

RESULTS

Table I

It illustrates the normal ranges of enzymes and electrolytes which were done for each subject in our study.

Tables from II to V

This tables illustrates the main data which were obtained from the detailed medical history and clinical examination.

They included the following main data from detail medical history: No. of subject, Age, Sex, past and family history, school attendance. Sleep interruption, No. of previous asthmatic attacks per year, No. of previous hospitalization due to severe asthmatic attacks and they also included the history of atopy of each subject.

They include also the following main data from clinical examination: HR. RR. respiratory distress and peak flow rate.

This data were subdivided accordingly to the severity of attack as

mild group	Table II
moderate group	Table III
severe group	Table IV
control group	Table V

From these tables we can notice that:

There was an increase of No. of school absence days, sleep interruption HR, RR (accordingly to the same age and sex) and respiratory distress with increasing the severity of asthmatic attack. But there was a decrease of peak flow rate level (accordingly to the same age and sex) with increasing of the severity of asthmatic attack.

No. of previously asthmatic attacks and No. of previously hospitalization represent the chronicity of the asthmatic diseases of each subject.

Tables from VI to IX

These tables illustrated the values of enzymes and electrolytes which were obtained by laboratory studies in each group.

Table VI

Represent these values in mild group where we can notice that:

No. of cases 20.

SGOT, SGPT, CK and LDH were in normal ranges in all cases.

CK-MB in cases number 8, 32, 46, 51 and 55 was more than 5.5% of total **CK** but still less than 2.12 U/L.

i.e. **CK-MB** increase in about 25% of all mild cases

N.B.

All electrolytes studies (**Na, K, Ca and P**) were in normal range in all cases and in all groups (mild, moderate, severe and control)

Table VII

Represent values of the moderate group as we can notice that:

No. of cases 20

SGOT, SGPT, CK and LDH were in normal ranges in all cases.

CK,MB in cases number 27, 39, 59 and 60 was more than 5.6% of total **CK** but still less than 2.12 U/L.

i.e. **CK-MB** was increased in about 20% of all moderate cases

Table VIII

represent values of the severe group

No. of cases 20

SGOT, in cases number 3, 7, 10, 28, 36, 38, 40, 54 and 57, were more than 26 U/L.

i.e. It was increased in about 45% of all severe cases

SGPT in cases number 7, 28 and 36, were more than 35 U/L.

i.e. it was increased in about 15% of all severe cases.

CK and LDH were in normal ranges in all cases

CKMB in cases number 4, 40 was more than 5.6% of total **CK** but less than 2.12 U/L. in percentage of 10% of severe cases

and in cases number 7, 28, 29, 34, and 50 **CKMB** was more than 5.6% of total **CK** and also more than 2.12 U/L. in percentage of 25% of severe cases.

N.B.

The 5 cases were **CKMB** more than 2.12 U/L, we noticed marked ECG changes which indicated myocardial affections.

Table IX

It represents values in control subject

No. of cases 10 and all enzymes or electrolytes were in the normal ranges

Tables from X to XVI

They illustrated the statistical comparisons (between one group and other) of enzymatic and electrolytic changes in each group.

From this tables we can observe that:

The mean of **SGOT**, **SGPT**, **CK** and **LDH** changes showed significant differences as compared between the following groups.

* mild group and control	table X.
* moderate group and control	table XI.
* severe group and control	table XII.
* all cases and control	table XIII.
* mild group and moderate group	table XIV.
* mild group and severe group	table XV.
* moderate group and severe group	table XVI.

The mean of **CKMB** changes showed significant differences when compared between the following groups

* severe group and control	table XII
* mild group and severe group	table XV
* moderate group and severe group	table XVI

The mean of **CKMB** changes showed no significant differences when compared between the following groups:

- | | |
|---------------------------------|------------|
| * mild group and control | table X |
| * moderate group and control | table XI |
| * all cases and control | table XIII |
| * mild group and moderate group | table XIV |

The mean of electrolytes (Na, K, Ca and P) showed no significant differences when compared between any two groups as shown in all tables from table X to table XVI.

N.B:

Significant differences is indicated if: **P < 0.05**

Table (I): Normal values of enzymes and electrolytes according to the used methods.

Variable	Normal value
I. Enzymes:	
- AST (SGOT)	0 - 26 u/l.
- ALT (SGPT)	0 - 35 u/l.
- CK	10 - 70 u/l.
- CK-MB	0 - 1.4 u/l or less than 5% of total CK
- LDH	50 - 200 u/l.
II. Electrolytes:	
- Na.	135 - 145 m Eq/L
- K	3.5 - 7 mEq/l
- Ca	8.8 - 10.8 mg/dl
- P	3.5 - 5.6 mg/dl

Table (II): The main clinical data in mild group.

No.	Age in y	sex	family his.	past his.	school attend.	sleep Interrup.	No. of attack/y	previous hosplt.	atopy	HR beat/min	RR breath/min	resp. dist.	PFR l/min.
6	3.5	m	-ve	+ve	-	-ve	4	-	No	150	27	mild	-
8	9.3	m	+ve	+ve	good	-ve	1	2	No	120	25	mild	240
9	9	m	+ve	+ve	good	-ve	6	3	yes	118	20	mild	260
14	7	m	-ve	+ve	good	-ve	5	2	No	128	31	mild	230
15	6	f	+ve	+ve	good	-ve	2	-	No	110	35	mild	200
18	8	m	+ve	+ve	good	-ve	5	4	yes	125	28	mild	250
19	4	m	-ve	+ve	-	-ve	3	2	No	132	33	mild	-
25	3	m	+ve	+ve	-	-ve	3	-	No	130	30	mild	-
26	15	m	+ve	+ve	good	-ve	4	2	No	100	28	mild	430
32	8	f	-ve	+ve	good	-ve	2	1	yes	95	25	mild	210
33	7	f	-ve	+ve	good	-ve	1	-	No	100	28	mild	190
37	4	f	+ve	+ve	-	-ve	3	1	yes	125	25	mild	-
41	4.5	m	-ve	+ve	-	-ve	2	-	No	125	22	mild	120
43	4	m	+ve	+ve	-	-ve	5	2	yes	145	24	mild	-
44	4	f	+ve	+ve	-	-ve	6	4	yes	120	30	mild	-
46	11	m	+ve	+ve	good	-ve	3	4	No	80	25	mild	280
51	6	f	+ve	+ve	good	-ve	5	2	yes	98	22	mild	190
52	12	f	+ve	+ve	good	-ve	7	3	yes	75	24	mild	280
53	3	f	+ve	+ve	-	-ve	8	-	yes	100	28	mild	-
55	5	m	+ve	+ve	-	-ve	1	-	No	115	30	mild	140

Table (III): The main clinical data in moderate group.

