RESULTS

Table (1): Clinical Data of Children of Healthy Parents (Control) (Group 1).

No.	Sex	Age (years)	Body weight (Kg)	Height (Cm)	Body surface area m^2	Body mass index kg/m^2
1	F	8	22	123	0.874	25.160
2	F	12	30	136	1.073	27.959
3	F	7	21	120	0.842	24.938
4	M	11	33	137	1.123	29.378
5	M	12	31	139	1.105	28.044
6	F	7	21	115	0.816	25.720
7	F	10	25	133	0.977	25.587
8	M	7	24	116	0.870	27.599
9	M	11	30	120	0.980	30.615
10	M	10	26	135	1.004	25.889
11	M	11	36	134	1.147	31.385
12	M	4	16	108	0.695	23.022
13	F	3	14	110	0.665	21.038
14	F	3	15	104	0.658	22.798
15	F	6	20	123	0.840	23.818
16	M	14	36	149	1.239	29.061
17	M	12	32	141	1.132	28.267
18	M	11	30	138	1.084	27.665
19	M	8	26	124	0.944	27.535
20	M	6	21	121	0.847	24.789
21	F	9	26	135	1.004	25.889
22	F	12	33	134	1.105	29.853
23	F	10	26	138	1.020	25.480
24	M	8	24	121	0.897	26.767
25	M	11	33	129	1.075	30.688
26	M	5	17	111	0.727	23.369
27	M	4	17	116	0.723	23.523
28	F	9	28	132	1.020	27.460
29	M	7	21	93	0.700	30.000
30	M	8	23	95	0.739	31.127
31	M	10	28	102	0.846	33.107
32	M	11	30	110	0.920	32.609
33	M	12	32	114	0.970	32.977
Mean		8.758	25.667	122.91	0.929	27.367
Range	21M-12F	3-14	14-36	93-149	0.658-1.239	12.038-33.107
S.D.±		2.916	6.147	14.01	0.159	3.164
S.E.±		0.508	1.070	2.44	0.028	0.551

Table (2): Clinical Data of Children of Parents with Myocardial Infarction (Group 2).

No.	Sex	Age (years)	Body weight (Kg)	Height (Cm)	Body surface area m^2	Body mass index kg/m^2
1	M	13	33	145	1.170	28.193
2	M	11	29	134	1.046	27.716
3	F	9	25	126	0.939	26.610
4	M	7	23	115	0.849	27.101
5	M	7	22	114	0.828	26.585
6	F	4	15	99	0.635	23.627
7	M	7	21	119	0.837	25.090
8	M	3	13	93	0.571	22.770
9	M	12	31	138	1.100	28.192
10	M	4.5	16	104	0.676	23.660
11	M	13	33	145	1.170	28.194
12	M	9.5	25	125	0.934	26.764
13	M	13	38	140	1.210	31.393
14	M	14	42	142	1.277	32.882
15	F	14	45	138	1.288	34.929
16	F	13	42	150	1.329	31.601
17	M	14	46	150	1.381	33.298
18	M	13	35	130	1.109	31.567
19	M	14	39	145	1.257	31.036
20	F	13	32	140	1.126	28.413
21	M	12	29	129	1.018	28.491
22	F	11	28	127	0.992	28.240
Mean		10.48	30.09	129.45	1.034	28.471
Range	16M-6F	3-14	13-46	93-150	0.571-1.381	22.77-34.929
S.D.±		3.57	9.57	16.35	0.229	3.253
S.E.±		0.76	2.04	3.49	0.049	0.693

Table (3): Clinical Data of Children of Parents with Diabetes Mellitus. (Group 3).

No.	Sex	Age (years)	Body weight (Kg)	Height (Cm)	Body surface area m^2	Body mass index kg/m^2
1	M	14	35	142	1.182	29.61
2	F	11	30	133	1.056	28.42
3	M	11	33	135	1.111	29.69
4	F	9	26	125	0.950	27.37
5	F	13	32	140	1.126	28.41
6	F	7	21	115	0.816	25.72
7	M	7	22	112	0.817	26.93
8	F	9	25	127	0.945	26.46
9	F	13	33	143	1.159	28.48
10	F	14	40	148	1.289	31.03
11	M	12	32	140	1.126	28.41
12	F	9	29	125	0.995	29.15
13	F	10	29	128	1.012	28.65
14	M	9	27	125	0.965	27.98
15	M	13	38	143	1.230	30.89
16	F	7	23	119	0.870	26.44
17	M	12	35	137	1.152	30.39
18	M	9	30	124	1.003	29.90
19	F	7	26	122	0.933	27.86
20	F	11	32	133	1.085	29.49
21	M	8	25	125	0.934	26.76
22	F	5	22	107	0.790	27.83
Mean		10.00	29.41	129.45	1.025	28.45
Range	13F-9M	5-14	21-40	107-148	0.790-1.289	25.72-31.03
S.D.±		2.58	5.25	10.92	0.140	1.48
S.E.±		0.55	1.12	2.33	0.030	0.315

Table (4): Clinical Data of Children of Parents with Diabetes Mellitus + Myocardial Infarction (Group 4).

No.	Sex	Age (years)	Body weight (Kg)	Height (Cm)	Body surface area m^2	Body mass index kg/m^2
1	M	14	40	154	1.327	30.146
2	M	11	31	139	1.105	28.044
3	F	9	25	133	0.977	25.587
4	M	14	50	152	1.445	34.600
5	M	9	48	140	1.338	35.873
6	M	10	45	139	1.295	34.747
7	M	12	47	142	1.328	34.648
8	M	13	46	145	1.348	34.127
9	M	12	47	148	1.381	34.042
10	M	11	49	147	1.398	35.039
11	M	13	50	151	1.438	34.766
12	M	8	46	144	1.341	34.298
13	M	9	45	147	1.349	33.365
14	M	11	43	142	1.290	33.330
15	M	12	44	139	1.283	34.300
16	M	13	42	144	1.290	32.550
17	M	10	46	148	1.368	33.624
18	M	12	45	147	1.349	33.365
19	M	10	41	142	1.457	34.996
20	M	14	50	163	1.727	35.317
21	F	12.5	42	151	1.399	30.021
22	M	14	58	165	1.634	35.503
Mean		11.614	42.22	147.82	1.358	33.286
Range	20M-2F	8-14	25-58	133-165	1.727-1.358	25.587-35.873
S.D.±		2.02	7.51	9.28	0.150	2.59
S.E.±		0.43	1.60	1.98	0.032	0.552

Table (5): Clinical Data of Children of Parents with Diabetes Mellitus + Angina Pectoris (Group 5).

No.	Sex	Age (years)	Body weight (Kg)	Height (Cm)	Body surface area m^2	Body mass index kg/m^2
1	F	6	19	110	0.740	25.660
2	M	10	26	122	0.933	27.861
3	M	8	24	118	0.880	27.259
4	M	11	30	135	1.067	28.109
5	F	8	22	119	0.854	25.770
6	F	6	21	116	0.791	26.562
7	M	13	34	143	1.174	28.972
8	M	14	50	160	1.500	33.337
9	F	12	45	156	1.408	31.958
10	F	14	40	156	1.339	29.865
11	F	14	52	150	1.547	38.795
12	M	11	37	140	1.198	30.887
13	F	10	35	135	1.140	30.715
14	M	14	40	145	1.270	31.491
15	F	14	50	140	1.361	36.725
16	F	9	26	113	0.883	29.453
17	F	11	41	127	1.166	35.164
18	M	7	21	93	0.700	30.000
19	M	8	23	95	0.739	31.127
20	M	10	28	102	0.846	33.104
Mean		10.50	33.20	128.75	1.077	30.641
Range	10M-10F	6-14	19-52	93-160	0.700-1.547	25.66-38.795
S.D.±		3.06	11.57	20.35	0.270	3.524
S.E.±		0.685	2.59	4.55	0.060	0.788

Table (6): Serum Lipids, Lipoproteins, Apoproteins Profile and Fructosamine in Children of Healthy Parents (controls). (Group 1)

No.	T.G. mg/dl	Total Chol. mg/dl	HDL Chol. mg/dl	Athe. index	LDL Chol. mg/dl	Apo-A mg/dl	Apo-B mg/dl	Fruct. mg/dl
1	56	125	32.2	3.88	81.6	203	80	18.0
2	63	155	62.7	2.47	79.7	302	72	26.0
3	56	115	40.7	2.83	63.1	215	60	19.5
4	64	152	32.9	4.65	106.3	209	140	28.5
5	101	152	36.9	4.12	93.9	215	95	27.0
6	57	152	37.9	4.01	102.7	195	135	29.5
7	67	141	44.9	3.14	82.7	215	77	18.5
8	56	147	64.1	2.29	71.7	303	65	18.5
9	52	202	49.8	4.06	141.8	295	150	29.0
10	59	129	32.7	3.94	80.0	258	75	17.0
11	74	144	30.0	4.80	96.3	265	120	29.0
12	63	136	28.9	4.71	94.5	192	110	19.0
13	60	125	27.4	4.56	85.6	182	90	20.0
14	98	145	56.7	2.56	68.3	274	68	27.0
15	70	162	60.3	2.69	87.7	285	85	29.0
16	75	110	23.3	4.72	68.6	160	75	22.0
17	67	141	35.7	3.95	91.9	285	95	24.5
18	59	145	46.4	3.13	83.2	295	80	22.5
19	56	170	54.1	3.14	87.9	270	95	29.5
20	62	158	52.2	3.03	91.7	295	105	18.5
21	78	146	56.1	2.60	73.0	278	85	19.5
22	70	138	37.3	4.24	86.7	203	95	20.5
23	78	147	39.2	3.75	86.7	212	100	22.5
24	90	180	43.4	4.15	118.6	262	120	19.5
25	75	175	36.8	4.76	123.2	251	135	17.5
26	67	160	32.7	4.89	113.9	223	121	18.5
27	70	153	40.6	3.77	98.0	262	130	19.5
28	73	148	60.8	2.43	72.6	295	60	23.0
29	78	155	44.4	3.49	95.0	270	90	28.0
30	63	144	31.4	4.59	100.0	238	95	26.0
31	73	135	28.2	4.79	92.2	165	80	23.5
32	69	140	30.1	4.65	96.1	182	85	27.5
33	68	151	33.1	4.56	104.3	187	105	30.5
Mean	69.0	147.8	41.33	3.80	91.50	240.6	96.15	23.3
Range	52 -101	110- 202	27.4- 64.1	2.29- 4.89	63.1- 141.8	160- 303	60-150	17- 30.5
S.D±	11.49	17.99	11.52	0.84	16.82	44.4	24.09	4.44
S.E±	2.00	3.13	2.01	0.15	2.93	7.72	4.19	0.77

