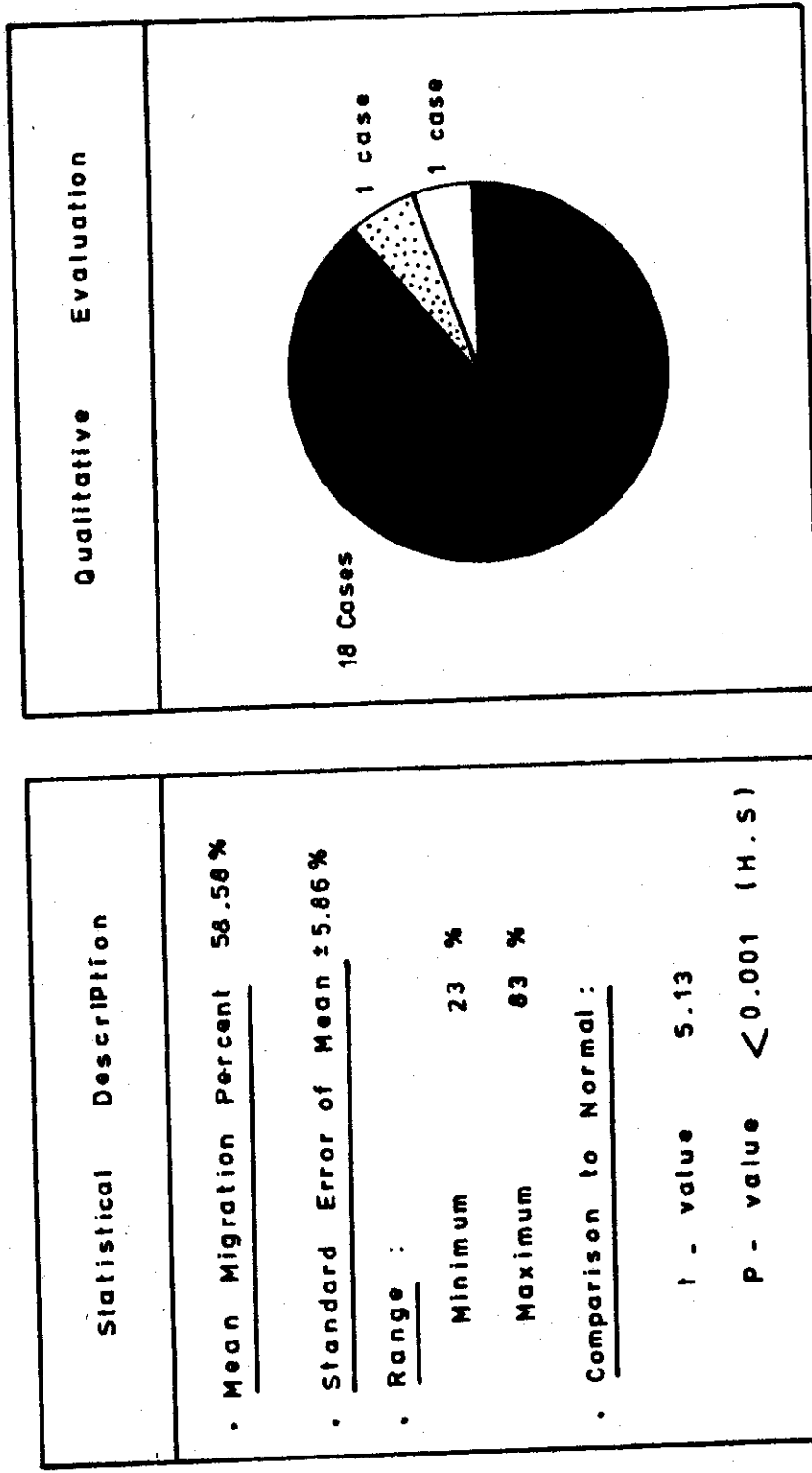
Table (5)

The absolute number of T-lymphocyte per cumm in the group of atrophic rhinitis as compared statistically with the normal controls, and correlation between the absolute number to sex, severity and age in the disease group.

	The absolute No. of T-cells /cumm		Sex		Severity		Age in years		
	Control group	Atrophic rhinitis group	Female	Male	Mild	Moderate & severe	10-20	20-30	30-40
Mean/cumm	1383.08	587.55	616.02	521.12	649.08	546.53	646.23	550.73	577.97
S.E.M.	59.12	50.86	65.23	75.46	97.96	54.72	101.90	90.9	76.72
Statistical comparison	$t = 9.54$ $P < 0.001$ H.S.		$t = 0.85$ $P > 0.05$ N.S.		$t = 0.99$ $P > 0.05$ N.S.		$r = -0.1$ $P > 0.05$ N.S.		