No.	Age in y	sex	family his.	past his.	school attend.	sleep interrup.	No. of attack/y	previous hospit.	atopy	HR beat/min	RR breath/min	resp. dist.	PFR l/min.
1	9	f	+ve	+ve	good	+ve	2	1	No	100	30	mod	180
2	14	m	+ve	+ve	affect	+ve	9	6	yes	75	33	mod	290
5	3.7	m	+ve	+ve	-	+ve	1	-	yes	150	33	mod	-
12	9.9	m	+ve	+ve	good	+ve	3	2	No	100	35	mod	210
13	8	f	-ve	+ve	good	-ve	1	-	No	105	40	mod	190
17	4.5	f	+ve	+ve	-	+ve	8	1	No	115	39	mod	90
22	12	f	-ve	+ve	good	+ve	3	-	No	92	35	mod	270
24	14	m	+ve	+ve	affect	+ve	10	6	No	98	33	mod	320
27	4.5	m	-ve	+ve	-	+ve	5	2	No	124	45	mod	80
31	6.2	m	+ve	+ve	good	+ve	1	-	yes	140	38	mod	120
35	5.5	m	+ve	+ve	-	+ve	1	-	No	134	43	mod	150
39	12	f	+ve	+ve	affect	+ve	7	4	No	116	32	mod	190
42	13	m	+ve	+ve	affect	+ve	4	3	yes	80	35	mod	210
45	5.3	f	+ve	+ve	-	-ve	1	-	No	130	40	mod	-
48	7	m	+ve	+ve	affect	+ve	8	2	yes	110	35	mod	130
49	8	m	+ve	+ve	good	+ve	8	-	No	104	40	mod	180
56	4.3	f	+ve	+ve	-	+ve	9	2	yes	140	40	mod	-
58	3.5	m	+ve	+ve	-	+ve	10	3	yes	150	35	mod	-
59	8.5	m	+ve	+ve	affect	+ve	12	6	yes	110	50	mod	200
60	5	f	+ve	+ve	-	+ve	10	1	yes	118	36	mod	-

Table (IV): The main clinical data in severe group.

No.	Age in y	sex	family hls.	past hls.	school attend.	sleep interrup.	No. of attack/y	previous hosplt.	atopy	HR beat/mln	RR breath/mln	resp. dist.	PFR l/mln.
3	8	f	-ve	+ve	-	+ve	2	3	No	120	40	sev.	110
4	10	m	+ve	+ve	poor	+ve	5	-	No	124	49	sev.	-
7	7	m	+ve	+ve	poor	+ve	8	4	yes	125	52	sev.	100
10	9	f	+ve	+ve	poor	+ve	4	5	yes	90	50	sev.	140
11	6.5	m	-ve	+ve	poor	+ve	3	3	No	136	40	sev.	90
16	5.5	f	+ve	+ve	-	+ve	3	-	yes	132	50	sev.	80
20	9	m	+ve	+ve	affect	+ve	6	-	yes	96	39	sev.	150
21	9.5	m	+ve	+ve	poor	+ve	2	4	yes	130	35	sev.	130
23	7.5	f	+ve	+ve	poor	+ve	5	2	No	142	45	sev.	90
28	12	m	+ve	+ve	affect	+ve	5	1	yes	140	50	sev.	365
29	4	m	+ve	+ve	-	+ve	3	2	yes	156	56	sev.	-
30	4.9	m	+ve	+ve	-	+ve	2	1	yes	125	38	sev.	-
34	15	f	-ve	+ve	-	+ve	6	5	No	148	40	sev.	-
36	3	f	+ve	+ve	-	+ve	4	-	No	155	60	sev.	-
38	3.5	m	+ve	+ve	-	+ve	2	-	yes	154	60	sev.	-
40	5	m	+ve	+ve	-	+ve	5	2	yes	150	45	sev.	100
47	3	m	+ve	+ve	-	+ve	3	1	No	160	50	sev.	-
50	13	f	+ve	+ve	poor	+ve	5	4	No	130	40	sev.	130
54	11	m	-ve	+ve	affect	+ve	7	4	No	76	56	sev.	110
57	9	m	+ve	+ve	-	+ve	6	2	yes	140	50	sev.	90

Table (V): The main clinical data in control subjects.

No.	Age In y	sex	family hls.	past hls.	school attend.	sleep Interrup.	No. of attack/y	previous hosplt.	atopy	HR beat/mln	RR breath/mln	resp. dist.	PFR l/mln.
61	3.5	m	-ve	-ve	good	-ve	-ve			140	22		-
62	9	m	-ve	-ve	good	-ve	-ve			110	20		290
63	4.5	m	-ve	-ve	good	-ve	-ve			110	27		150
64	3	m	-ve	-ve	good	-ve	-ve			125	23		-
65	6	m	-ve	-ve	good	-ve	-ve			90	27		200
66	14	m	-ve	-ve	good	-ve	-ve			92	18		520
67	10	m	-ve	-ve	good	-ve	-ve			96	19		400
68	12	f	-ve	-ve	good	-ve	-ve			88	19		450
69	8.5	f	-ve	-ve	good	-ve	-ve			96	20		290
70	10	m	-ve	-ve	good	-ve	-ve			80	20		390

Table (VIII): Values of enzymes and electrolytes in severe group.

No.	AST u/l	ALT u/l	CK u/l	CKMB u/l	LDH u/l	Na Meq/l	K Meq/l	Ca mg/dl	P mg/dl
3	29	30	28	0	88	140	3.5	9.3	4.5
4	20	25	33	2	92	141	4	9.2	4
7	35	38	42	4	102	143	5.1	9.5	3.6
10	28	26	25	0.2	96	136	3.6	10	3.7
11	25	22	44	0	88	139	3.5	10.2	3.8
16	24	23	38	0	92	135	3.9	9.6	4.2
20	20	22	32	0	95	144	4.7	10.5	4.7
21	25	34	22	1	96	138	4.5	10	3.8
23	25	25	40	0	98	142	5.2	9.8	5
28	29	38	42	3	102	138	4.5	9.2	4
29	22	35	40	4	102	136	3.7	9.2	4.7
30	25	28	29	0	93	141	4.1	9.8	3.8
34	22	24	42	5	105	140	5.2	9	3.5
36	36	40	36	0	98	142	4.3	10.5	3.5
38	32	22	45	0	101	138	4.6	10.7	4.4
40	36	20	28	2	100	139	3.8	9.6	4.1
47	22	24	34	0.5	96	135	4.5	9.5	3.7
50	24	26	46	3	105	142	4.2	10.5	3.5
54	27	30	33	0.8	94	142	5.4	9.8	3.8
57	34	28	27	0	98	138	3.8	9.3	3.7

Table (VI): Values of enzymes and electrolytes in mild group.

No.	AST u/l	ALT u/l	CK u/l	CKMB u/l	LDH u/l	Na Meq/l	K Meq/l	Ca mg/dl	P mg/dl
6	18	15	12	0	68	140	3.8	9	3.5
8	20	20	16	1.1	60	140	4	9	3.7
9	16	23	12	0.3	66	139	4.2	9.5	3.6
14	18	25	22	0.3	57	138	3.8	10.5	3.5
15	20	22	13	0	75	136	3.5	10.2	4.1
18	20	20	16	0	60	139	4.5	9.3	4.2
19	21	18	21	0.1	63	136	5	9.5	3.8
25	15	16	22	1	60	142	3.6	10	3.5
26	15	17	16	0	58	140	3.7	10.4	4.2
32	12	19	14	1	60	138	4	10	3.8
33	14	18	13	0	71	136	4.2	10.5	4.5
37	16	18	18	0	70	137	4.4	10	4.7
41	20	16	14	0	63	140	3.8	9.6	5
43	21	24	12	0	65	142	3.9	9.2	3.5
44	20	18	22	0	72	142	3.5	10.8	4
46	18	17	15	1.2	58	139	4.4	9.7	5.4
51	15	20	17	1	65	137	3.8	10.2	3.5
52	16	14	14	0.3	59	140	4.2	9.2	3.5
53	20	18	15	0.6	63	140	5	10.5	5
55	17	18	19	1.2	62	135	4.8	10	4.4

Table (VII): Values of enzymes and electrolytes in moderate group.