T.G. = Triglycerides
Total Chol. = Total cholesterol
HDL Chol. = High density lipoprotein cholesterol
Athe.index = Atherogenic index
LDL Chol. = Low density lipoprotein cholesterol
Apo-A = Apolipoprotein A
Apo-B = Apolipoprotein B
Fruct. = Fructosamine

Table (7) : Serum Lipids, Lipoproteins, Apoproteins and Fructosamine of Children of Parents with myocardial infarction. (Group 2)

No.	T.G. mg/dl	Total Chol. mg/dl	HDL Chol. mg/dl	Athe. index	LDL Chol. mg/dl	Apo-A mg/dl	Apo-B mg/dl	Fruct mg/dl
1	47	131	20.0	6.55	101.0	180	95	23.2
2	46	116	21.0	5.52	85.0	120	80	19.6
3	91	131	34.8	3.76	78.0	175	70	24.9
4	80	156	32.7	4.77	107.0	170	130	17.9
5	155	119	19.4	6.13	68.6	110	135	21.1
6	155	133	32.1	4.14	70.0	145	105	29.8
7	200	153	37.6	4.07	76.0	200	90	37.0
8	190	160	35.6	4.49	87.0	195	80	21.2
9	45	169	41.9	4.03	119.0	220	130	26.7
10	65	213	44.6	4.78	155.4	210	185	26.7
11	63	168	36.4	4.62	118.6	260	135	18.4
12	54	179	29.3	6.11	138.9	250	150	20.5
13	117	170	38.6	4.40	108.0	210	105	22.6
14	120	180	33.5	5.37	122.5	200	130	23.0
15	106	219	40.2	5.45	157.6	260	195	25.5
16	98	230	42.4	5.42	168.0	245	180	18.0
17	83	199	30.9	6.44	152.1	195	140	29.0
18	79	190	42.1	4.51	132.1	230	120	27.0
19	75	185	35.9	5.15	134.1	210	115	19.0
20	68	236	43.2	5.46	189.2	260	180	31.0
21	69	200	34.2	5.85	152.8	200	135	22.0
22	70	211	35.1	6.01	161.9	220	130	18.0
Mean	94.36	174.91	34.61	5.139	121.49	202.95	127.95	23.73
Rang	45-200	116-236	19.4-44.6	3.76-6.55	68.6-189.2	120-260	70-195	17.9-37.0
S.D±	44.91	35.47	7.20	0.831	34.76	41.77	35.0	4.99
S.E±	9.58	7.56	1.53	0.177	7.41	8.96	7.46	1.06
P	<0.02	<0.005	<0.02	<0.001	<0.001	<0.005	<0.001	>0.7
Sign	*	*	*	*	*	*	*	N.S

P Compared to controls
N.S = Non significant
* = Significant

Table (8): Serum Lipids, Lipoproteins, Apoproteins and Fructasomine, Levels in Children of Diabetic Parents. (Group 3).

No.	T.G. mg/dl	Total Chol. mg/dl	HDL Chol. mg/dl	Athe. index	LDL Chol. mg/dl	Apo-A mg/dl	Apo-B mg/dl	Fruct. mg/dl
1	74	219	49.5	4.42	154.7	280	100	23.4
2	73	249	47.9	5.20	186.5	210	160	15.0
3	67	174	38.2	4.55	122.4	250	85	27.8
4	95	216	46.0	4.70	151.0	235	150	27.2
5	83	205	44.0	4.66	144.4	300	60	23.2
6	74	220	59.9	3.67	145.3	195	145	22.6
7	103	216	53.1	4.07	142.3	240	120	20.0
8	60	179	47.8	3.74	119.2	170	110	18.0
9	51	150	48.8	3.07	91.0	175	80	17.0
10	64	188	34.1	5.51	141.1	220	75	20.2
11	58	207	56.8	3.64	138.6	200	130	27.4
12	50	188	45.8	4.10	13.2	235	145	15.0
13	56	133	45.0	2.96	76.8	195	65	22.0
14	75	156	32.7	4.77	108.3	280	80	30.0
15	68	173	44.7	3.87	114.7	170	60	24.2
16	90	146	38.1	3.83	89.9	160	60	22.4
17	85	210	58.2	3.61	134.8	210	135	23.0
18	65	180	45.7	3.94	121.3	280	110	19.0
19	100	206	52.1	3.95	133.9	290	100	27.0
20	87	185	48.7	3.80	118.9	295	95	25.0
21	70	170	43.8	3.88	112.2	250	100	24.0
22	105	225	56.2	4.00	147.8	260	140	23.0
Mean	75.14	190.68	47.14	4.09	128.51	231.82	104.77	22.56
Range	50-105	133-249	32.7-56.2	2.96-5.20	91-186.5	170-300	60-160	15-27.45
S.D.±	16.45	29.36	7.27	0.620	24.59	44.39	32.13	4.09
S.E.±	3.51	6.26	1.55	0.132	5.24	9.46	6.84	0.87
P	>0.1	<0.001	<0.05	>0.1	<0.001	>0.4	>0.2	>0.5
Sign.	N.S	*	*	N.S	*	N.S	N.S	N.S

P Compared to controls

N.S = Non significant

* = Significant

Table (9): Serum Lipids, Lipoproteins, Apoproteins and Fructosamine Levels in Children of Parents with Diabetes Mellitus + Myocardial Infarction. (Group 4).

No.	T.G. mg/dl	Total Chol. mg/dl	HDL Chol. mg/dl	Athe. index	LDL Chol. mg/dl	Apo-A mg/dl	Apo-B mg/dl	Fruct. mg/dl
1	113	188	64.4	2.92	101.0	270	150	25.5
2	110	238	53.6	4.44	162.4	260	220	22.4
3	70	158	24.6	6.42	119.4	160	160	22.0
4	159	223	44.6	5.00	146.6	210	205	29.8
5	80	137	32.1	4.27	88.9	120	50	26.9
6	98	150	35.6	4.21	94.8	135	55	26.7
7	83	193	61.2	3.15	115.2	270	140	18.6
8	60	188	47.3	3.97	128.7	250	180	25.5
9	95	199	43.0	4.63	137.0	200	200	19.0
10	170	202	40.2	5.02	127.8	235	185	27.0
11	128	185	29.2	6.34	130.2	110	200	18.0
12	160	194	40.3	4.81	121.7	195	115	23.0
13	150	202	55.6	3.63	117.4	165	90	27.9
14	132	198	42.0	4.71	129.6	180	190	23.2
15	170	233	68.3	4.41	130.7	280	200	20.2
16	68	188	54.5	3.45	119.9	260	70	18.2
17	110	175	45.6	3.84	107.4	195	95	23.4
18	145	170	38.0	4.47	103.0	165	60	18.2
19	93	168	34.6	4.86	114.8	180	95	18.8
20	65	180	40.6	4.43	126.4	260	100	25.5
21	98	150	44.2	3.39	86.2	210	70	24.6
22	82	194	55.3	3.51	122.2	250	85	28.5
Mean	110.86	186.95	45.22	4.314	119.61	207.22	132.50	23.33
Range	60-170	137-238	24.6-68.3	2.92-6.42	86.2-162.4	110-280	50-220	18.0-29.8
S.D.±	35.74	25.63	11.39	0.914	18.12	51.51	57.79	3.76
S.E.±	7.62	5.46	2.43	0.195	3.86	11.00	12.32	0.80
P_1	<0.001	<0.001	>0.2	<0.05	<0.001	<0.02	<0.01	>0.9
Sign.	*	*	N.S	*	*	*	*	N.S
P_2	>0.1	>0.2	<0.001	<0.005	>0.7	>0.7	>0.7	>0.7
Sign.	N.S	N.S	*	*	N.S	N.S	N.S	N.S
P_3	<0.001	>0.6	>0.5	>0.3	>0.1	>0.05	>0.05	>0.4
Sign.	*	N.S	N.S	N.S	N.S	N.S	N.S	N.S

P_1 Compared to controls

P_2 Compared to children of parents with myocardial infarction.