Fig C13

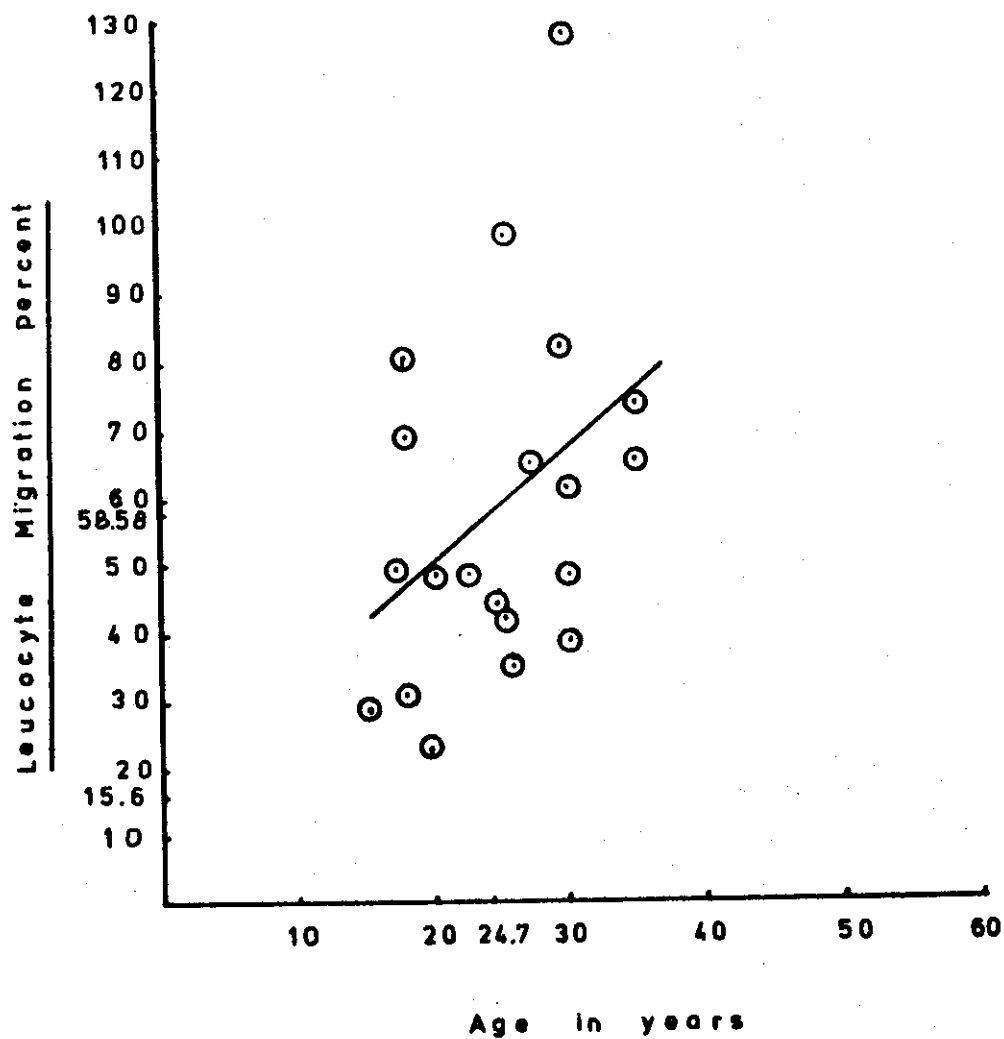
Results of Leucocyte Migration test in atrophic rhinitis group



☐ Normal ☐ Inhibition ☐ Stimulation
 H.S = Highly Significant

Fig (4)

Relation of Leucocyte Migration Percent in
atrophic rhinitis group to the age.