No.	AST u/l	ALT u/l	CK u/l	CKMB u/l	LDH u/l	Na Meq/l	K Meq/l	Ca mg/dl	P mg/dl
1	18	21	27	0	91	141	4	9	3.7
2	22	20	25	1	83	142	4.2	9.1	3.5
5	18	25	32	0.3	90	140	3.8	10	3.6
12	22	28	20	0.5	78	140	3.8	10.5	4.1
13	14	33	33	0	77	134	4.4	10	4
17	20	22	24	0	83	143	3.8	10.8	4.2
22	24	18	28	0	88	135	3.6	8.8	3.7
24	18	25	31	0	81	138	4	9.4	4.4
27	26	30	28	2	86	135	4	9.2	3.8
31	22	22	25	0.7	81	141	4.5	10	3.9
35	24	25	18	0	78	136	4	10.7	4.8
39	26	22	22	1.3	84	140	4.4	10.2	4.1
42	20	20	24	0	93	140	5.2	10.6	3.7
45	26	24	22	0	98	142	4.7	9.9	4.2
48	21	22	23	0.6	83	140	5.3	10.4	4.7
49	25	28	28	0	84	142	4.6	9.5	3.7
56	20	18	25	0.8	96	136	3.8	9.2	3.6
58	26	21	27	0.7	85	144	3.6	10	3.7
59	22	25	24	2	80	140	4.2	9.8	4.2
60	25	20	22	1.2	78	138	3.9	9.4	3.9

Table (IX): Values of enzymes and electrolytes in control subjects.

No.	AST u/l	ALT u/l	CK u/l	CKMB u/l	LDH u/l	Na Meq/l	K Meq/l	Ca mg/dl	P mg/dl
61	8	12	20	0.7	58	137	3.5	9.2	3.5
62	9	15	15	0.3	60	142	4.2	9	4.5
63	10	13	20	0.4	56	136	5.2	10	3.7
64	10	12	16	0	52	138	3.6	9.6	4.6
65	9	13	16	0	58	140	3.9	10.1	3.9
66	9	9	19	0	56	140	4.7	9.8	4
67	12	11	17	0.6	60	140	5.1	9.5	4.8
68	14	11	20	0	67	136	4	8.8	4.4
69	10	10	19	0.2	56	142	3.9	9	3.8
70	9	14	18	0	64	138	4.5	10.5	4.2

Table (X): Comparision of enzymatic and electrolytes changes
between mild group & control

Variable		No.	Mean	S.D.	S.E of Mean	T-Value	P
SGOT	grl	20	17.6 u/l	2.624	0.587	8.24	0.0 (S)
	c	10	10.0 u/l	1.764	0.558		
SGPT	grl	20	18.8 u/l	2.913	0.651	6.72	0.0 (S)
	c	10	12.0 u/l	1.826	0.577		
CK	grl	20	15.65 u/l	u/13.281	0.734	-2.09	0.046 (S)
	c	10	18.0 u/l	1.886	0.596		
CK-MB	grl	20	0.435 u/l	0.496	0.111	-0.57	0.515 (NS)
	c	10	0.55 u/l	0.578	0.183		
LDH	grl	20	63.75 u/l	4.633	1.036	4.09	0.0 (S)
	c	10	57.3 u/l	2.497	0.790		
Na	grl	20	139.1 meq/l	2.654	0.593	0.1	0.918 (NS)
	c	10	139 meq/l	2.108	0.667		
K	grl	20	4.105 meq/l	0.461	0.103	-0.03	0.979
	c	10	4.11 meq/l	0.555	0.175		
Ca.	grl	20	9.86 mg/dl	0.596	0.133	0.13	0.898 (NS)
	c	10	9.83 mg/dl	0.6	0.19		
P	grl	20	4.02 mg/dl	0.597	0.133	-0.66	0.513 (NS)
	c	10	4.16 mg/dl	0.414	0.131		

N.B: There was significant differences if $P < 0.05$

S → Significant

NS → Non significant

Table (XI): Comparison of enzymatic and electrolytes changes between moderate group and control.

Variable		No.	Mean	S.D	S.E of Mean	T-Value	p
SGOT	grII	20	21.75 u/l	3.477	0.778	10.0	0.00 (S)
	c	10	10.0 u/l	1.764	0.558		
SGPT	grII	20	22.9 u/l	4.303	0.962	6.72	0.0 (S)
	c	10	12.0 u/l	1.826	0.577		
CK	grII	20	25.4 u/l	4.406	0.985	6.62	0.00(S)
	c	10	18.0 u/l	1.886	0.596		
CK-MB	grII	20	0.54 u/l	0.646	0.144	5.05	0.967 (NS)
	c	10	0.55 u/l	0.578	0.183		
LDH	grII	20	80.5 u/l	9.174	2.051	7.79	0.00 (S)
	c	10	57.3 u/l	2.497	0.790		
Na	grII	20	139.05 meq/l	2.929	0.655	0.05	0.962 (NS)
	c	10	139 meq/l	2.108	0.667		
K	grII	20	4.15 meq/l	0.49	0.11	0.2	0.842 (NS)
	c	10	4.11 meq/l	0.555	0.175		
Ca.	grII	20	9.84 mg/dl	0.716	0.16	0.04	0.970 (NS)
	c	10	9.83 mg/dl	0.6	0.19		
P	grII	20	3.865 mg/dl	0.351	0.079	-2.04	0.051 (NS)
	c	10	4.16 mg/dl	0.414	0.131		

Table (XII): Comparision of enzaymatic and electrolytes changes between severe group and control

Variable		No.	Mean	S.D	S.E of Mean	T-Value	p
SGOT	grIII	20	27.0 u/l	5.211	1.165	9.96	0.0 (S)
	c	10	10.0 u/l	1.764	0.558		
SGPT	grIII	20	28.0 u/l	6.035	1.349	8.14	0.0 (S)
	c	10	12.0 u/l	1.826	0.577		
CK	grIII	20	35.3 u/l	7.226	1.616	7.39	0.0 (S)
	c	10	18.0 u/l	1.886	0.596		
CK-MB	grIII	20	1.275 u/l	1.661	0.371	1.34	0.044 (S)
	c	10	0.55 u/l	0.578	0.183		
LDH	grIII	20	97.3 u/l	5.449	1.218	21.94	0.0 (S)
	c	10	57.3 u/l	2.497	0.79		
Na	grIII	20	139.55 meq/l	2.856	0.639	0.54	0.0595 (NS)
	c	10	139.0 meq/l	2.180	0.667		
K	grIII	20	4.35 meq/l	0.6	0.134	1.06	0.299 (NS)
	c	10	4.11 meq/l	0.555	0.175		
Ca.	grIII	20	9.81 mg/dl	0.59	0.132	-0.09	0.931 (NS)
	c	10	9.83 mg/dl	0.6	0.19		
P	grIII	20	3.995 mg/dl	0.45	0.101	-0.97	0.34 (NS)
	c	10	4.16 mg/dl	0.414	0.131		

Table (XIII): Comparison of enzymatic and electrolytes changes between all cases & control

