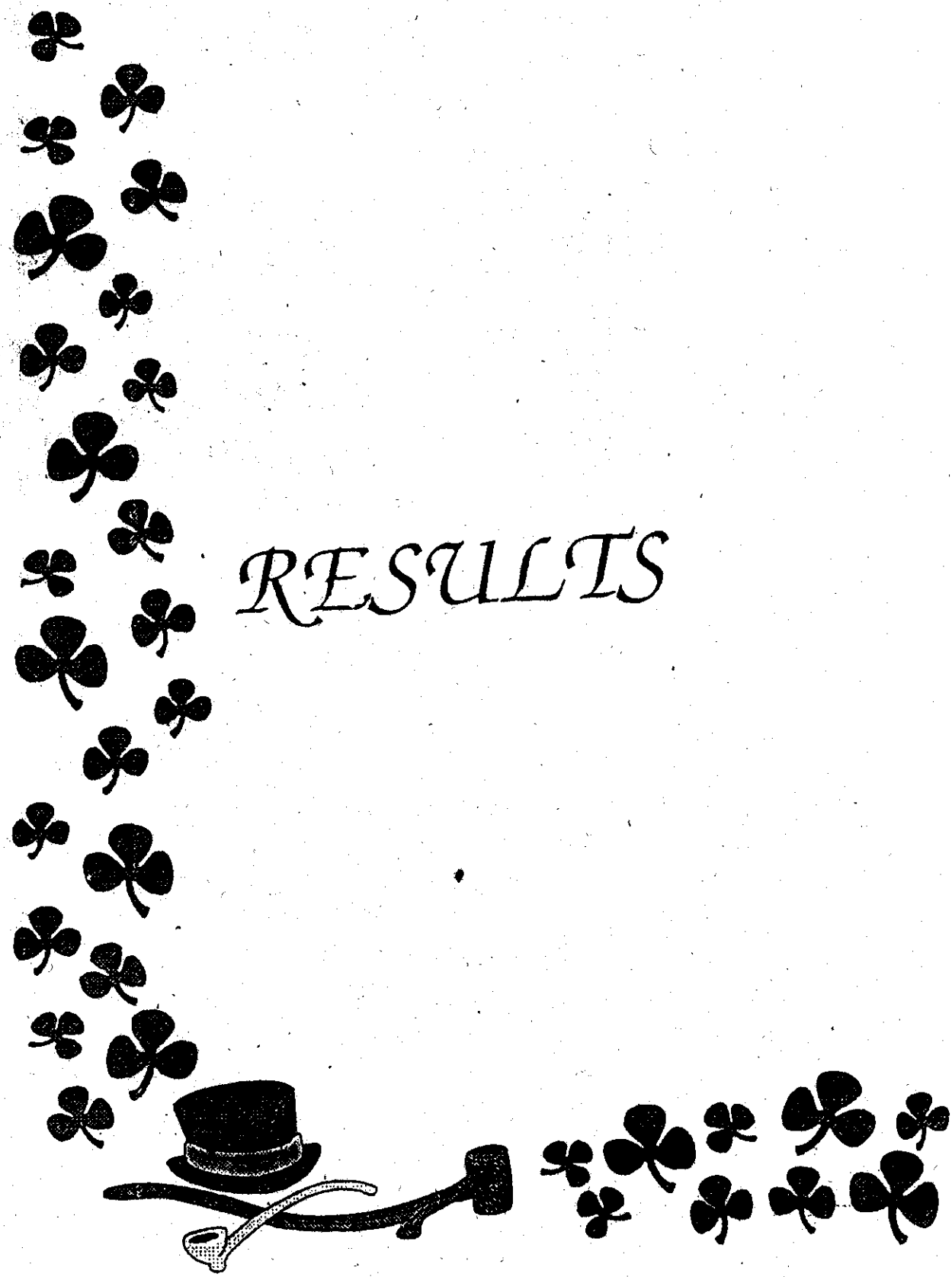
RESULTS



Results

This study consists of one handred subjects 40 of them are diabetic with autonomic neuropathy (group I) and another 40 are diabetic without autonomic neuropathy (group II) and 20 normal subjects as a control

The results of this work are tabulated in 8 tables.