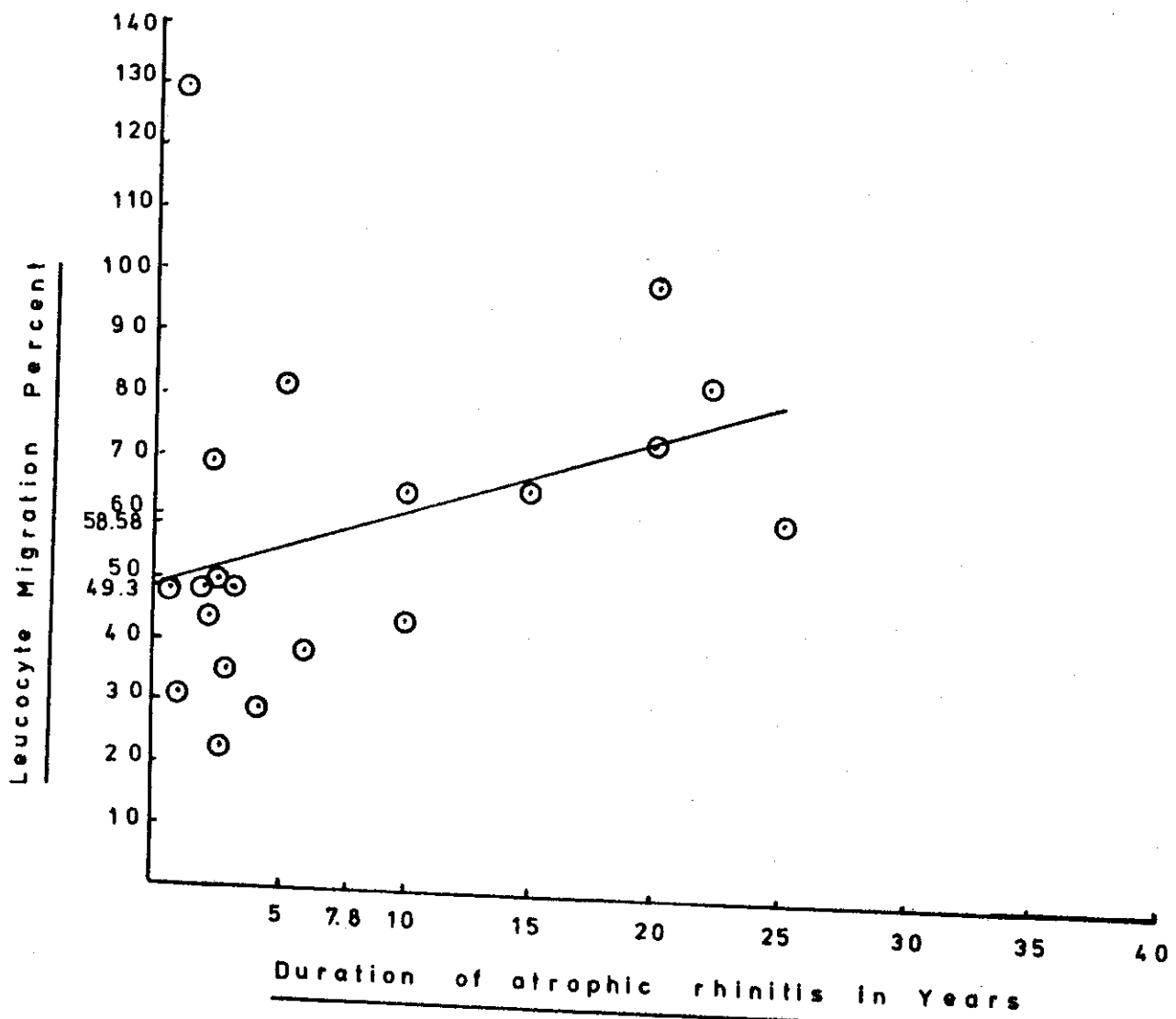
$$r = 0.4$$

$$P > 0.05$$

(N.S.) = Not significant

Fig (5)

Relation of leucocyte Migration Percent in atrophic rhinitis group to the duration of the disease in Years.