Variable		No.	Mean	S.D.	S.E of Mean	T-Value	P
SGOT	grIV	60	22.116 u/l	5.468	0.706	6.91	0.0 (S)
	c	10	10.0 u/l	1.764	0.558		
SGPT	grIV	60	23.23 u/l	5.901	0.762	5.94	0.0 (S)
	c	10	12.0 u/l	1.826	0.577		
CK	grIV	60	25.45 u/l	9.591	1.238	2.43	0.018 (S)
	c	10	18.0 u/l	1.886	0.596		
CK-MB	grIV	60	0.75 u/l	1.115	0.144	0.55	0.582 (NS)
	c	10	0.55 u/l	0.578	0.183		
LDH	grIV	60	80.516 u/l	15.305	1.976	4.76	0.0 (S)
	c	10	57.3 u/l	2.497	0.790		
Na	grIV	60	139.23 meq/l	2.776	0.358	0.25	0.801 (NS)
	c	10	139.0 meq/l	2.108	0.667		
K	grIV	60	4.201 meq/l	0.523	0.067	0.51	0.612 (NS)
	c	10	4.11 meq/l	0.555	0.175		
Ca.	grIV	60	9.836 mg/dl	0.626	0.081	0.03	0.975 (NS)
	c	10	9.83 mg/dl	0.6	0.19		
P	grIV	60	3.96 mg/dl	0.474	0.061	-1.26	0.214 (NS)
	c	10	4.16 mg/dl	0.414	0.131		

Table (XIV): Comparison of enzymatic and electrolytes changes between mild group and moderate group.

Variable		No.	Mean	S.D.	S.E of Mean	T-Value	P
SGOT	grI	20	17.6 u/l	2.624	0.587	-4.26	0.0 (S)
	grII	20	21.75 u/l	3.477	0.778		
SGPT	grI	20	18.8 u/l	2.913	0.651	-3.53	0.001 (S)
	grII	20	22.9 u/l	4.303	0.962		
CK	grI	20	15.65 u/l	3.281	0.734	-7.94	0.0 (S)
	grII	20	25.4 u/l	4.406	0.985		
CK-MB	grI	20	0.435 u/l	0.496	0.111	-0.58	0.567 (NS)
	grII	20	0.54 u/l	0.646	0.144		
LDH	grI	20	63.75 u/l	4.633	1.036	-7.29	0.0 (S)
	grII	20	80.5 u/l	9.174	2.051		
Na	grI	20	139.1 meq/l	2654	0.593	0.06	0.955 (NS)
	grII	20	139.05 meq/l	2.929	0.655		
K	grI	20	4.105 meq/l	0.461	0.103	-0.30	0.766 (NS)
	grII	20	4.15 meq/l	0.490	0.11		
Ca.	grI	20	9.86 mg/dl	0.596	0.133	0.1	0.924 (NS)
	grII	20	9.84 mg/dl	0.716	0.16		
P	grI	20	4.02 mg/dl	0.597	0.133	1.0	0.323 (NS)
	grII	20	3.865 mg/dl	0.351	0.079		

Table (XV): Comparision of enzymatic and electrolytes changes between mild group and severe group.

Variable		No.	Mean	S.D.	S.E of Mean	T-Value	P
SGOT	grI	20	17.6 u/l	2.624	0.587	-7.21	0.0 (S)
	grIII	20	27.0 u/l	5.211	1.165		
SGPT	grI	20	18.8 u/l	2.913	0.651	-6.14	0.0 (S)
	grIII	20	28.0 u/l	6.035	1.349		
CK	grI	20	15.65 u/l	3.281	0.734	-11.07	0.0 (S)
	grIII	20	35.3 u/l	7.226	1.616		
CK-MB	grI	20	0.435 u/l	0.496	0.111	-2.17	0.037 (S)
	grIII	20	1.275 u/l	1.661	0.371		
LDH	grI	20	63.75 u/l	4.633	1.036	-20.98	0.0 (S)
	grIII	20	97.3 u/l	5.449	1.218		
Na	grI	20	139.1 meq/l	2654	0.593	-0.52	0.609 (NS)
	grIII	20	139.55 meq/l	2.856	0.639		
K	grI	20	4.105 meq/l	0.461	0.103	-1.45	0.155 (NS)
	grIII	20	4.35 meq/l	0.6	0.134		
Ca.	grI	20	9.86 mg/dl	0.596	0.133	0.27	0.791 (NS)
	grIII	20	9.81 mg/dl	0.59	0.132		
P	grI	20	4.02 mg/dl	0.597	0.133	0.15	0.882 (NS)
	grIII	20	3.995 mg/dl	0.45	0.101		

Table (XVI): Comparison of enzymatic and electrolytes changes between moderate group and severe group.

Variable		No.	Mean	S.D.	S.E of Mean	T-Value	P
SGOT	grII	20	21.75 u/l	3.477	0.778	-3.75	0.001 (S)
	grIII	20	27.0 u/l	5.211	1.165		
SGPT	grII	20	22.9 u/l	4.303	0.462	-3.08	0.004 (S)
	grIII	20	28.0 u/l	6.035	1.349		
CK	grII	20	25.4 u/l	4.406	0.985	-5.23	0.0 (S)
	grIII	20	35.3 u/l	7.226	1.616		
CK-MB	grII	20	0.54 u/l	0.646	0.144	-2.04	0.033 (S)
	grIII	20	1.275 u/l	1.661	0.371		
LDH	grII	20	80.5 u/l	9.174	2.051	-70.4	0.0 (S)
	grIII	20	97.3 u/l	5.449	1.218		
Na	grII	20	139.05 meq/l	2.929	0.655	-0.55	0.588 (NS)
	grIII	20	139.55 meq/l	2.856	0.639		
K	grII	20	4.15 meq/l	0.49	0.11	-1.15	0.255 (NS)
	grIII	20	4.35 meq/l	0.6	0.134		
Ca.	grII	20	9.84 mg/dl	0.716	0.16	0.14	0.886 (NS)
	grIII	20	9.81 mg/dl	0.59	0.132		
P	grII	20	3.865 mg/dl	0.351	0.079	-1.02	0.315 (NS)
	grIII	20	3.995 mg/dl	0.45	0.101		