P_3 Compared to children of parents with diabetes mellitus

Table (10): Serum Lipids, Lipoproteins, Apoproteins profile and Fructosamine Levels in Children of Parents with Diabetes Mellitus + Angina Pectoris. (Group 5)

No.	T.G. mg/dl	Total Chol. mg/dl	HDL Chol. mg/dl	Athe. index	LDL Chol. mg/dl	Apo-A mg/dl	Apo-B mg/dl	Fruct. mg/dl
1	93	136	37.5	3.63	79.9	160	65	23.4
2	102	149	45.6	3.27	83.0	220	95	16.9
3	89	158	44.6	3.54	95.6	240	65	16.9
4	93	161	51.5	3.13	90.9	295	140	27.8
5	123	199	45.4	4.38	129.0	260	70	25.5
6	45	190	41.3	4.60	139.0	195	190	36.2
7	75	145	37.3	3.89	92.7	150	65	20.5
8	130	225	54.0	4.17	145.0	240	205	33.1
9	108	195	33.4	5.84	140.0	120	195	31.6
10	112	190	37.6	5.05	130.0	140	160	28.7
11	86	185	42.4	4.36	125.4	220	65	21.2
12	95	200	43.0	4.65	138.0	215	185	18.6
13	130	220	54.0	4.07	140.0	300	205	16.7
14	85	180	43.0	4.19	120.0	215	100	20.5
15	105	220	49.0	4.49	150.0	215	210	27.1
16	112	210	33.4	6.29	154.2	120	130	21.1
17	130	210	44.0	4.77	140.0	280	200	19.5
18	85	170	42.0	4.05	111.0	200	115	20.5
19	105	230	55.0	4.18	154.0	210	135	21.1
20	100	215	45.0	4.78	150.0	200	150	22.0
Mean	100.15	189.4	43.95	4.37	125.42	209.75	137.25	23.45
Range	45-130	136-230	33.4-55.0	3.13-6.29	79.9-154.2	120-300	65-210	16.7-36.2
S.D.±	20.74	28.34	6.39	0.77	24.63	52.53	54.59	5.62
S.E.±	4.64	6.34	1.43	0.173	5.51	11.75	12.21	1.26
P_1	<0.001	<0.001	>0.3	<0.02	<0.001	<0.05	<0.005	>0.9
Sign.	*	*	N.S	*	*	*	*	N.S
P_2	<0.001	<0.8	>0.1	>0.2	>0.5	>0.1	<0.05	>0.5
Sign	*	N.S	N.S	N.S	N.S	N.S	*	N.S

P_1 Compared to controls

P_2 Compared to children of diabetic parents

N.S = Non significant

* = Significant

Table (11): Correlation studies in control children (n = 33).

	r	p	significance
I-Triglycerides with :			
1-Total cholesterol	0.091	> 0.6	N.S
2-HDL-cholesterol	0.04	> 0.8	N.S
3-Atherogenic index	0.007	> 0.95	N.S
4-LDL-cholesterol	0.041	> 0.8	N.S
5-Apo-A	0.003	> 0.95	N.S
6-Apo-B	0.044	> 0.8	N.S
7-Fructosamine	0.074	> 0.6	N.S
II-Total cholesterol with			
1-HDL-cholesterol	0.432	< 0.02	*
2-Atherogenic index	-0.042	> 0.8	N.S
3-LDL-cholesterol	0.446	< 0.01	*
4-Apo-A	0.520	< 0.005	*
5-Apo-B	0.615	< 0.001	*
6-Fructosamine	0.307	> 0.05	N.S
III-HDL-cholesterol with			
1-Atherogenic index	-0.906	< 0.001	*
2-LDL-cholesterol	-0.246	> 0.1	N.S
3-Apo-A	0.792	< 0.001	*
4-Apo-B	-0.290	< 0.1	N.S
5-Fructosamine	0.079	> 0.6	N.S
IV- Atherogenic index with			
1-LDL-cholesterol	0.571	< 0.001	*
2-Apo-A	-0.669	< 0.001	*
3-Apo-B	0.558	< 0.001	*
4-Fructosamine	0.060	> 0.7	N.S
V-LDL-cholesterol with			
1-Apo-A	-0.063	> 0.7	N.S
2-Apo-B	0.876	< 0.001	*
3-Fructosamine	0.230	> 0.1	N.S
VI-Apo-A with			
1-Apo-B	-0.057	> 0.7	N.S
2-Fructosamine	0.034	> 0.8	N.S
VII-Apo-B with			
Fructosamine	0.202	> 0.2	N.S

r = correlation coefficient
N.S = Non significant
* = Significant.

Table (12): Correlation studies in children of parents with myocardial infarction (n = 22)

	r	p	signifi-cace
I-Triglycerides with :			
1-Total cholesterol	-0.301	>0.1	N.S
2-HDL-cholesterol	-0.008	>0.95	N.S
3-Atherogenic index	-0.341	>0.1	N.S
4-LDL-cholesterol	-0.397	>0.05	N.S
5-Apo-A	-0.272	>0.2	N.S
6-Apo-B	-0.281	>0.2	N.S
7-Fructosamine	-0.354	>0.1	N.S
II-Total cholesterol with			
1-HDL-cholesterol	0.721	<0.001	*
2-Atherogenic index	0.059	>0.7	N.S
3-LDL-cholesterol	0.948	<0.001	*
4-Apo-A	0.791	<0.001	*
5-Apo-B	0.787	<0.001	*
6-Fructosamine	0.046	>0.8	N.S
III-HDL-cholesterol with			
1-Atherogenic index	-0.520	<0.02	*
2-LDL-cholesterol	0.541	<0.01	*
3-Apo-A	0.717	<0.001	*
4-Apo-B	0.453	<0.05	*
5-Fructosamine	0.293	>0.1	N.S
IV- Atherogenic index with			
1-LDL-cholesterol	0.233	>0.2	N.S
2-Apo-A	-0.023	>0.9	N.S
3-Apo-B	0.315	>0.1	N.S
4-Fructosamine	-0.313	>0.1	N.S
V-LDL-cholesterol with			
1-Apo-A	0.740	<0.001	*
2-Apo-B	0.791	<0.001	*
3-Fructosamine	0.032	>0.8	N.S
VI-Apo-A with			
1-Apo-B	0.578	<0.005	*
2-Fructosamine	0.044	>0.8	N.S
VII-Apo-B with			
Fructosamine	-0.01	>0.95	N.S

r = Correlation coefficent
N.S = Non significant
* = Significant

Table (13): Correlation studies in children of parents with diabetes mellitus (n = 22).

	r	p	significace
I-Triglycerides with :			
1-Total cholesterol	0.449	<0.05	*
2-HDL-cholesterol	0.245	>0.2	N.S
3-Akurogenic index	0.182	>0.4	N.S
4-LDL-cholesterol	0.330	>0.1	N.S
5-Apo-A	0.387	>0.05	N.S
6-Apo-B	0.170	>0.4	N.S
7-Fructosamine	0.366	>0.05	N.S
II-Total cholesterol with			
1-MDL-cholesterol	0.576	<0.01	*
2-Atherogenic index	0.423	<0.05	*
3-LDL-cholesterol	0.964	<0.001	*
4-Apo-A	0.272	>0.2	N.S
5-Apo-B	0.736	<0.001	*
6-Fructosamine	-0.087	>0.7	N.S
III-HDL-cholesterol with			
1-Atherogenic index	-0.487	<0.025	*
2-LDL-cholesterol	0.359	>0.1	N.S
3-Apo-A	-0.08	>0.7	N.S
4-Apo-B	0.616	<0.005	*
5-Fructosamine	-0.114	>0.6	N.S
IV- Atherogenic index with			
1-LDL-cholesterol	0.477	<0.025	*
2-Apo-A	0.364	>0.05	N.S
3-Apo-B	0.098	>0.6	N.S
4-Fructosamine	0.06	>0.7	N.S
V-LDL-cholesterol with			
1-Apo-A	0.297	>0.1	N.S
2-Apo-B	0.197	>0.3	N.S
3-Fructosamine	-0.119	>0.5	N.S
VI-Apo-A with			
1-Apo-B	0.019	>0.95	N.S
2-Fructosamine	0.353	>0.1	N.S
VII-Apo-B with			
Fructosamine	-0.235	>0.2	N.S

r = Correlation coefficent
N.S = Non significant
* = Significant

Table (14): Correlation studies in children of parents with diabetes mellitus + myocardial infarction (n = 22).

	r	p	significace
I-Triglycerides with :			
1-Total cholesterol	0.496	<0.02	*
2-HDL-cholesterol	0.144	>0.5	N.S
3-Atherogenic index	0.121	>0.6	N.S
4-LDL-cholesterol	0.220	>0.3	N.S
5-Apo-A	-0.09	>0.6	N.S
6-Apo-B	0.316	>0.1	N.S
7-Fructosamine	0.102	>0.6	N.S
II-Total cholesterol with			
1-HDL-cholesterol	0.772	<0.001	*
2-Atherogenic index	-0.094	>0.6	N.S
3-LDL-cholesterol	0.843	<0.001	*
4-Apo-A	0.569	<0.01	*
5-Apo-B	0.719	<0.001	*
6-Fructosamine	-0.007	>0.95	N.S
III-HDL-cholesterol with			
1-Atherogenic index	-0.816	<0.001	*
2-LDL-cholesterol	0.166	>0.4	N.S
3-Apo-A	0.773	<0.001	*
4-Apo-B	0.151	>0.5	N.S
5-Fructosamine	0.051	>0.7	N.S
IV- Atherogenic index with			
1-LDL-cholesterol	0.427	<0.05	*
2-Apo-A	-0.586	<0.005	*
3-Apo-B	0.352	>0.1	N.S
4-Fructosamine	-0.160	>0.4	N.S
V-LDL-cholesterol with			
1-Apo-A	0.347	>0.1	N.S
2-Apo-B	0.795	<0.001	*
3-Fructosamine	-0.078	>0.7	N.S
VI-Apo-A with			
1-Apo-B	0.272	>0.2	N.S
2-Fructosamine	0.019	>0.95	N.S
VII-Apo-B with			
Fructosamine	-0.106	>0.6	N.S

r = Correlation coefficient
N.S = Non significant
* = Significant

Table (15): Correlation studies in children of parents with diabetes mellitus + angina pectoris (n = 20)