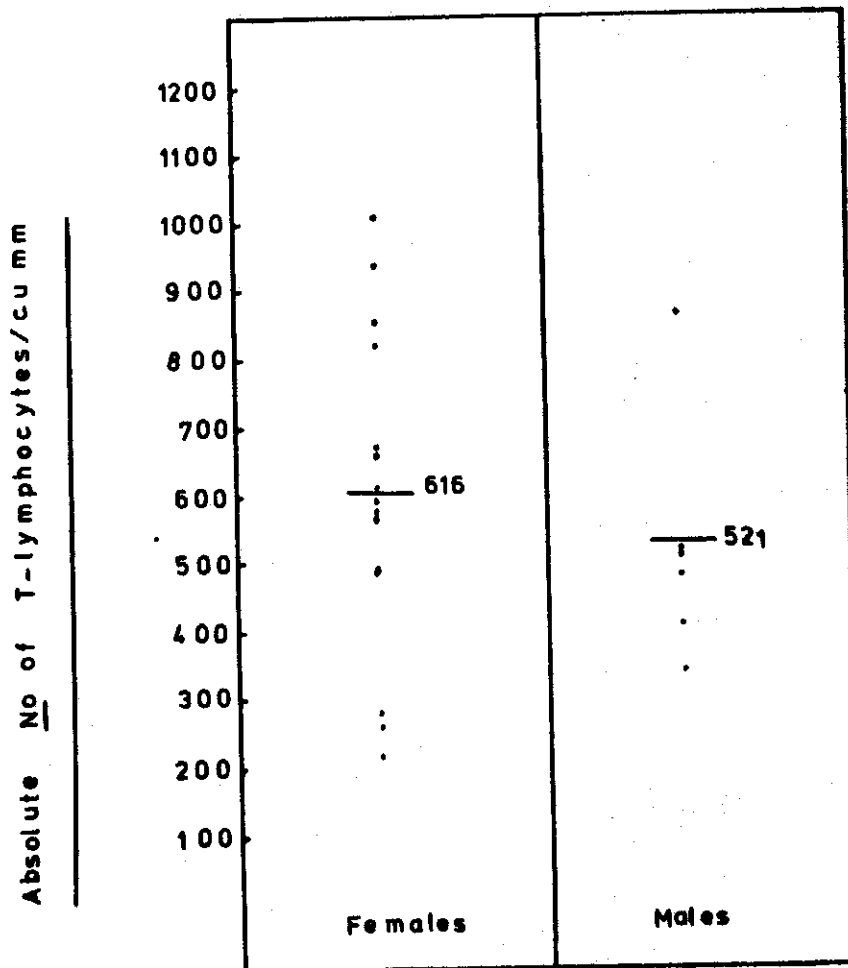


$r = 0.36$

$P > 0.05$ (N.S.)

Fig (6)

Relation of the Number of T-lymphocytes
Per Cu mm in atrophic rhinitis group to sex.



Statistical Comparison :

$t = 0.85$

$P > 0.05$ (N.S.)