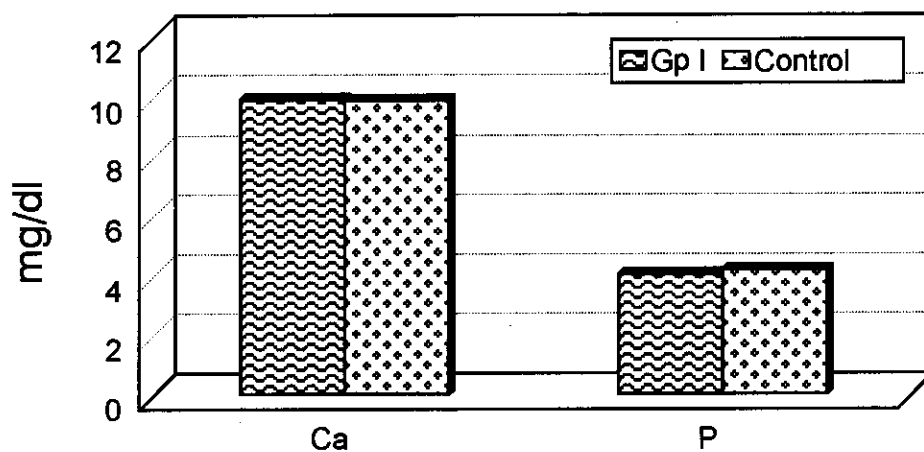
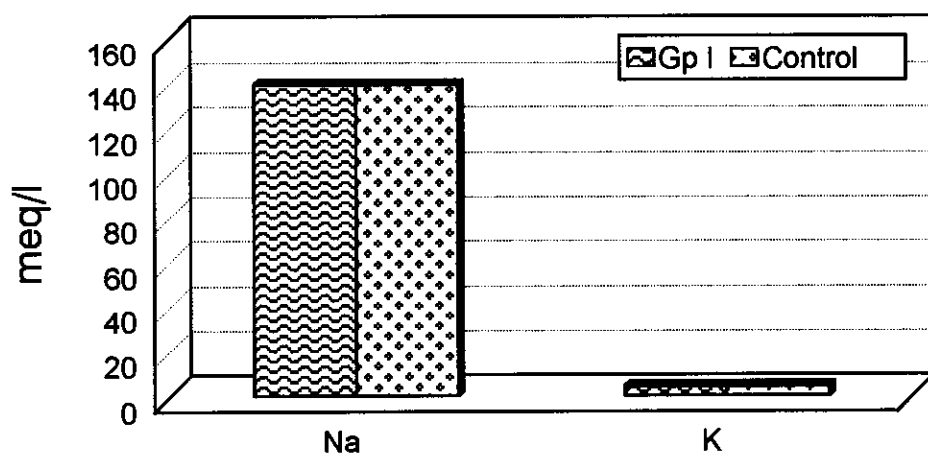
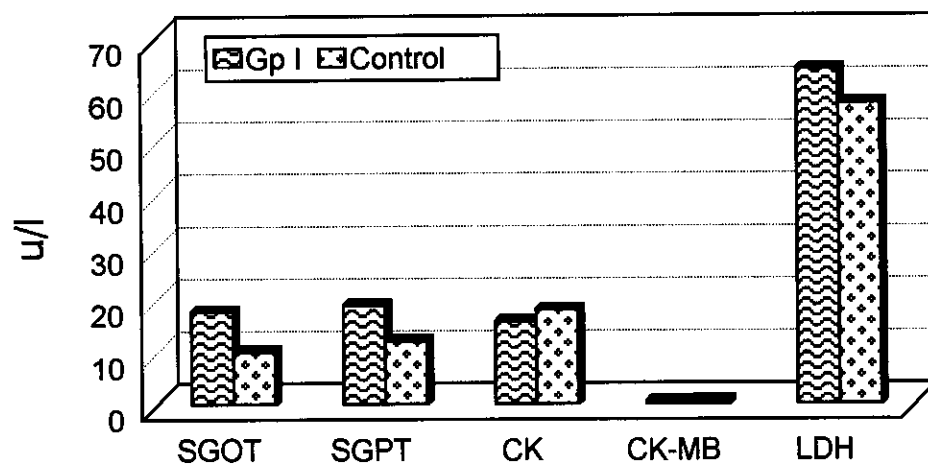


Fig. (1): Comparison of enzymatic and electrolytes changes between mild group & control.

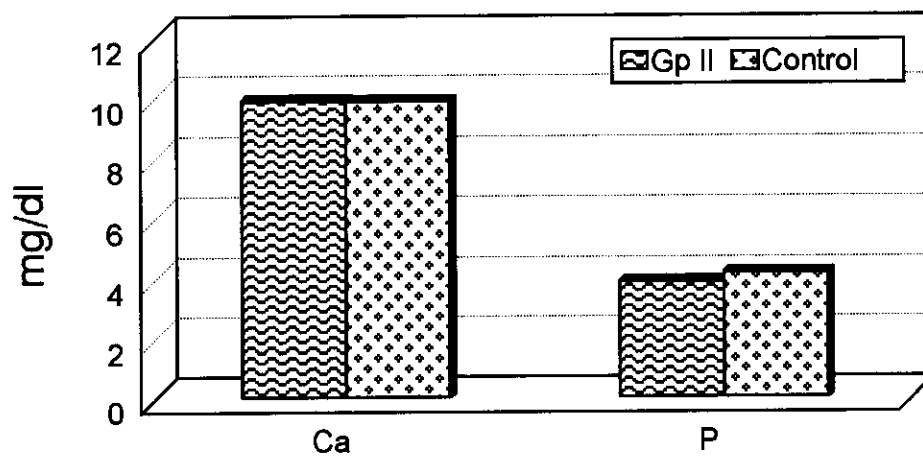
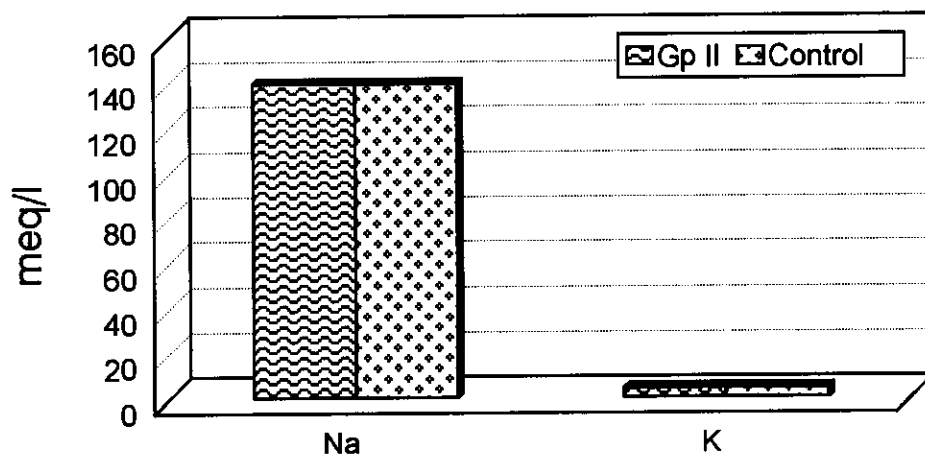
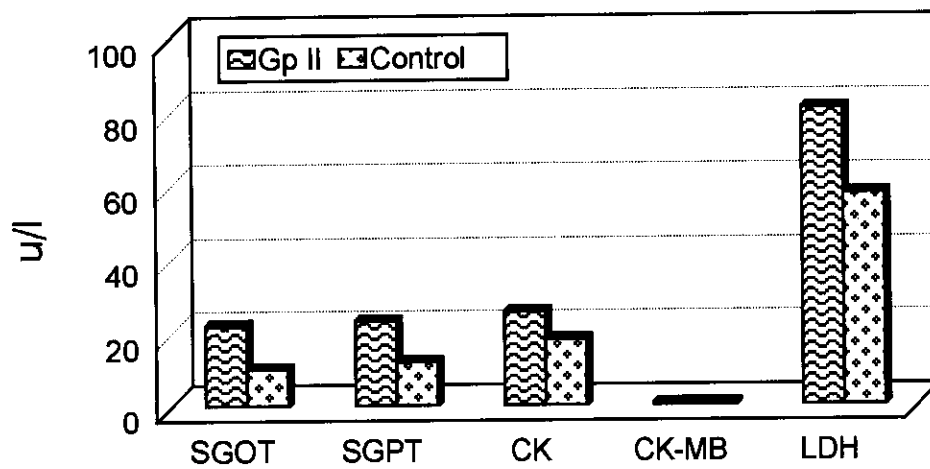


Fig. (2): Comparison of enzymatic and electrolytes changes between moderate group & control.