	r	p	significace
I-Triglycerides with :			
1-Total cholesterol	0.522	<0.02	*
2-HDL-cholesterol	0.318	>0.1	N.S
3-Atherogenic index	0.218	>0.3	N.S
4-LDL-cholesterol	0.350	>0.1	N.S
5-Apo-A	0.353	>0.1	N.S
6-Apo-B	0.333	>0.1	N.S
7-Fructosamine	-0.150	>0.5	N.S
II-Total cholesterol with			
1-MDL-cholesterol	0.410	>0.05	N.S
2-Atherogenic index	0.540	<0.02	*
3-LDL-cholesterol	0.956	<0.001	*
4-Apo-A	0.175	>0.4	N.S
5-Apo-B	0.693	<0.001	*
6-Fructosamine	0.175	>0.4	N.S
III-HDL-cholesterol with			
1-Atherogenic index	-0.533	<0.02	*
2-LDL-cholesterol	0.158	>0.5	N.S
3-Apo-A	0.795	<0.001	*
4-Apo-B	0.272	>0.2	N.S
5-Fructosamine	-0.075	>0.7	N.S
IV- Atherogenic index with			
1-LDL-cholesterol	0.723	<0.001	*
2-Apo-A	-0.567	<0.01	*
3-Apo-B	0.403	>0.05	N.S
4-Fructosamine	0.263	>0.2	N.S
V-LDL-cholesterol with			
1-Apo-A	-0.053	>0.8	N.S
2-Apo-B	0.670	<0.005	*
3-Fructosamine	0.267	>0.2	N.S
VI-Apo-A with			
1-Apo-B	0.140	>0.5	N.S
2-Fructosamine	-0.229	>0.3	N.S
VII-Apo-B with			
Fructosamine	0.416	>0.05	N.S

r = Correlation coefficient
N.S = Non significant
* = Significant

Table (16) : Summary of correlation studies between lipids, lipoproteins, apoproteins and fructosamine in different groups.

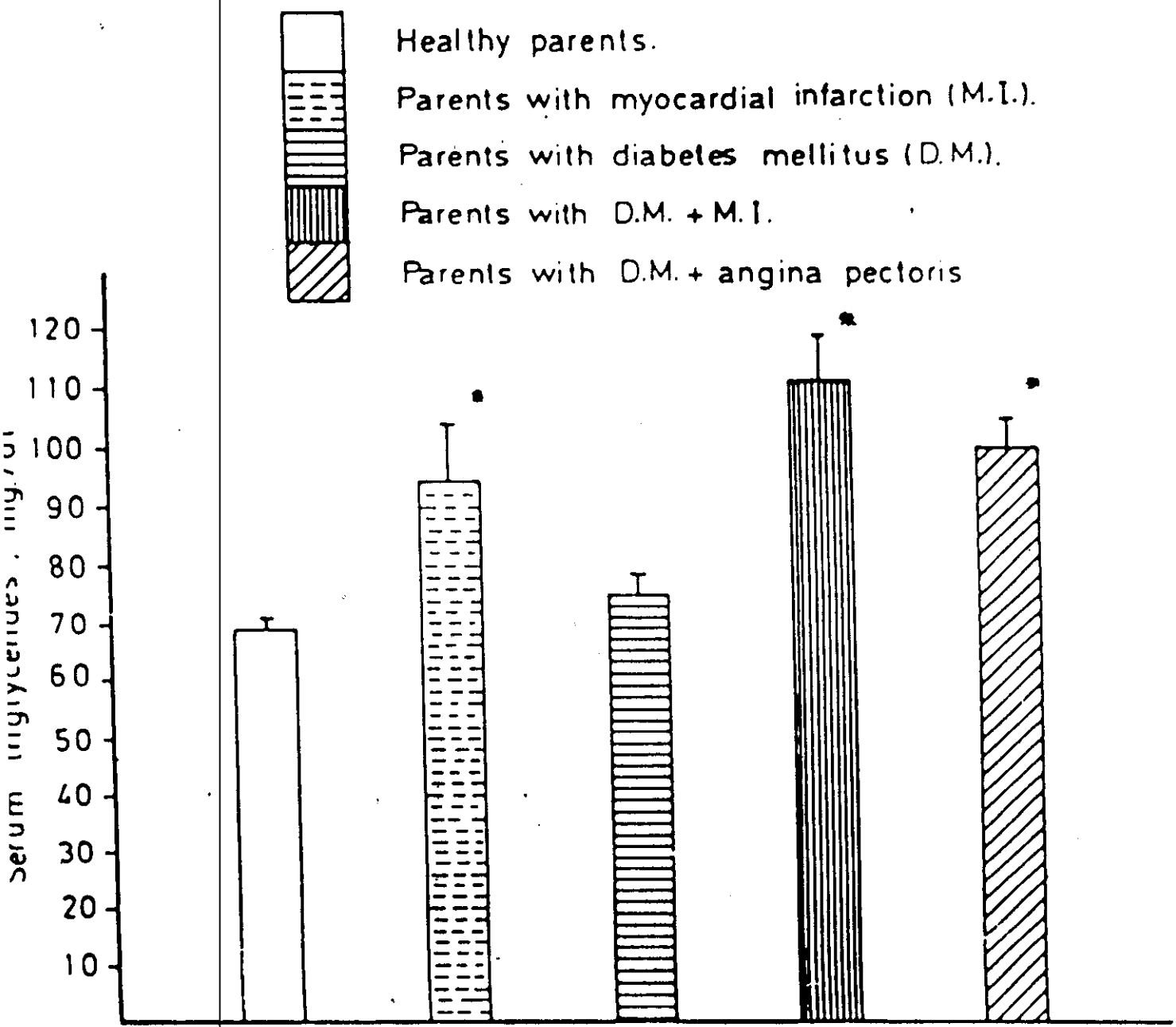
Type and No. of patients	Group 1 control n = 33	Group 2 (MI) n = 22	Group 3 (DM) n = 22	Group 4 (DM+MI) n = 22	Group 5 (DM + AP) n = 20
Triglycerides (mg/dl)					
-Mean	69.0	94.36	75.14	110.86	100.15
-Range	52 - 101	45 - 200	50 -105	60 - 170	45 -130
-S.D. ±	11.49	44.91	16.45	35.74	20.74
-S.E. ±	2.00	9.58	3.51	7.62	4.64
-P.		<0.02	>0.1	<0.001	<0.001
-Sign.		*	N.S	*	*
Total cholesterol (mg/dl)					
-Mean	147.82	174.91	190.36	186.95	189.4
-Range	110-202	116 - 236	133 - 249	137 - 238	136 - 230
-S.D. ±	17.99	35.47	29.36	25.63	28.34
-S.E. ±	3.13	7.56	6.26	5.46	6.34
-P.		<0.005	<0.001	<0.001	<0.001
-Sign.		*	*	*	*
HDL cholesterol (mg/dl)					
-Mean	41.33	34.61	47.14	45.22	43.95
-Range	27.4-64.1	19.4-44.6	32.7-56.2	24.6-68.3	33.4-55.0
-S.D. ±	11.52	7.20	7.27	11.39	6.39
-S.E. ±	2.01	1.53	1.55	2.43	1.43
-P.		<0.02	<0.05	>0.2	>0.3
-Sign.		*	*	N.S	N.S
Atherogenic index					
-Mean	3.80	5.139	4.09	4.314	4.37
-Range	2.29-4.89	3.76-6.55	2.96-5.20	2.92-6.42	3.13-6.29
-S.D. ±	0.84	0.831	0.620	0.914	0.77
-S.E ±	0.15	0.177	0.132	0.195	0.173
-P.		<0.001	>0.1	<0.05	<0.02
-Sign.		*	N.S	*	*