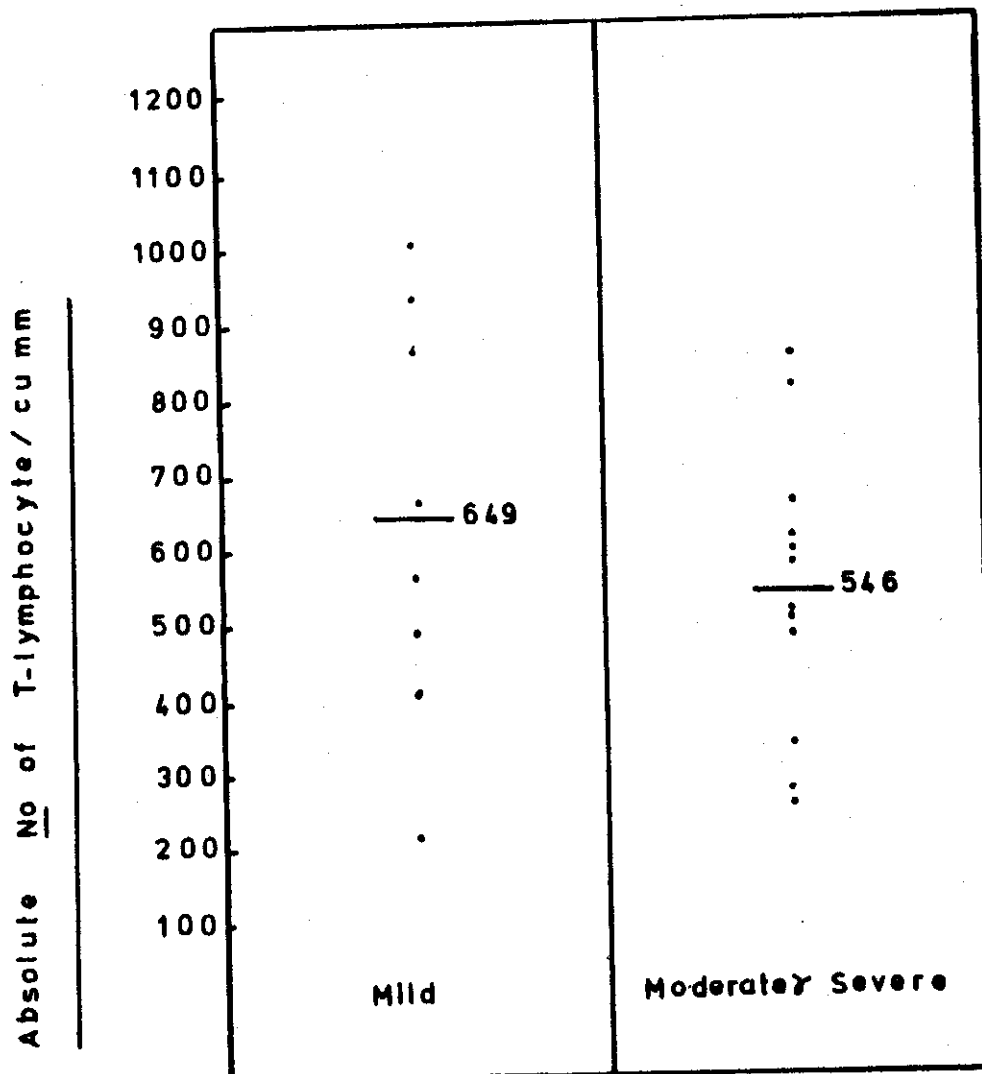
Individual result

— Mean of the absolute

No of T-lymphocytes/c.mm

Fig C73

Relation of the Number of T-lymphocytes/cu mm in atrophic rhinitis group to severity of the disease.



Statistical Comparison :

$t = 0.99$

$P > 0.05$

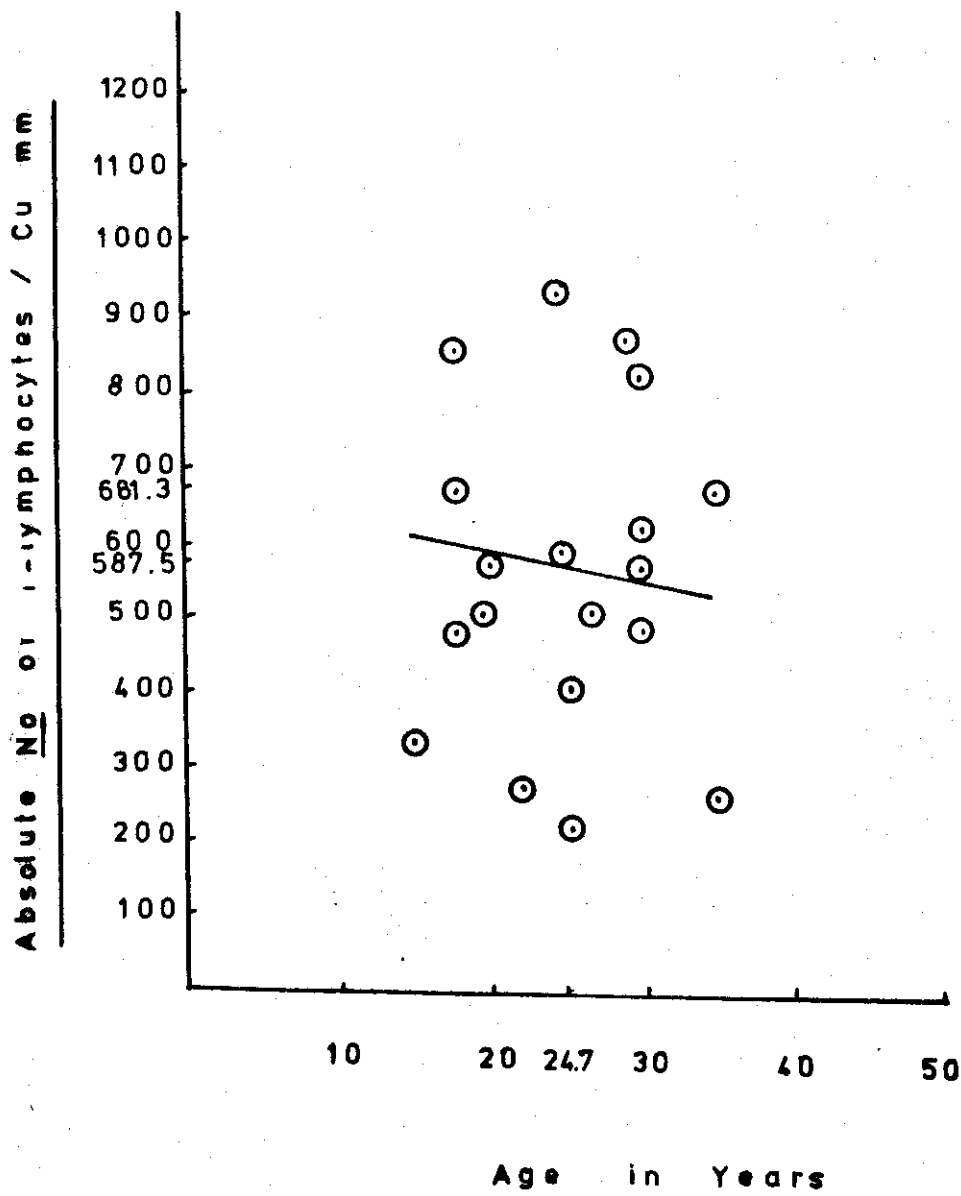
N. S.