Table 1: Shows the range of age group I was 48-62 years with a mean 50.2 ±4.4 and Gr. II was 44-58 years with a mean of 51.2 ± 5.6 and a control group was 35-55 years with a mean of 51.1 ± 5.9 with no significant difference in between. It also shows that the mean of duration of D.M in Gr I. (was 12.7 years and Gr. II was 4.2 years which is significantly difference.

Table 2: Showing that the symptoms of diabetic autonomic neuropathy is more common in Gr. I than in group II. Impotence 80% in Gr. I versus 20% in Gr. II. Diarrhea 30% in Gr I versus 2.5% in Gr. II and abnormal sweating 15% in Gr. I versus 2.5% in Gr. II and Gastric symptoms 35% in

Table 3: Showing that the autonomic function tests are more 2 tests +ve in Gr. I versus 2 or less 1n Gr. II they are valsalva manoeuvre 95% in Gr. I and 10% in Gr. II H.R. responding to deep breathing 97.5 in Gr. I and 5% in Gr. II H.R. responding to standing 40% in Gr. I and 5.0 in Gr. II postural hypotension 62.5% in Gr. I and 7.5% in Gr. II, and sustained handgrip 10% in Gr. I and 5% in Gr. II.

Table 4: Showing that the mean of lipid profile in the studied groups as follow. The mean of triglycerides in Gr.I 229.5±57.5, in Gr. II 226.3±52.4 and control 164.5±50.3. As regarding serum cholesteral the mean in Gr. I 255.3 ± 51.8, in Gr. II 236.6±49.7 in controls 197.0 ±19.14. As regarding to H.D.L. the mean in Gr. I 44.5±7.9 in Gr. II 45.6 ± 8.35 in controls 57.15 ±5.53. As regarding to L.D.L. the mean in Gr. I 174.0±30.1 in Gr. II 168.7±31.0 in control 143.5±35.8. As regarding to H.D.L.C \L.D.L.C the mean in Gr. I o.359±0.26 in Gr. II 0.365±0.18 in controls 0.38 ±0.12 - the above mentioned results showing that there is no significant difference in the mean of Triglyceride, cholestrol, H.D.L.C. L.D.L.C., and H.D.L.C/L.C.D.L.C. between Gr I and Gr. II and there is significant

Table 6: Showing that silent myocardial ischaemia is +ve in Gr. I (diabetic è autonomic neuropathy è silent ischaemia)by 22 (27.5%) from 80 diabetic è patients and also +ve in Gr. III (diabetic è out autonomic neuropathy and è silent ischaemia by 2 (2,5%) from diabetic è patients but -ve in Gr. II (diabetic è autonomic neuropathy and è silent ischaemia 18 (22.5%) from 80 patients and also-ve in Gr. IV (diabetic è autonomic neuropathay è out silent ischaemia 38 (47.5%) from 80 diabetic patients.

Table 7: showing that the range of age in Gr. I 48-62 year and the mean is 52.4±5.6 in Gr. II the range is 48-62 year and the mean is 48.7±4.5 in Gr. III the range is 44.58 and the man is 50 ± 4.6 in Gr. IV the range is 44.58 and the mean 50.0±4.6 and the range of control is 35-55 and the mean is 51-05±5.9 the above mentianed indicate No significant difference between the studied groups and the controls in age and also showing that the duration of D.M in Gr. I 13.5±2.7 in Gr. II 11.5 ± 2 in Gr. III 5± 0.2 in Gr. IV 3.5 ±1.7 and this indicate that the duration of D.M is more in