Table (16) : Continued

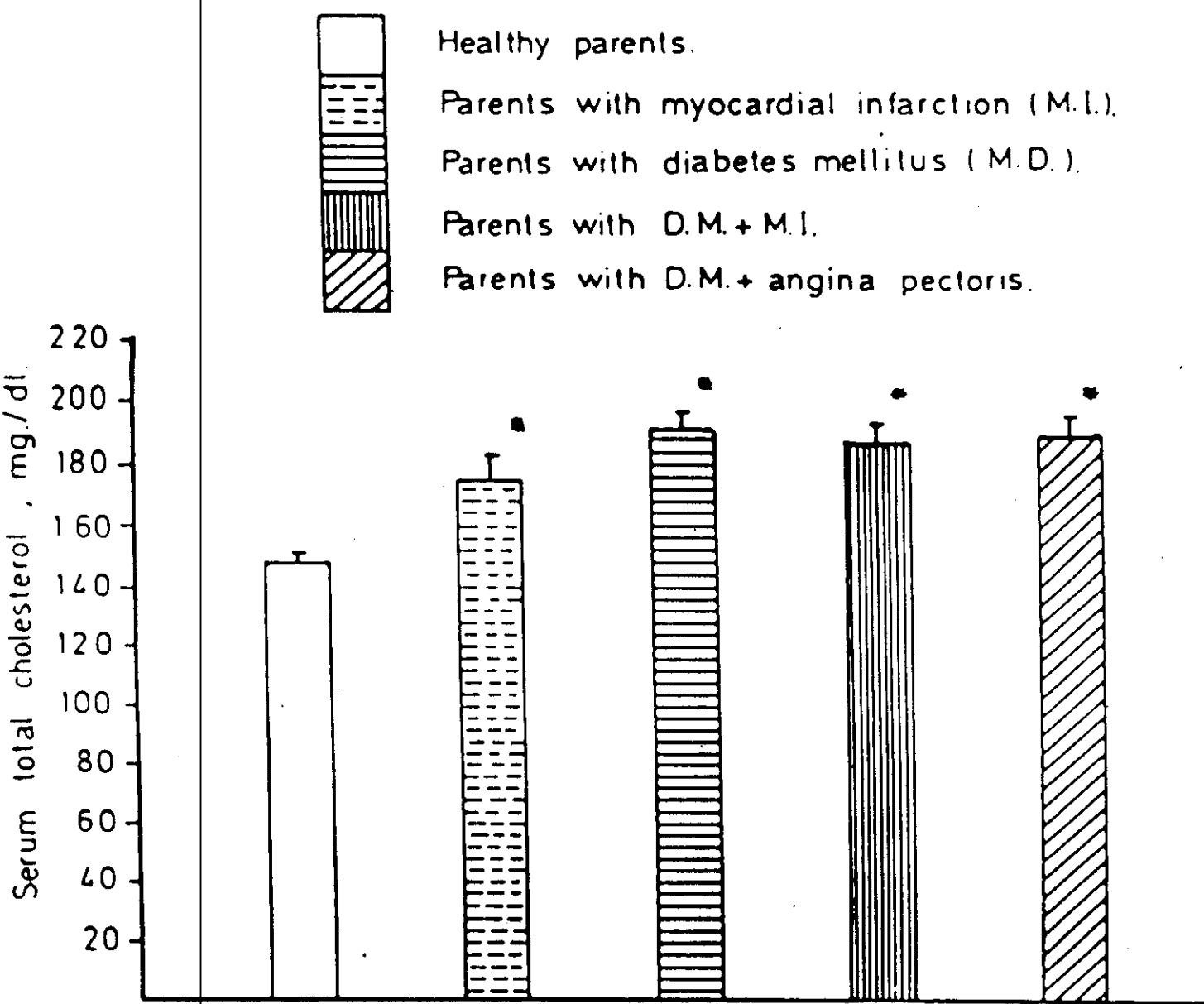
Type and No of patients	Group 1 control n = 33	Group 2 (MI) = 22	Group 3 (DM) n = 22	Group 4 (DM+MI) n = 22	Group 5 (DM + AP) n = 20
LDL Cholesterol (mg/dl)					
-Mean	91.50	121.49	128.51	119.61	125.42
-Range	63.1-141.8	68.6-189.2	91-186.5	86.2-162.4	79.9-154.2
-S.D. ±	16.82	34.76	24.59	18.12	24.63
-S.E. ±	2.93	7.41	5.24	3.86	5.51
-P.		<0.001	<0.001	<0.001	<0.001
-Sign.		*	*	*	*
Apo-A (mg/dl)					
-Mean	240.64	202.95	231.82	207.22	209.75
-Range	160 - 303	120-260	170- 300	110 - 280	120 - 300
-S.D. ±	44.44	41.77	44.39	51.51	52.53
-S.E. ±	7.72	8.96	9.46	11.00	11.75
-P.		<0.005	>0.4	<0.02	<0.05
-Sign.		*	N.S	*	*
Apo-B (mg/dl)					
-Mean	96.15	127.95	104.77	132.50	137.25
-Range	60 - 150	70-195	60-160	50 - 220	65 - 210
-S.D. ±	24.09	35.0	32.13	57.79	54.59
-S.E. ±	4.19	7.46	6.84	12.32	12.21
-P.		<0.001	>0.2	<0.01	<0.005
-Sign.		*	N.S	*	*
Serum fructosamine (mg/dl)					
-Mean	23.3	23.73	22.56	23.33	23.45
-Range	17-30.5	17.9-37.0	15 -27.4	18.0-29.8	16.7-36.2
-S.D. ±	4.44	4.99	4.09	3.76	5.62
-S.E. ±	0.77	1.06	0.87	0.80	1.26
-P.		>0.7	>0.5	>0.9	>0.9
-Sign.		N.S	N.S	N.S	N.S

P. = Compared to control
* = Significant
N.S. = Non significant

gure(1) : Serum triglycerides levels in children of healthy (controls) or diseased parents. (mean + S.E.).



Figure(2): Serum total cholesterol levels in children o healthy (controls) or diseased parents. (mean + S.E.)



Figure(3): Serum HDL-cholesterol levels in children of ealthy (controls) or diseased parents. (mean + S.E.).

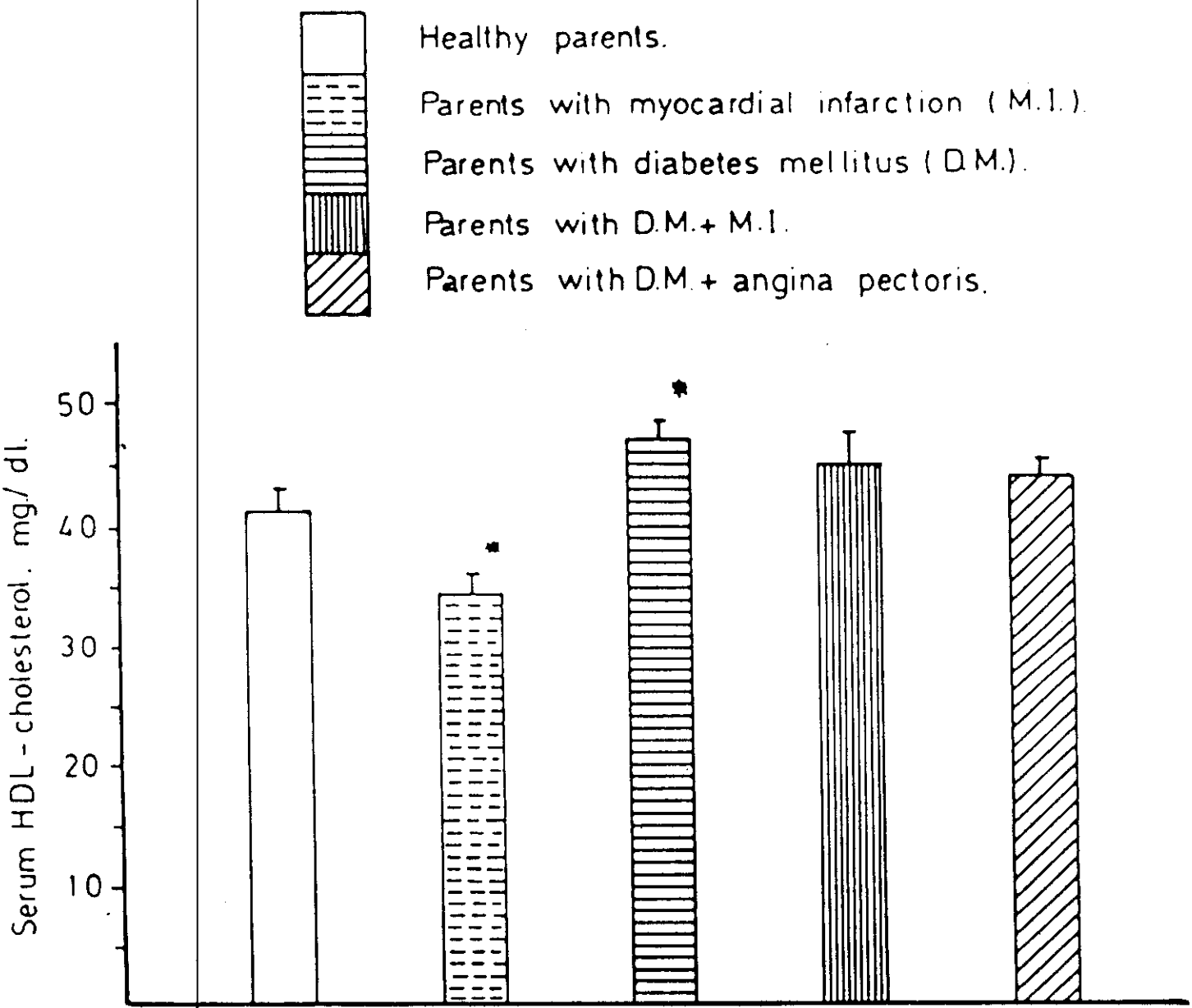
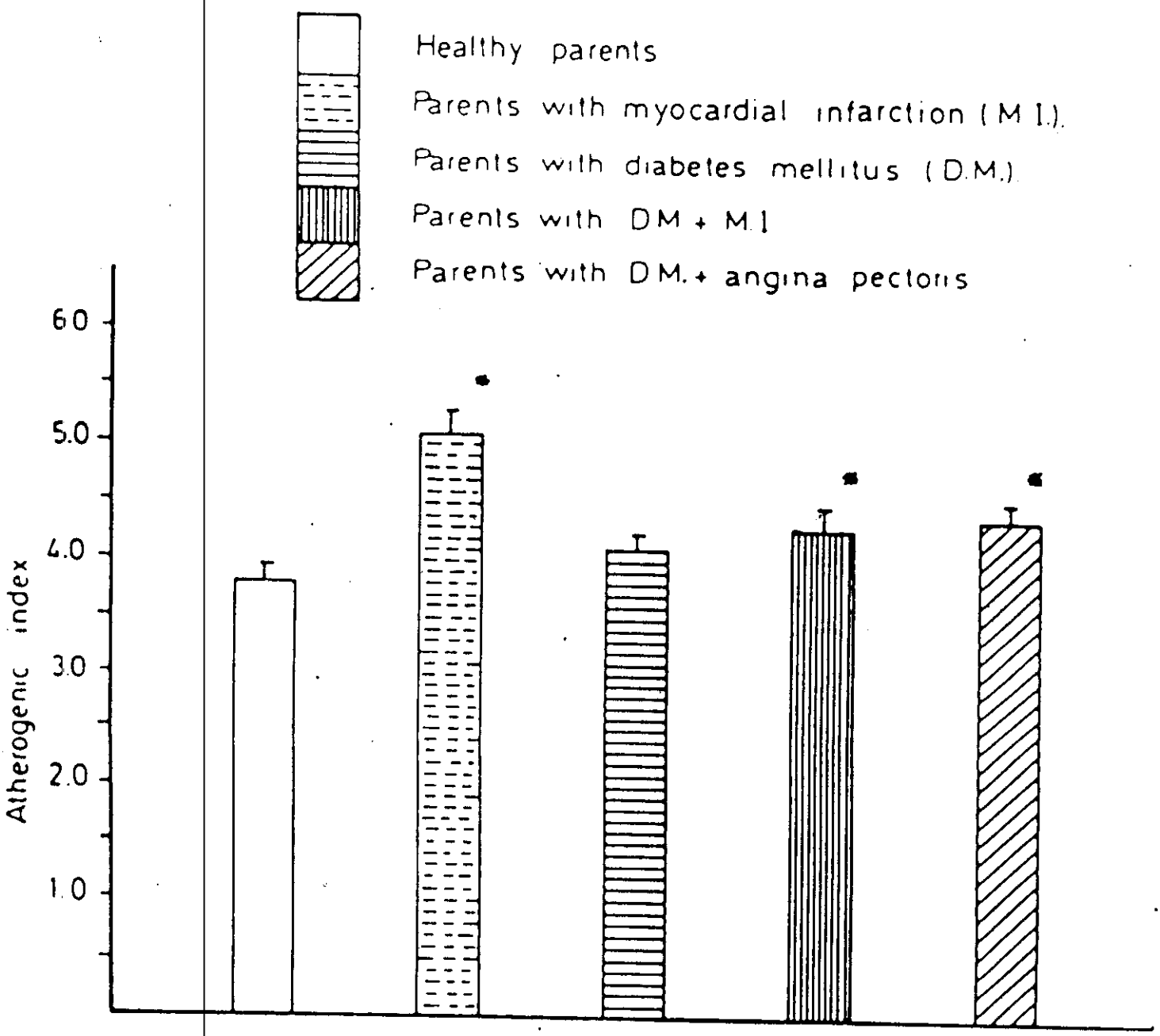