Individual result

— Mean of T-lymphocytes
per cu mm

Fig (8)

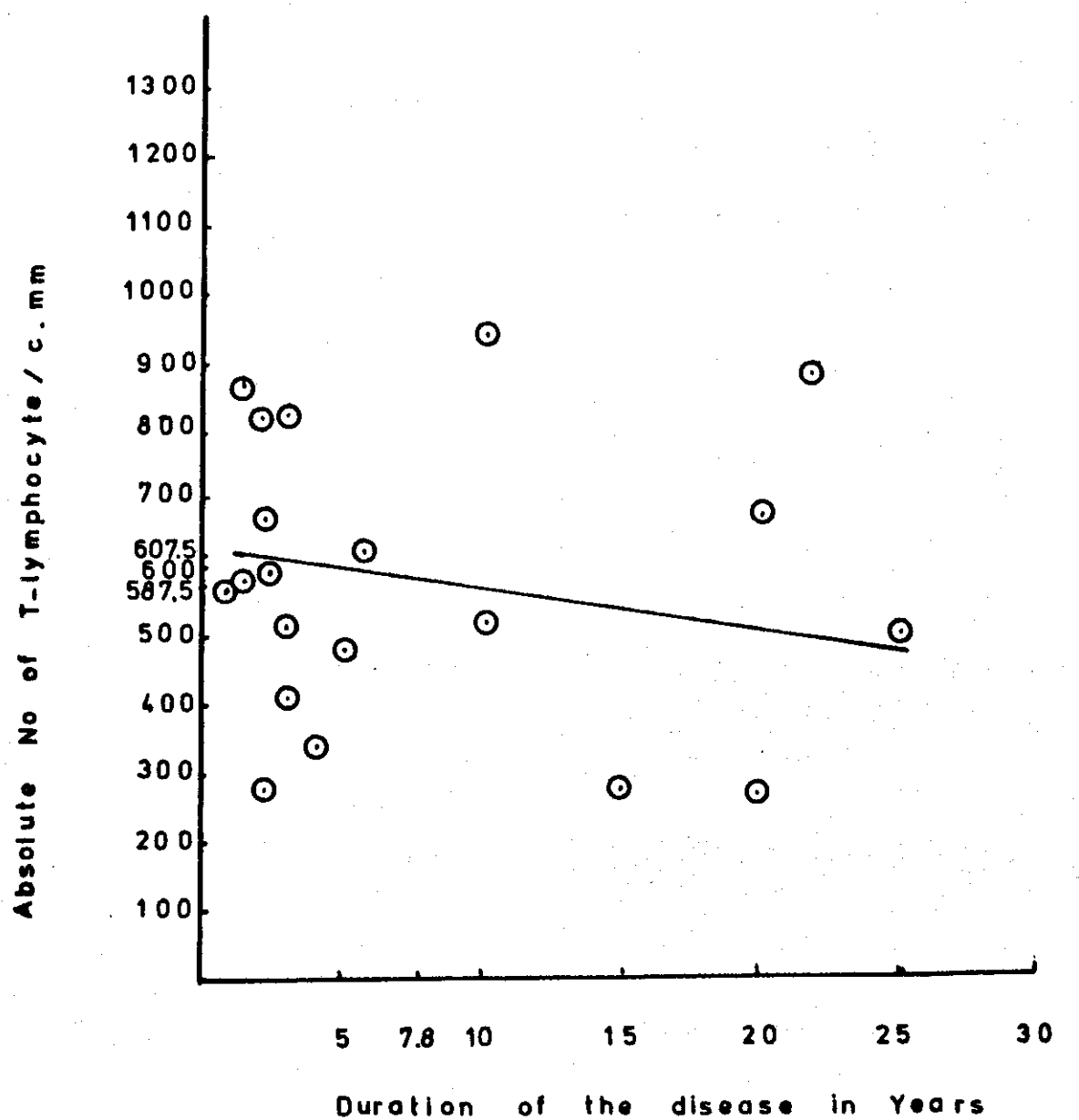
Relation of the absolute Number of T-lymphocytes
per cu mm in atrophic rhinitis group to the age in years.