208.38±45 in Gr. III 249.5±71.2, Gr. IV 237.9 ±51.91, controls 197.0 ± 4.9, the mean of H.D.L.C in Gr.I 46-29 8.41 Gr. II 44.56 ±8.41 Gr. III 44.56±8.41, Gr. IV 49.37±5.73 and controls 51.5±5.75 aud the mean of L.D.L.C in Gr. I 148.25±46.5, in Gr. II 135.3+38.48, in Gr. III 135 ±44. and in Gr. IV 164.21±35.81, controls 143.5±35.84 and the mean of H.D.LC/L.D.L.C, in Gr. I 0.214±0.16, in Gr. II 0.144±0.10, in Gr. III 0.404±0.10, in Gr. IV 0.361±0.13 and the controls 0.380±0.12 from the above there is no significant difference between Gr. I, II, III, IV in serum, cholestrol, triglyceride H.D.L.C but there is significance difference in these substances between diabetic groups and controls except cholestrol in Gr. III, Triglycerides and also in Gr. III and also H.D.L.C, L.D.L.C is not significantly different between diabetic groups and control except H.D.L.C between Gr. I and II and controls.

Concerning to H.D.L.C/L.D.L.C There is no significant difference between the studied groups and controls except. Gr.I and II versus controls.

Table 1: Showing the age and duration of D.M. between the studied groups:

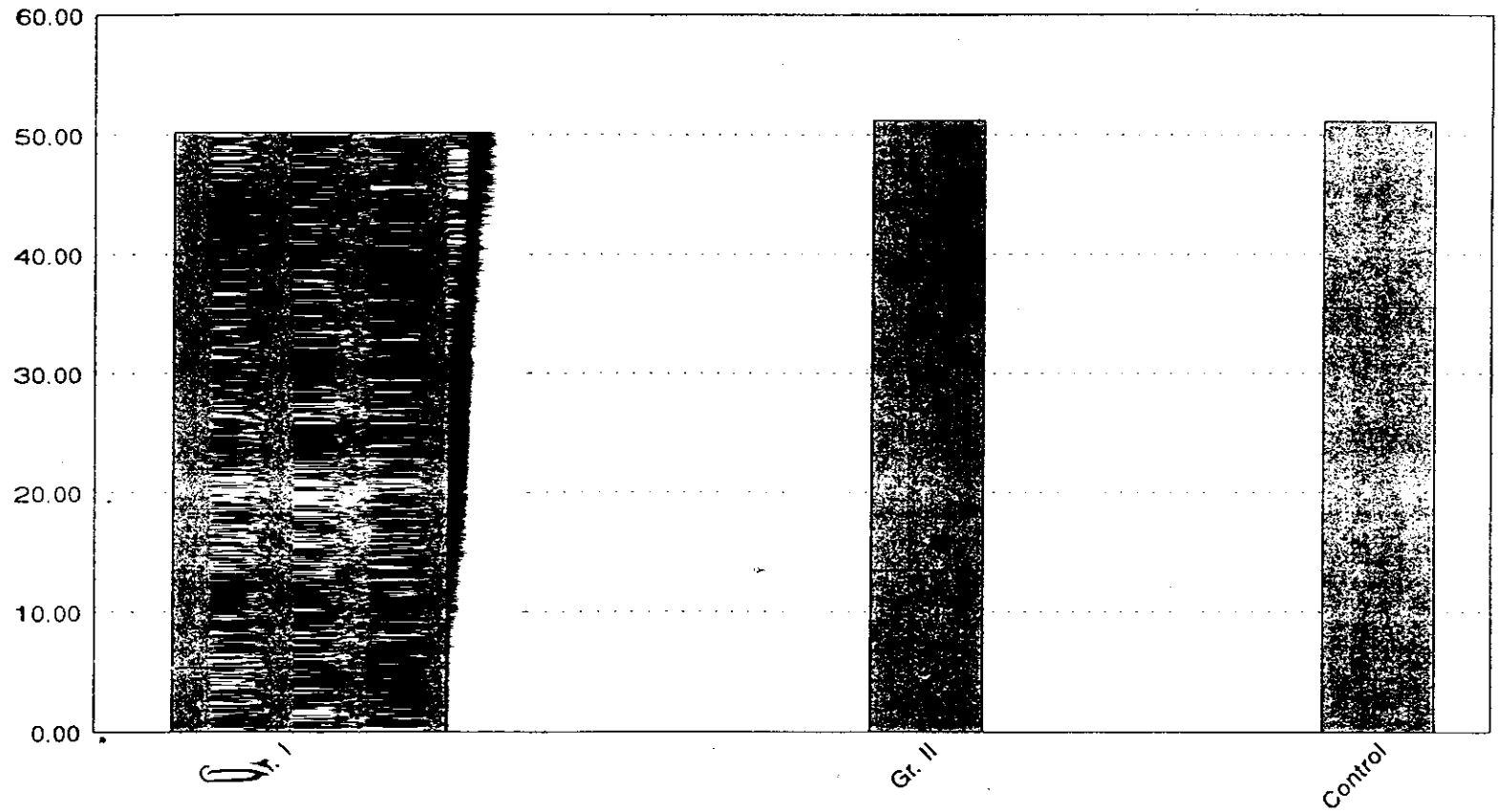
Studied groups	*Age years. Range* mean ± S.D.	*Duration of D.M in years mean ± S.D.*
Gr. I	48-624 year 50.2 ±4.4	12.7 ±2.7
Gr. II	44-58 year 51.2±5.6	4.2 ±2.1
Controls	35.55 year 51.1 ±5.9	-
Test of significance	t = 0.38 P > 0.05 t1 = 0.08 P1 > 0.05	P2 < 0.001