Figure (4): Atherogenic index in children of healthy (controls) or diseased parents



igure (5): Serum LDL-cholesterol levels in children of healthy (controls) or diseased parents. (mean ± S.E.).

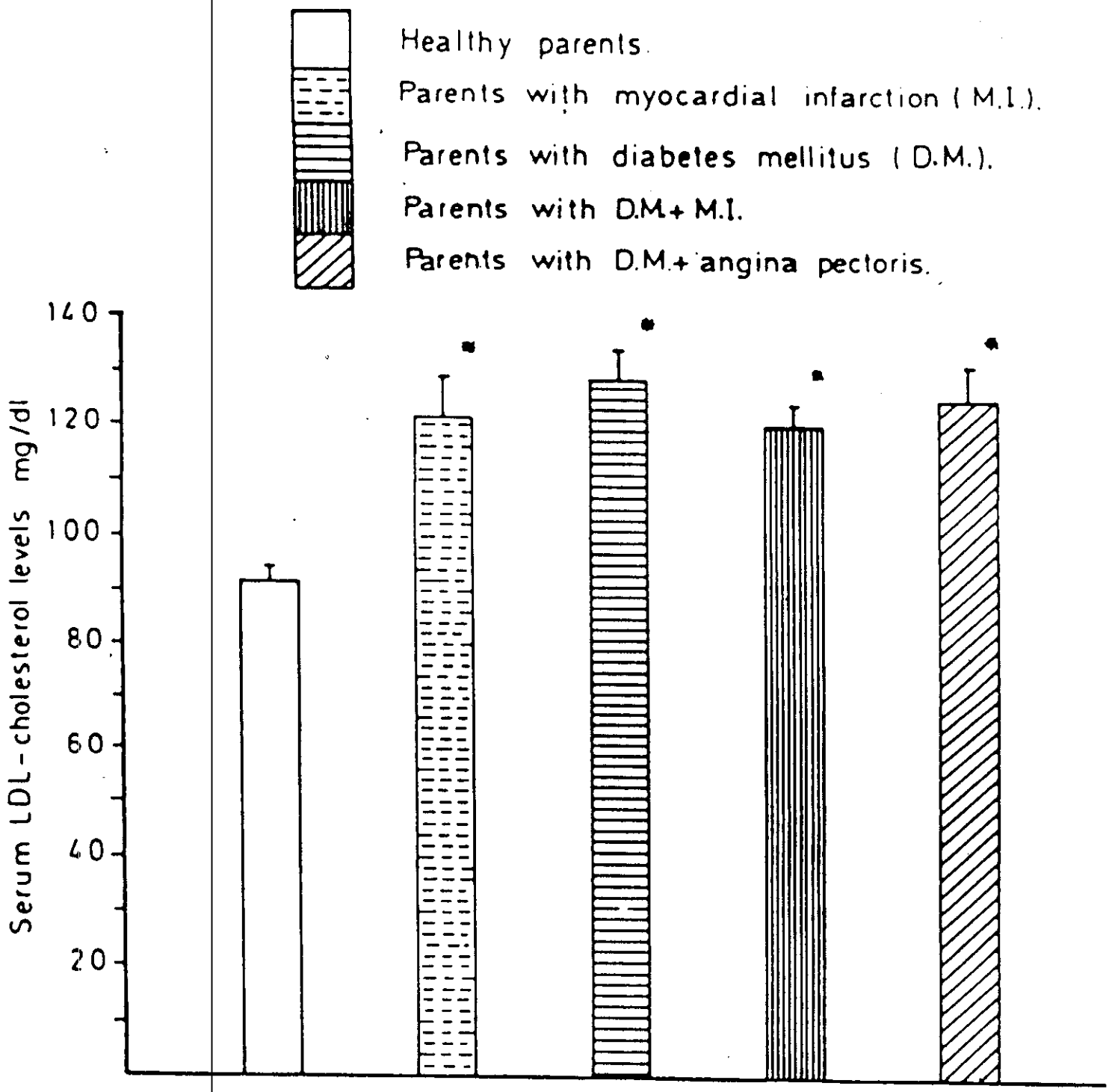
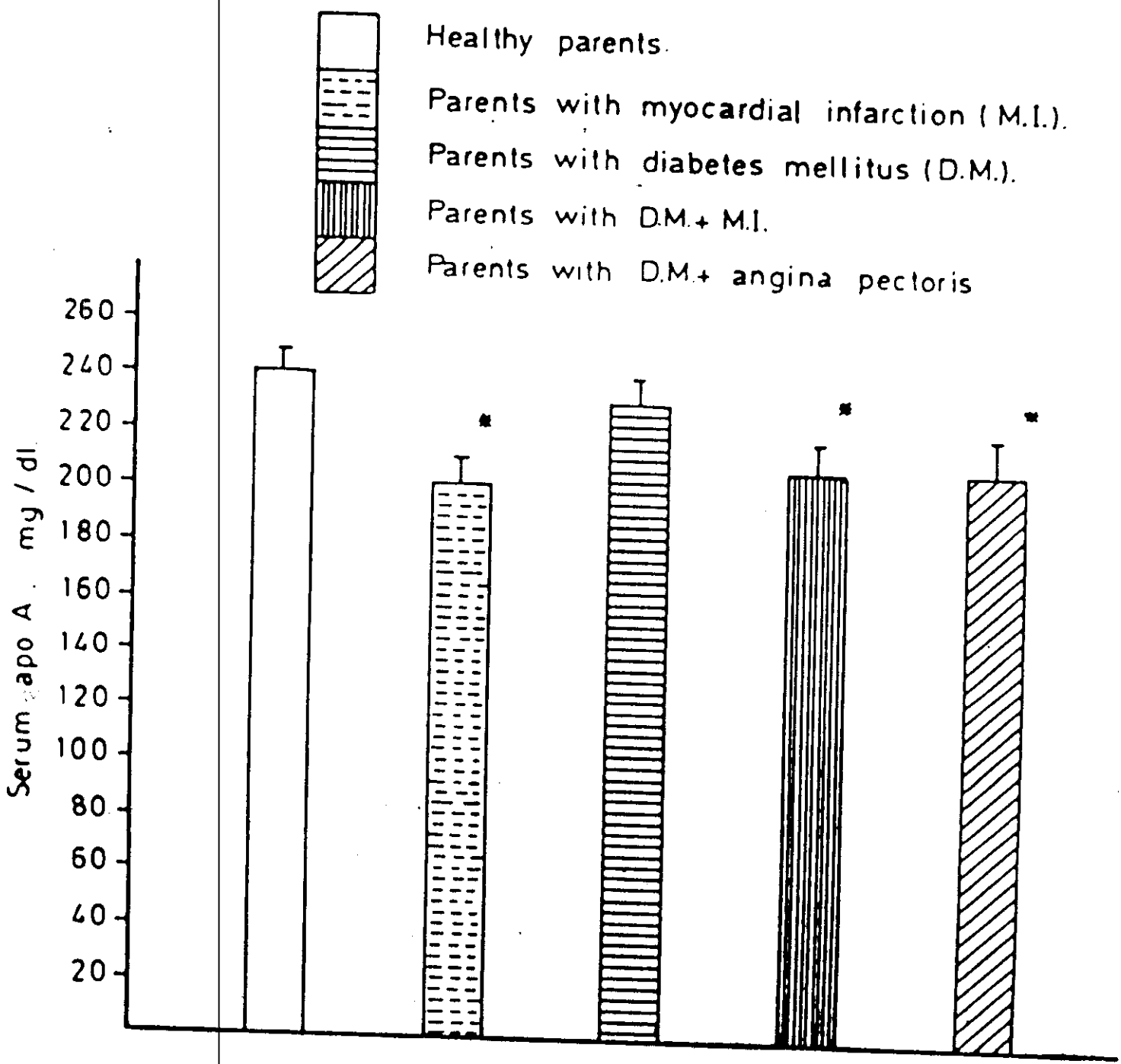


Figure (6): Serum apo A levels in children of healthy (controls) or diseased parents. (mean + S.E.).



igure(7): Serume apo B levels in children of healthy (controls) or diseased parents (mean + S.E.).