$r = -0.1$

Fig (9)

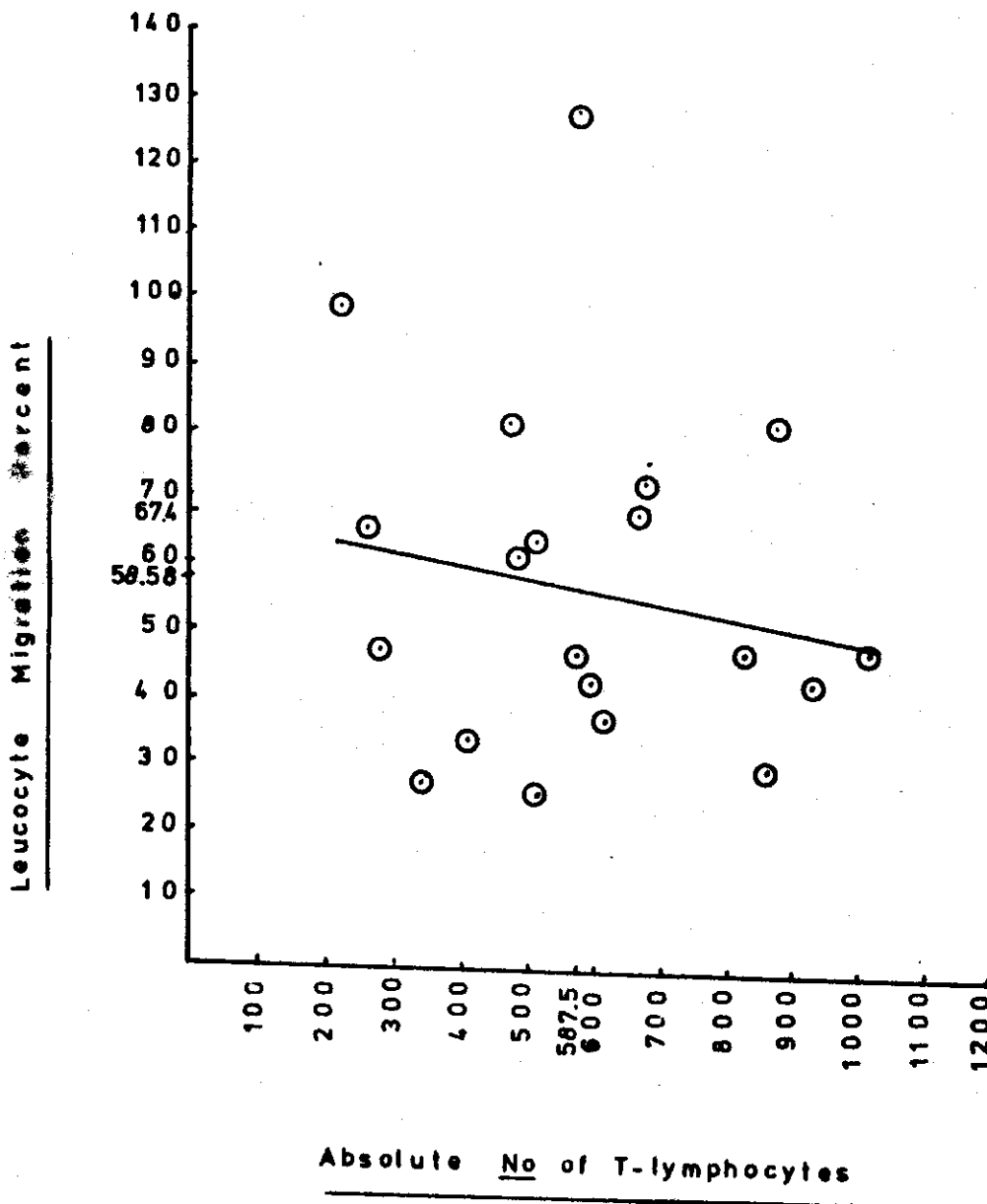
Relation of the Number of T-lymphocytes per cumm in
atrophic rhinitis group to the duration of the disease.



$r = -0.11$

Fig C10)

Relation between Leucocyte Migration Percent in Patient with atrophic rhinitis and the absolute Number of T-lymphocytes Per Cu mm .