N.B:

P = Degree of significance between Gr. I versus control.

P_1 = Degree of significance between Gr. II versus control.

Figure (1) Mean ± S.D of age distribution of the studied groups.



n.b. Gr. I : Diabetic autonomic neuropathy
Gr. II : Diabetic without autonomic neuropathy

Fig.(2): Number of patients [illegible] different symptoms with autonomic neuropathy in diabetic patients

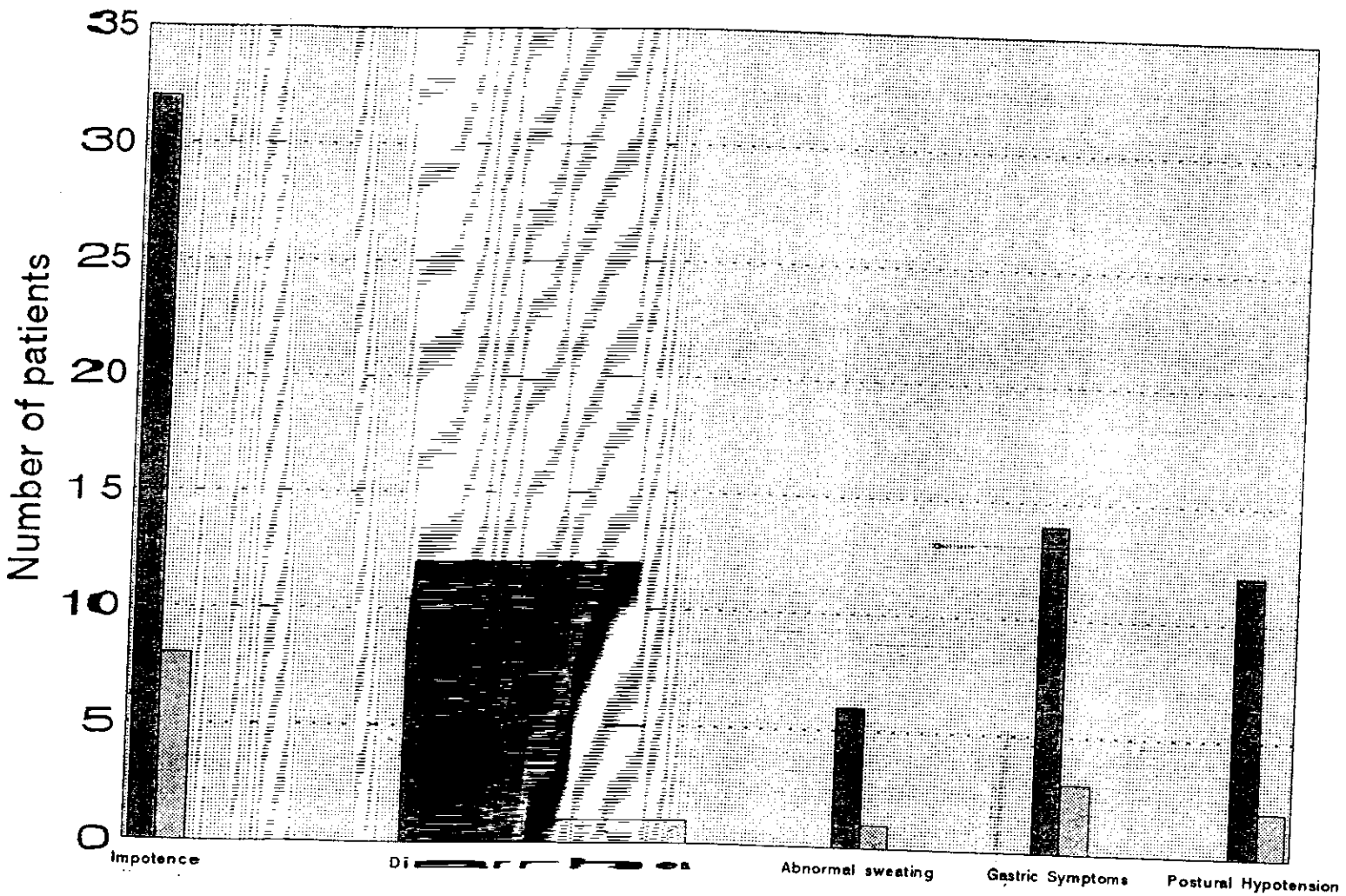
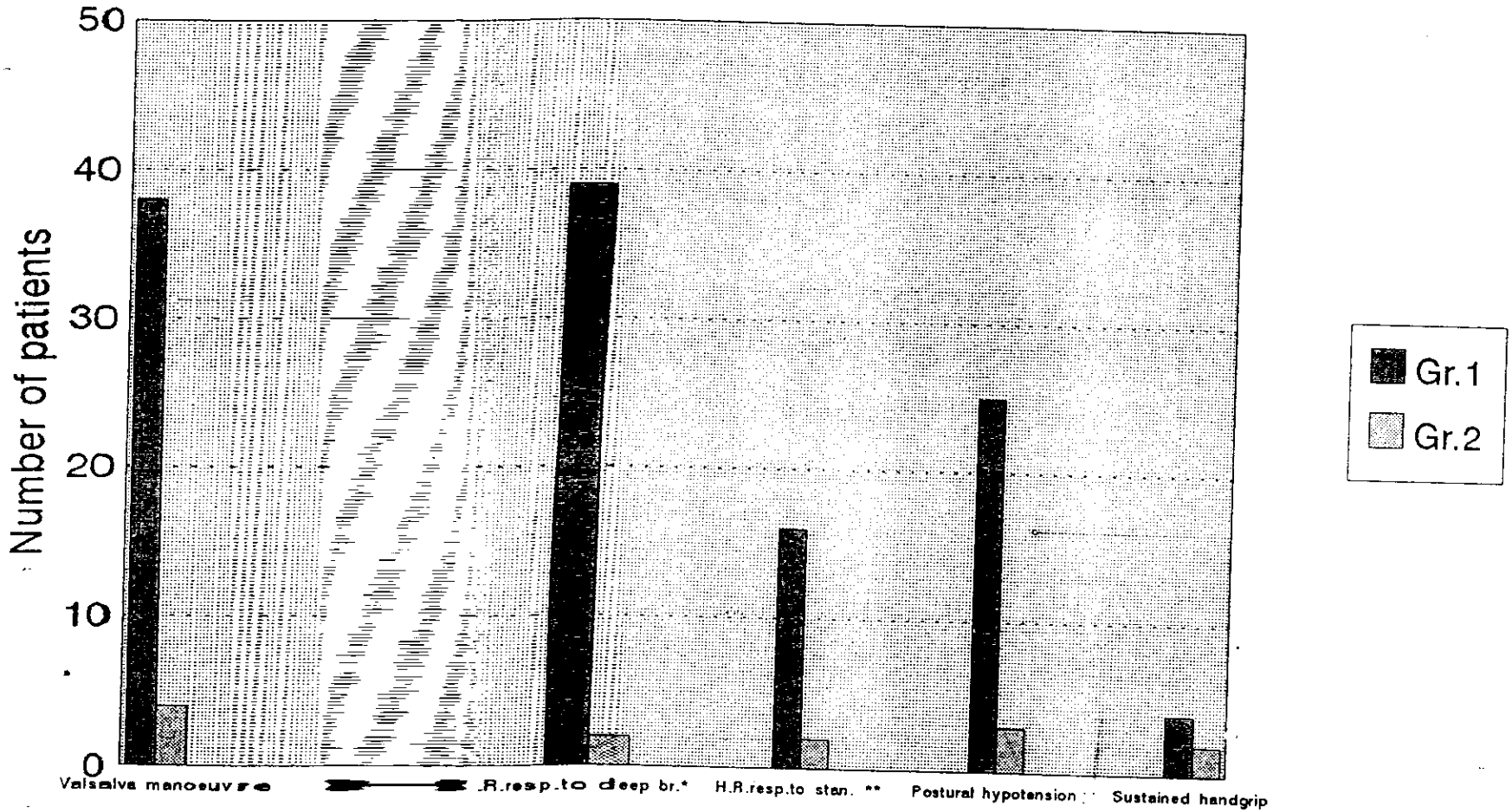