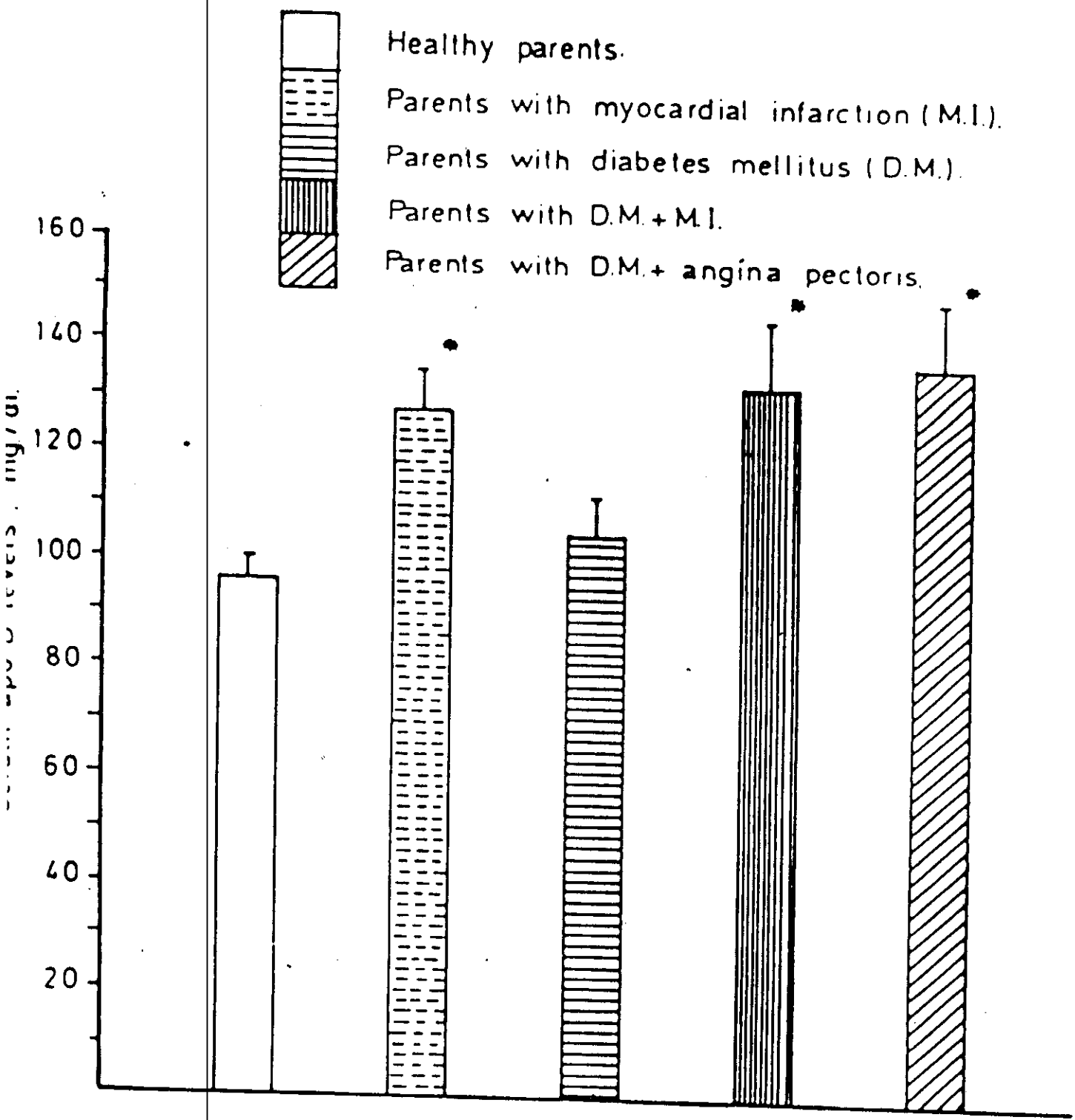
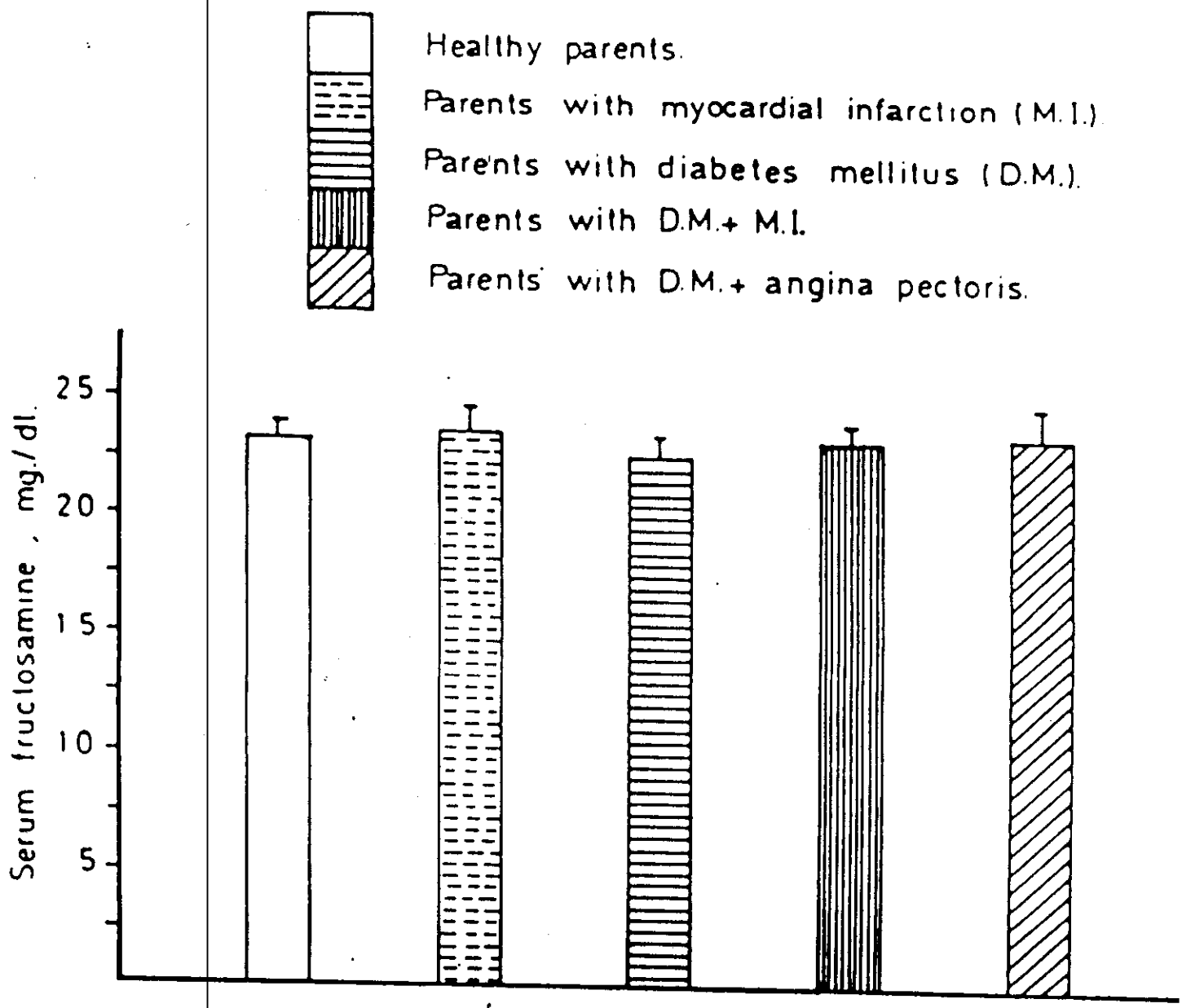


Figure (8): Serum fructosamine levels in children of healthy (controls) or diseased parents. (mean + S.E).



ANALYSIS OF THE RESULTS

Table (1) :-

Shows the clinical data of children of healthy parents who are taken as control group (Group 1). They are 33 children (21 males and 12 females). Their ages ranged from 3 to 14 years with a mean of 8.758 ±0.508 years. Their body weight ranged from 14 to 36 kg with a mean of 25.667 ±1.070 kg. Their height ranged from 93 to 149 cm with a mean of 122.91 ±2.44 cm. Their surface area ranged from 0.658 to 1.239 with a mean of 0.929 ± 0.028 m^2. Their body mass index ranged from 12.038 to 33.107 kg/m^2 with a mean of 27.367 ± 0.551 kg/m^2.

Table (2) :-

Shows the clinical data of children of parents with myocardial infarction (Group 2). They are 22 children (16 males and 6 females) their ages ranged from 3 to 14 years with a mean of 10.48 ± 0.76 years. Their body weight ranged from 13 to 41 kg with a mean of 29.772 ±2.04 kg. Their height ranged from 93 to 150 cm with a mean of 129.45 ±3.49 cm. Their body surface area ranged from 0.571 to 1.381 with a mean of 1.034 ±0.49 m^2. Their body mass index ranged from 22.77 to 34.929 kg/m^2 with a mean of 28.471 ±0.693 kg/m^2.

Table (3) :-

Shows clinical data of children of parents with diabetes mellitus (Group 3). Their number is 22 children (13 female and 9 males). Their ages ranged from 5 to 14 years with a mean of 10.70 ±0.55 years. Their body weight ranged from 21 to 40 kg with a mean of 28.41 ±1.12 kg. Their heights ranged from 107 to 148 cm with a mean of 129.45 ±2.33 cm. Their surface area ranged from 0.790 to 1.289 m^2 with a mean of 1.025 ±0.030 m^2. Their body mass index ranged from 25.75 to 31.03 kg/m^2 with a mean of 28.45 ±0.315 kg/m^2.

Table (4) :-

Shows clinical data of children of parents with diabetes mellitus + myocardial infarction (Group 4). Their number is 22 children (20 males and 2 females). Their ages ranged from 8 to 14 years with a mean of 11.614 ±0.43 years. Their body weight ranged from 25 to 50 kg with a mean of 42.45 ± 1.60 kg. Their height ranged from 124 to 154 cm with a mean of 127.82 ±1.98 cm. Their body surface area ranged from 0.956 to 1.615 m^2 with a mean of 1.358 ±0.032 m^2. Their body mass index ranged from 25.587 to 35.087 kg/m^2 with a mean of 33.273 ± 0.552 kg/m^2.