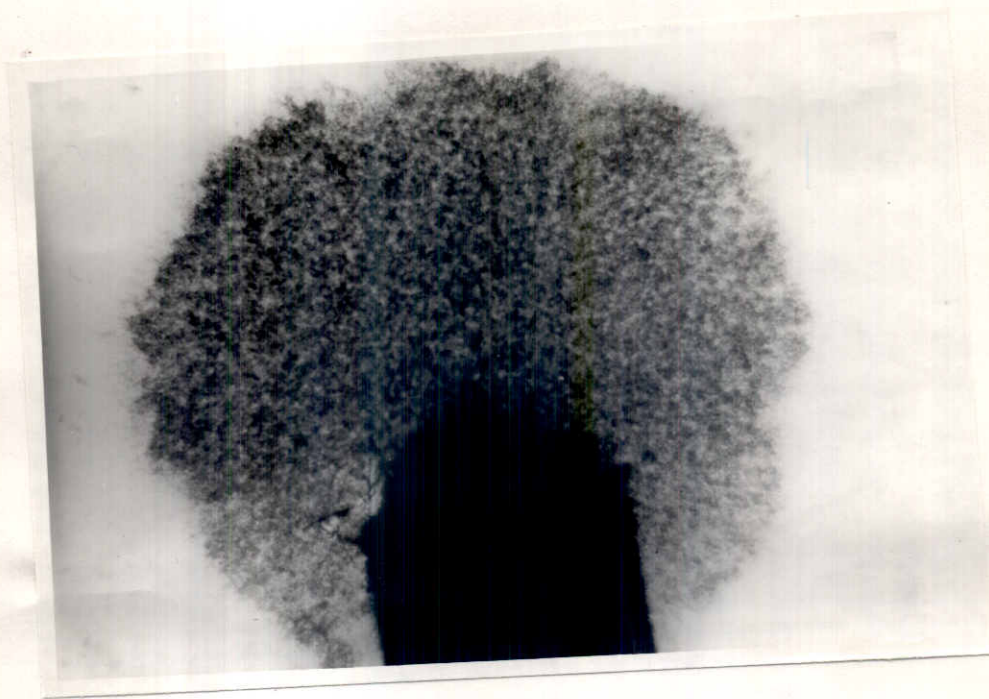


Photo (5) : Normal migration in presence of the crude extract of adult nasal mucosa.

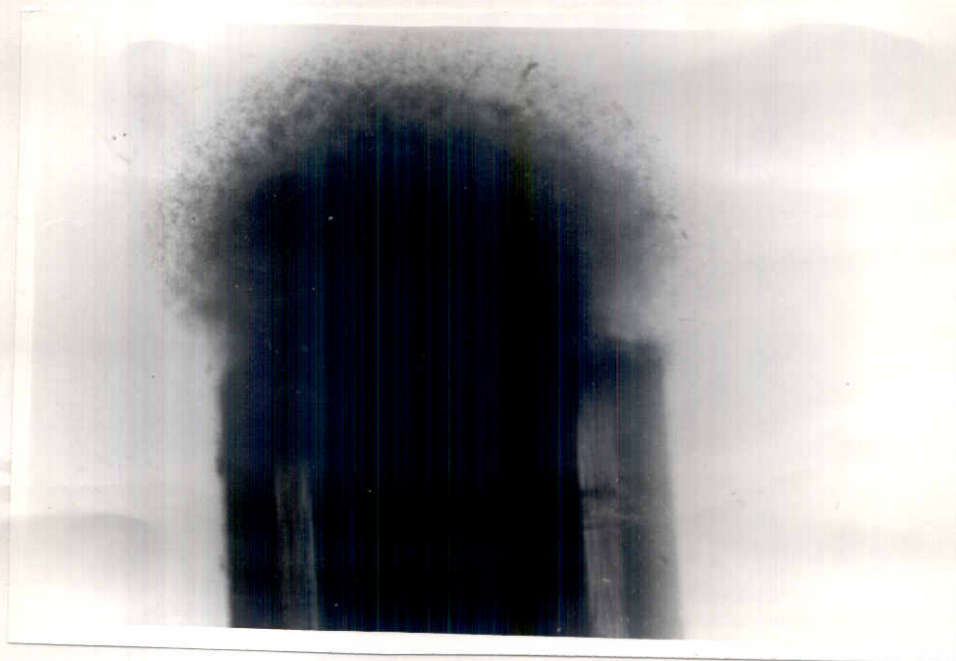


Photo (6) : Inhibition of migration in presence of the
crude extract of adult nasal mucosa.



Photo (7) : Stimulation of migration in the presence of
the crude extract of adult nasal mucosa.

D I S C U S S I O N