Table 3: Showing the results of autonomic function tests among the studied groups.

Autonomic function test	*Gr. I*		*Gr. II*		*Total*		Test of significance	
	No	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*
Valsalva manouevre								
+ ve	38	95.0	4	10.0	42	52.5	57.9	< 0.001
- ve	2	5.0	36	90.0	38	47.5		
H.R. responding to deep breathing								
+ ve	39	97.5	2	5.0	41	51.25	68.5	< 0.001
- ve	1	2.5	38	95.0	39	48.75		
H.R. responding to standing								
+ ve	16	40.0	2	5.0	18	22.5	14.1	< 0.001
- ve	24	60.0	38	95.0	62	77.5		
Postural typotension								
+ ve	25	62.5	3	7.5	28	35.0	26.5	< 0.001
- ve	15	37.5	37	92.5	52	65.0		
Sustained handgrip								
+ ve	4	10.0	2	5.0	6	7.5	0.72	> 0.01
- ve	36	90.0	38	95.0	74	92.5		

Fig. (3):Autonomic function tests among the studied groups.



* (H.R.responding to deep breathing) ** (H.R.responding to standing)

Table 5: Showing the incidence of ST segment depression after exercise test according to Brure protocol in the studied group.

ST segment depression	Gr. I		Gr. II		Total	
	No.	%	No.	%	No.	%
+ ve	22	55.0	2	5.0	24	30.0
- ve	18	45.0	38	95.0	56	70.0
Total	40	100.0	40	100.0	80	100.0

Table 6: Showing the number and percentege of ST segment Depression among all diabetics in the studied groups.