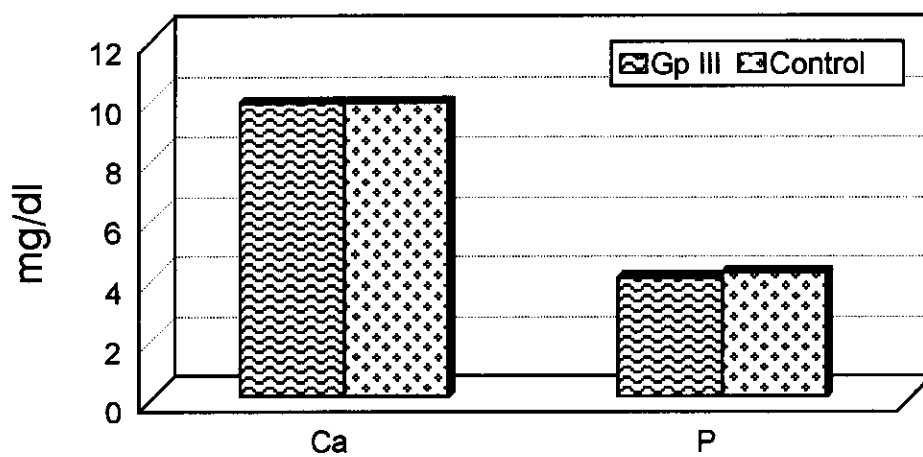
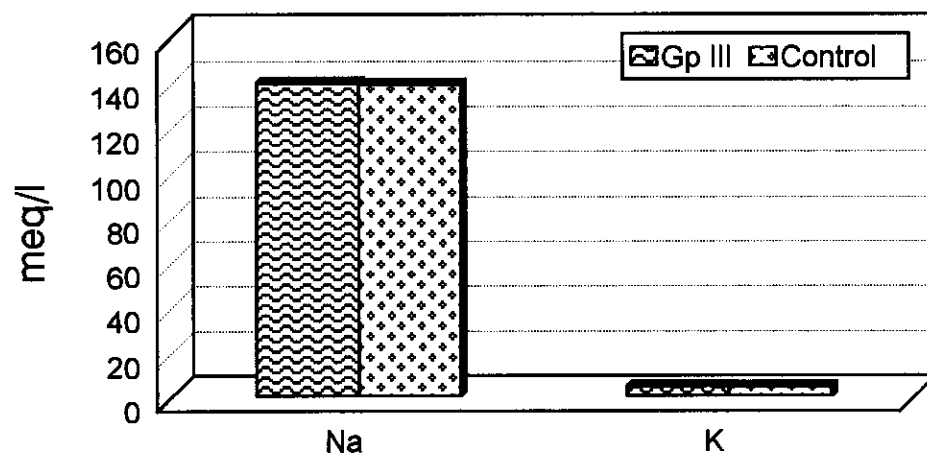
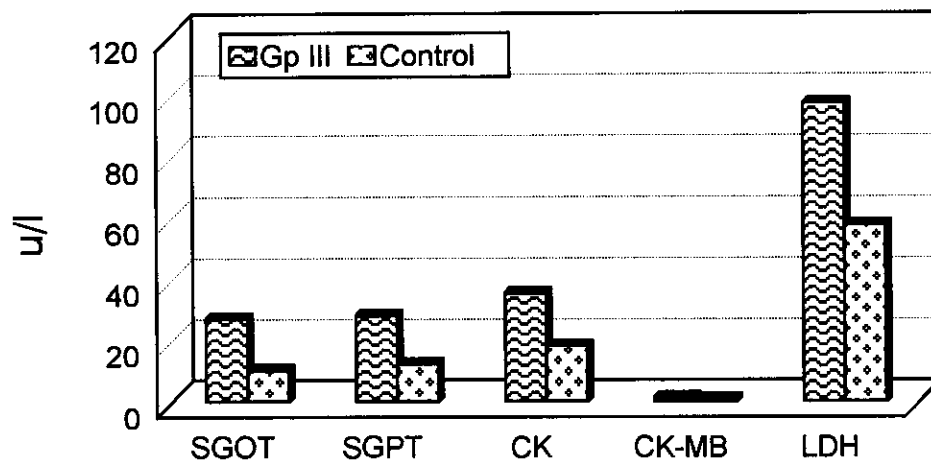


Fig. (3): Comparison of enzymatic and electrolytes changes between severe group & control.

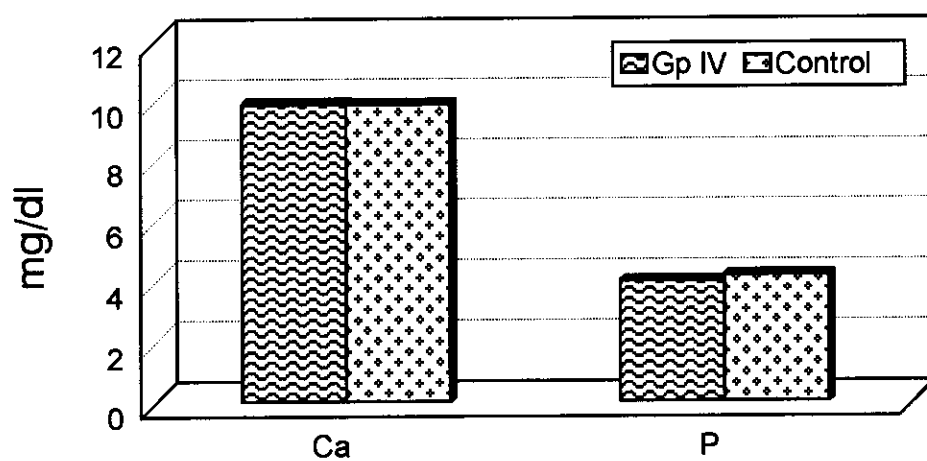
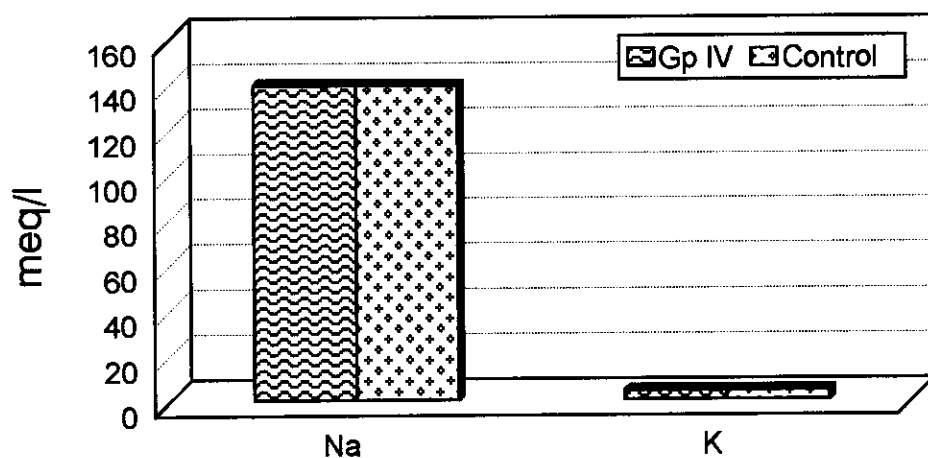
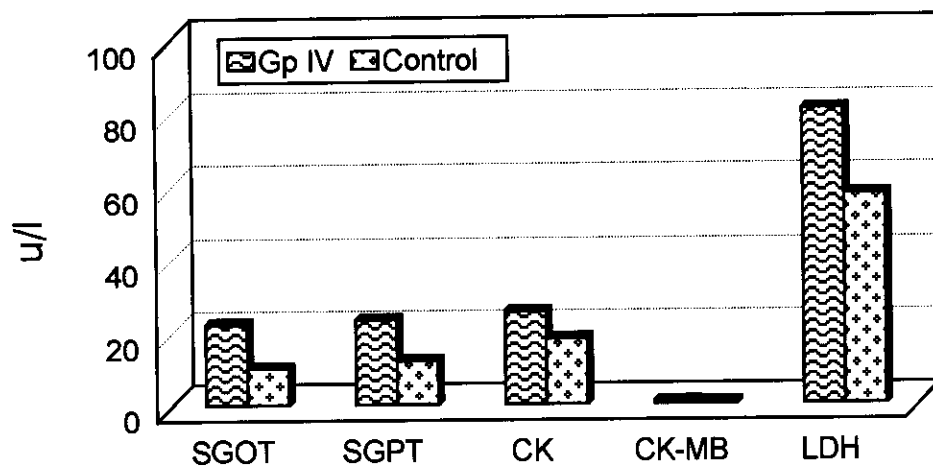