Table (5) :-

Shows clinical data of children of parents with diabetes mellitus + angina pectoris (Group 5). Their number is 20 children (10 males and 10 females). Their ages ranged from 6 to 14 years with a mean of 10.70 ±0.685 years. Their body weight ranged from 19 to 50 kg with a mean of 30.60 ±2.59 kg their height is ranged from 93 to 151 cm with a mean 128.75 4.55 cm. Their surface area ranged from 0.700 to 1.457 kg/m^2 with a mean of 1.077 ±0.060 m^2. Their body mass index ranged from 25.66 to 38.795 with a mean of 30.641 ±0.788 kg/m^2.

Table (6) :-

Shows serum lipids, lipoproteins, apoproteins profile and fructosamine in children of healthy parents (controls) (Group 1) serum triglycerides level ranged from 52 to 101 mg/dl with a mean of 69.0 ±2.00 mg/dl. Serum total cholesterol ranged from 110 to 202 mg/dl with a mean of 147.8 ±3.13 mg/dl. Serum HDL cholesterol level ranged from 27.4 to 64.1 mg/dl with a mean of 41.33 ±2.01 mg/dl. Atherogenic index ranged from 2.29 to 4.89 with a mean of 3.80 ±0.15. Serum LDL cholesterol ranged from 63.1 to 141.8 mg/dl with a mean of 91.50 ±2.93 mg/dl. Apo A level ranged from 160 to 303 mg/dl with a mean of 240.6 ±7.72 mg/dl. Apo B ranged from 60 to 150 mg/dl with a mean of 96.15 ±4.19 mg/dl. Serum fructosamine level ranged from 17 to 30.5 mg/dl with a mean of 23.3 ±0.77 mg/dl.

Table (7) :-

Shows serum lipids, lipoproteins, apoprotein profile and serum fructosamine of children of parents with myocardial infarction (Group 2). Their serum triglyceride level ranged from 45 to 200 mg/dl, with a mean of 94.36 ±9.58 mg/dl. It was significantly higher if compared to that of control group ($P < 0.02$). Their serum total cholesterol level was ranged from 116 to 236 with amean of 174.91±7.56 mg/dl. It was significantly higher if compared to that of control group ($P < 0.005$). Serum HDL cholesterol level ranged from 19.4 to 44.6 mg/dl with a mean of 34.61 ±1.53 mg/dl. However it is significantly higher if compared to that of control group ($P < 0.02$). Atherogenic index ranged from 3.76 to 6.55 with a mean of 5.139 ±0.177. It is significantly higher if compared to that of control group ($P < 0.001$). Serum LDL cholesterol ranged from 68.6 to 189.2 mg/dl with a mean of 121.49 ±7.41 mg/dl. It is significantly higher if compared to control group ($P < 0.001$). Serum apo A level ranged from 120 to 260 mg/dl with a mean of 202.95 ±8.96 mg/dl. It is significantly higher if compared to control group ($P < 0.005$). Serum apo B level ranged from 70 to 195 mg/dl with a mean of 127.95 ±7.46 mg/dl. It is significantly higher if compared to control ($P < 0.001$). Serum fructosamine level ranged from 17.9 to 37.0 mg/dl with a mean of 23.73 ±1.06 mg/dl. There is no significant difference if compared to control group ($P > 0.7$).

Table (8) :-

Shows serum lipids, lipoproteins, apoprotein profile, and fructosamine levels in children of diabetic parents ((Group 3). Their serum triglyceride level ranged from 50 to 105 mg/dl with a mean of 75.14 ±3.51 mg/dl. There is no significant difference if compared to control group (P >0.1). Serum total cholesterol level ranged from 133 to 249 mg/dl with a mean of 190.68 ±6.26 mg/dl. It is significantly higher if compared to control group (P <0.001). Serum HDL cholesterol level ranged from 32.7 to 56.2 mg/dl with a mean of 47.14 ±1.55 mg/dl. It is significantly higher if compared to control (P <0.05). Atherogenic index ranged from 2.96 to 5.20 with a mean of 4.09 ±0.132. No significant difference if compared to control. Serum LDL cholesterol level ranged from 91 to 186.5 mg/dl with a mean of 128.51 ±5.24 mg/dl. It is significantly higher if compared to control group (P <0.001). Serum apo-A level ranged from 170 to 300 mg/dl with a mean of 231.82 ±9.46 mg/dl. There is no significant difference if compared to control. Serum apo-B level ranged from 60 to 160 mg/dl with a mean of 104.77 ±6.84 mg/dl. There is no significant difference in comparison to control group. (P >0.2). Serum fructosamine level ranged from 15 to 27.45 mg/dl with a mean of 22.56 ±0.87 mg/dl. There is no significant difference if compared to that of control group.

Table (9) :-

Shows serum lipids, lipoproteins, apoproteins and fructosamine level in children of parents with diabetes mellitus + myocardial infarction (Group 4). Their serum level of triglycerides ranged from 60 to 170 mg/dl with a mean of 110.86 ±7.62. It is significantly higher if compared to control group (P1 <0.001) while there no significant difference if compared to group of children of parents with myocardial infarction (P2 >0.1). Serum total cholesterol ranged from 137 to 238 mg/dl with a mean of 186.95 ±5.46 mg/dl. It is significantly higher if compared to control group (P1 <0.001) while there is no significant difference if compared to group of children of parents with myocardial infarction (P2 >0.2) and that of group of children of parents with diabetes mellitus (P3 >0.6). Serum HDL cholesterol level ranged from 24.6 to 68.3 mg/dl with a mean of 45.22 ±2.43 mg/dl. There is no significant difference if compared to control group (P1 >0.2) and that of children of parents with diabetes mellitus (P3 >0.5) while it is significantly higher if compared to group of children of parents with myocardial infarction (P2 <0.001). Atherogenic index ranged from 2.92 to 6.42 to 6.42 with a mean of 4.314 0.195. It is significantly higher if compared to control group (P1 <0.05) and group of children of parents with myocardial infarction (P2 <0.005) while there is no significant difference in comparison to group of children of parents with diabetes

mellitus (P3 >0.3). Serum LDL cholesterol level ranged from 86.2 to 162.4 mg/dl with a mean of 119.61 ±3.86 mg/dl. It is significantly higher if compared to control group (P1 <0.001) while there is no significant difference in comparison between group (2) (P2 >0.7) and group (3) (P2 >0.1). Serum apo-A ranged from 110 to 280 mg/dl with a mean of 207.22 ±11.00 mg/dl. It is significantly higher if compared to control (P1 <0.02) but there is no significant differences in comparison to group (2) (P2 >0.7) and group (3) (P3 >0.05). Apo-B level ranged from 50 to 220 mg/dl with a mean of 132.50 ±12.32 mg/dl. It is significantly higher if compared to control group (P1 <0.01) while there is no significant difference in comparison with group (2) (P2 >0.7) and group 3 (P3 >0.05). Serum fructosamine level ranged from 18.0 to 29.8 mg/dl with a mean of 23.33 ±0.80 mg/dl. There is no significant difference in comparison to control group (1), group (2) and (group 3).

Table (10) :-

Shows serum lipids, lipoproteins, apoproteins profile and fructosamine levels in children of parents with diabetes mellitus + angina pectoris (Group 5). Serum triglyceride level ranged from 45 to 130 mg/dl with a mean of 100.15 ±4.64 mg/dl. It is significantly higher if compared to control group (P1 <0.001) and group (3) (children of diabetic parents) (P2 <0.001). Serum total

cholesterol level ranged from 136 to 230 mg/dl with a mean of 189.4 ±6.34 mg/dl. It is significantly higher if compared to control group (P1 <0.001) but there is no significant difference in comparison to children of diabetic parents (P2 <0.8). Serum HDL cholesterol level ranged from 33.4 to 55.0 mg/dl with a mean of 43.95 ±1.43 mg/dl. There is no significant difference in comparison with control group (P1 >0.3) or group of children of diabetic parents (P2 >0.1). Atherogenic index ranged from 3.13 to 6.29 with a mean of 4.37 ±0.173. It is significantly higher if compared to that of control group (P1 <0.02) but there is no significant difference in comparison with group of children of diabetic parents (P2 >0.2). Serum LDL cholesterol ranged from 79.9 to 154.2 mg/dl with a mean of 125.42 ±5.51 mg/dl. It is significantly higher if compared to control group (P1 <0.001) but there is no difference in comparison with group of children of diabetic parents (P2 >0.5). Serum apo-A level ranged from 120 to 300 mg/dl with a mean of 209.75 ±11.75 mg/dl. It is significantly higher if compared to control group (P1 <0.05) but there is no difference in comparison with group of children of diabetic parents (P2 >0.1). Apo-B level ranged from 16.7 to 36.2 mg/dl with a mean of 23.45 ±1.26 mg/dl. It is significantly higher if compared to control group (P <0.005) and group of children of diabetic parents (P <0.05). Serum fructosamine level ranged from 16.7 to 36.2

mg/dl with a mean 23.45 ±1.26 mg/dl. There is no significant difference in comparison with control group (P1 >0.9) and group of children of diabetic parents (P2 >0.5).

Table (11) :-

Shows correlation studies in children of healthy parents (control group).

Table (12) :-

Shows correlation studies in children of parents with myocardial infarction.

Table (13) :-

Shows correlation studies in children of parents with diabetes mellitus.

Table (14) :-

Shows correlation studies in children of parents with diabetes mellitus + myocardial infarction.

Table (15) :-

Shows correlation studies in children of parents with diabetes mellitus + angina pectoris.

Table (16) :-

Shows summary of correlation studies between lipids, lipoproteins, apoproteins and fractosamine in different groups.