Studied group	No.	Segment Depression	Total No.	%
Gr.I`	22	+ ve	80	27.5
Gr.II`	18	- ve	80	22.5
Gr. III`-	2	+ ve	80	2.5
Gr. IV`	38	- ve	80	47.5

N.B:

Gr. I` = diabetic è autonomic neuropathy è silent ischaemia.

Gr. II` = Diabetics è autonomic neuropathy è out silent ischaemia.

Gr. III` = Diabetics è out autonomic neuropathy è silent ischaemia.

Gr. IV` = Diabetic è out autonomic neuropthy è out silent ischaemia.

Fig.(4):S T se gment depression among the studied diabetics.

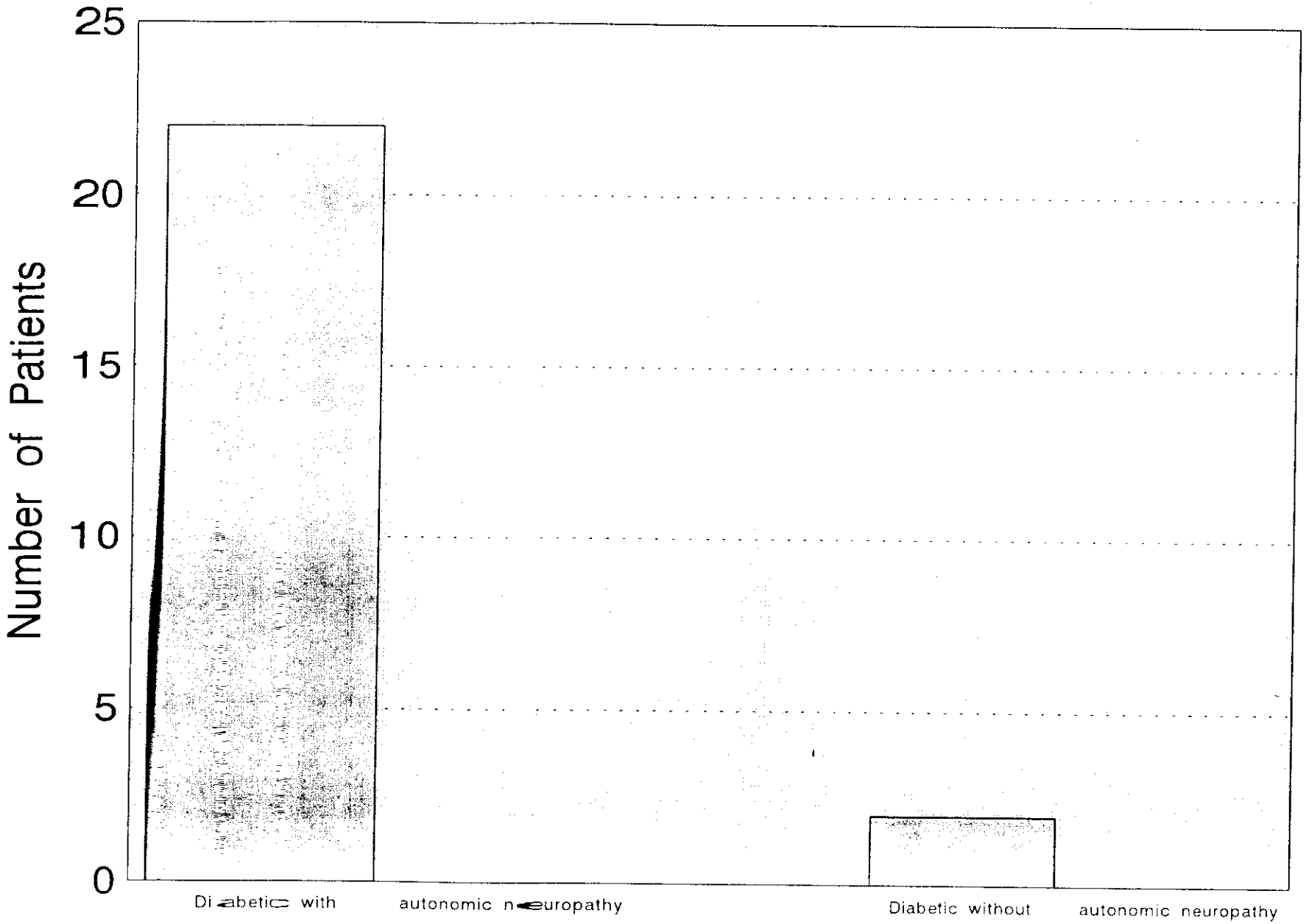


Table 7: Showing age and duration of D.M in different group è and è out silent ischaemia.

Studied groups	*Age in years Range mean± S.D.*	*Duration of D.M in years mean ± S.D.*
Gr. I	48 - 62 52.4 ± 5,6	13.38 ± 2.7
Gr. II	48.62 48.7 ±4.5	11.5 ± 2.0
Gr. III	44 - 58 54.5 ± 6.3	5 ± 0.2
Gr. IV	44 - 58 50.0 ± 4.6	3.5 ± 1.7
Controls	35 - 55 51.05 ± 5.9	-
Tests	Gr. I versus control. t = 0.837 P > 0.05	Gr. I versus Gr. III
of	Gr. II versus control. t = 1.35, p > 0.05	Gr. II versus Gr. III
Significance	Gr. III versus control. t = 0.73, p > 0.05	Gr. I versus Gr. IV
	Gr. IV versus control t = 0.71, p > 0.05	Gr. II 2 versus Gr. IV

Table 8: Showing lipid profile among the studied group è and è out silent ischaemia.