Fig. (4): Comparison of enzymatic and electrolytes changes between all cases & control.

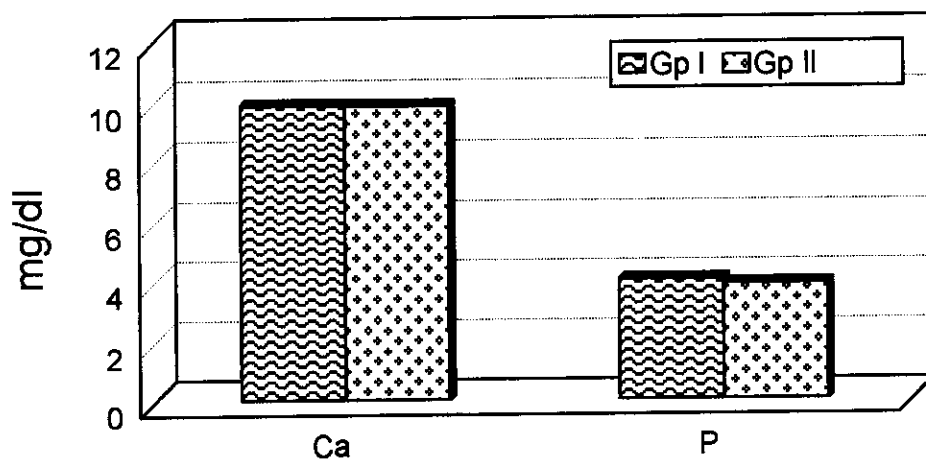
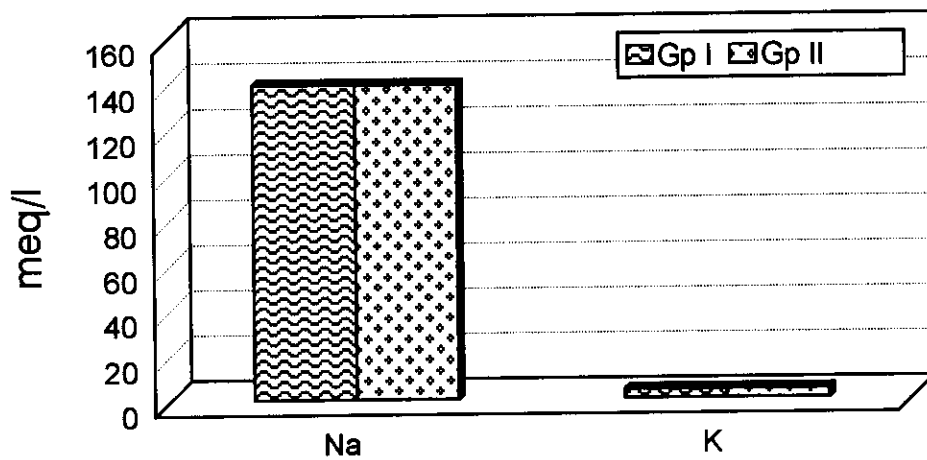
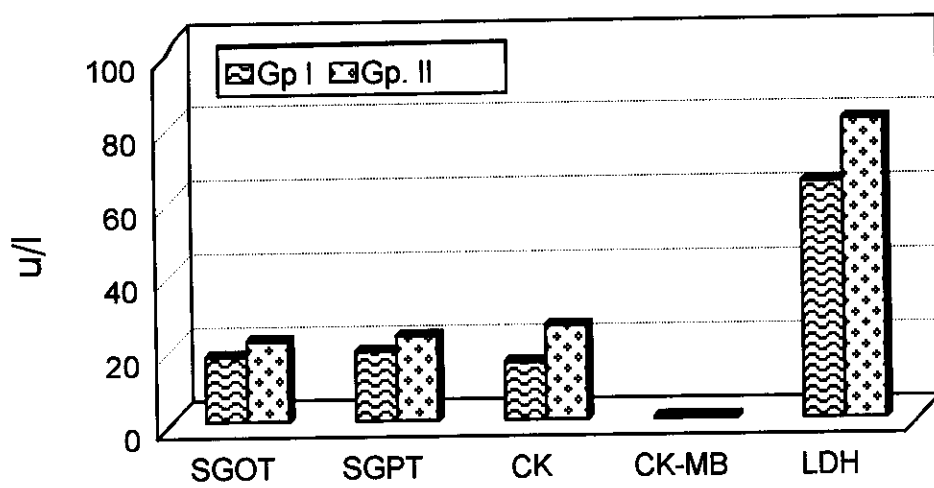


Fig. (5): Comparison of enzymatic and electrolytes changes between mild group moderate group.