Studied groups	TRi glycerides mean ± S.D. mg/100ml.	Cholestral mean ± S.D. mg/100 ml.	H.D.L. mean ± S.D. mg/100 ml.	L.D.L. mean ± S.D. mg/100 ml.	H.D.L./L.D.L. mean ± S.D.
Gr. I	237.13 ± 57.69	246.63 ± 54.71	46.29 ± 8.41	148.25 ± 40.05	0.214 ± 0.16
Gr. II	222.13 ± 57.64	268.38 ± 45.89	44.56 ± 8.41	135.38 ± 38.48	0.144± 0.10
Gr. III	217.5 ± 137.89	249.5 ± 71.42	52 ± 5.60	135 ± 49.44	0.404 ± 0.106
Gr. IV	226.74 ± 49.65	237.97 ± 51.91	49.37 ± 5.73	164.21 ± 35.84	0.361 ± 0.13
Controls	164.5 ± 50.31	197.0 ± 19.19	51.5 ± 5.73	143.5 ± 35.84	0.380 ± 0.12
Gr. I versus control	t = 4.458 p < 0.001	t = 4-149 P < 0.001	t = 2.297 P < 0.05	t = 0.384 P > 0.05	t = 3-927 P < 0.001
Gr. II versus controls	t = 3.152 P < 0.01	t = 5.845 P < 0.001	t = 2.701 P < 0.01	t = 0.05 P > 0.05	t = 6.435 P < 0.001
Gr. III versus controls	t = 0.54 P > 0.05	t = 1.035 P > 0.05	t = 0.203 P > 0.05	t = 0.236 P > 0.05	t = 0.301 P > 0.05
Gr. IV versus controls	t = 4.5 P < 0.001	t = 4.337 P > 0.001	t = 1.153 P > 0.05	t = 0.979 P > 0.05	t = 0.556 P > 0.05
Gr. I. versus Gr. II	t = 0.805 P > 0.05	t = 1.358 P > 0.05	t = 0.636 P > 0.05	t = 0.957 P > 0.05	t = 1.701 P > 0.05
Gr. III versus Gr. IV	t = 0.11.5 P > 0.05	t = 0.165 P > 0.05	t = 1.615 P > 0.05	t = 0.285 P > 0.05	t = 0.423 P > 0.05