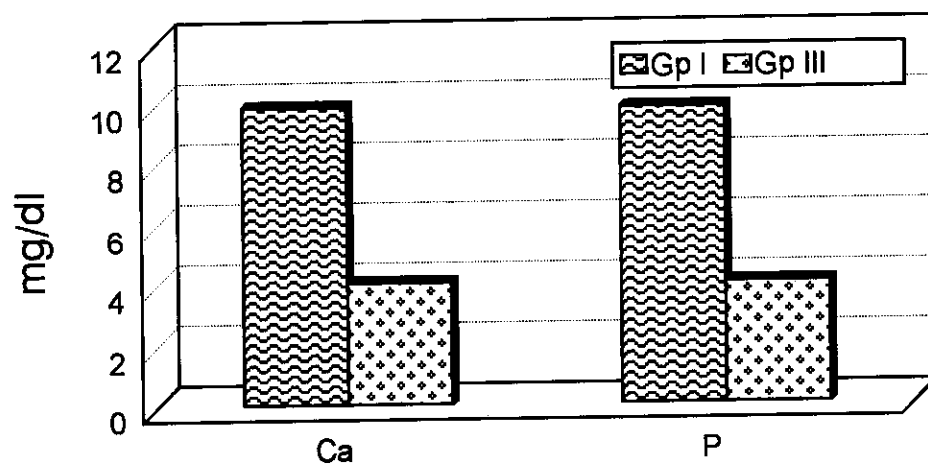
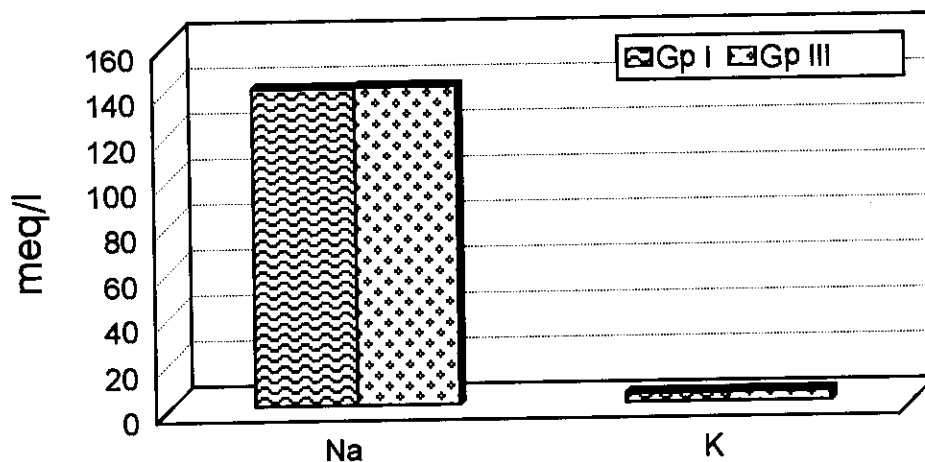
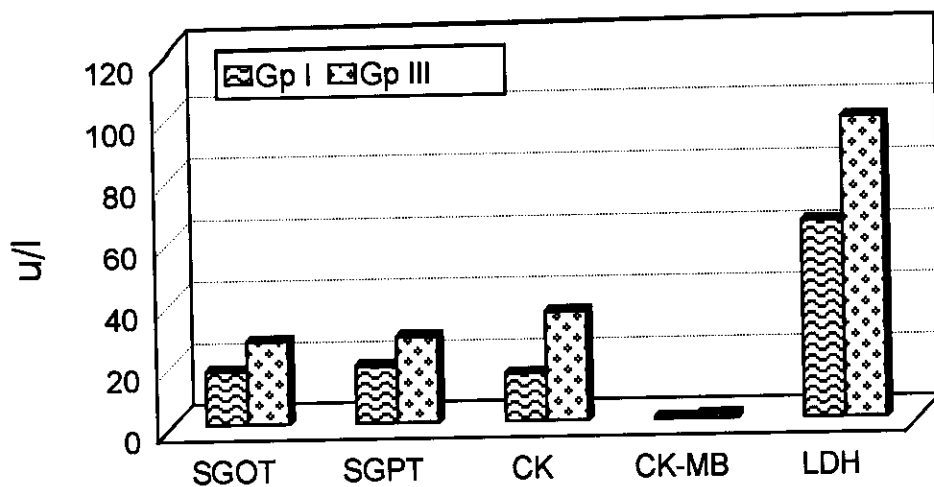


Fig. (6): Comparison of enzymatic and electrolytes changes between mild group and sever group.

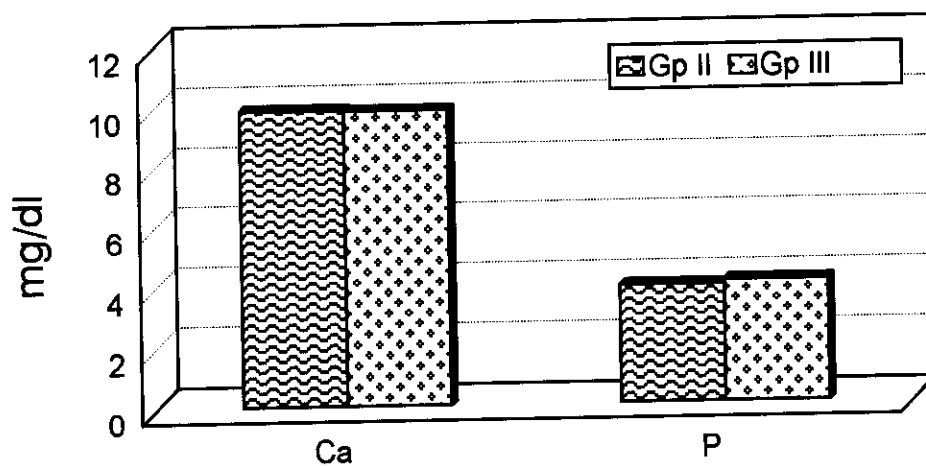
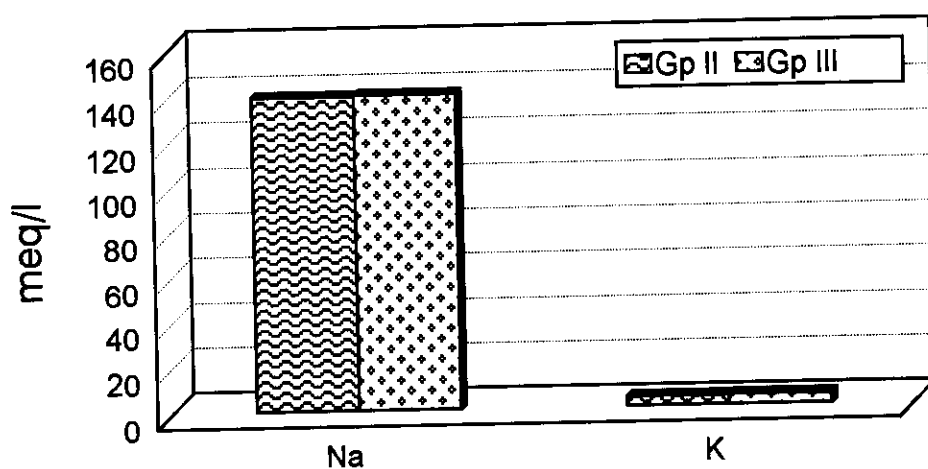
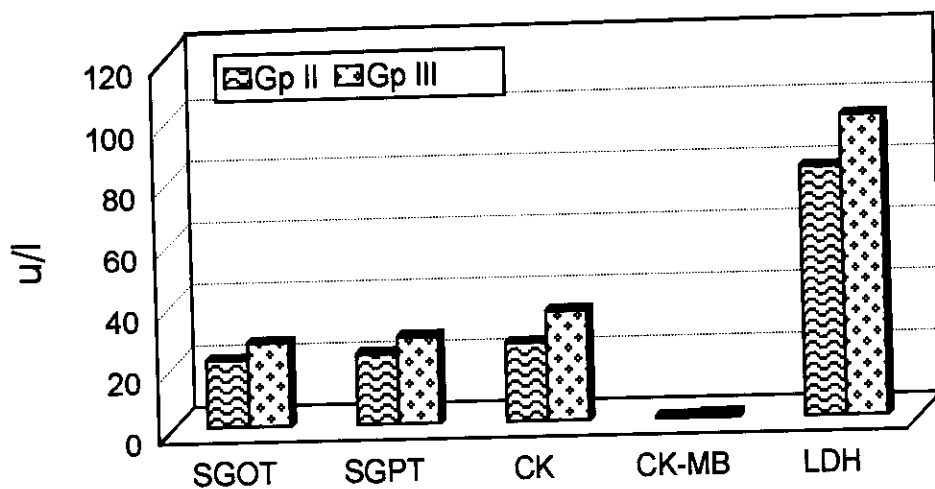


Fig. (7): Comparison of enzymatic and electrolytes changes between moderate group and sever group.