



# RESULTS

## RESULTS

### **Table (1) :**

Shows that CK- 24h. was greatly increased in gp. I ( $384.9 \pm 173.6$ ) Followed by gp. III ( $259.4 \pm 173.6$ ) and it is moderately increased in gp.II ( $167.1 \pm 6.9$ ) with statistically significant differences as compared with control group ( $P < 0.01$ ).

### **Table (2) :**

Shows that CK- 48h. was greatly increased in gp. I ( $588.1 \pm 314.5$ ) Followed by gp.III ( $488.9 \pm 314.9$ ) and it is moderately increased in gp. II ( $201.5 \pm 75.5$ ) with statistically significant differences as compared with control group ( $P < 0.01$ ).

### **Table (3) :**

Shows that CK-72h. was greatly increased in gp. I ( $339.9 \pm 193.2$ ) Followed by gp.III ( $285.8 \pm 139.8$ ) and it is moderately increased in gp. II ( $164.7 \pm 47.9$ ) with statistically significant differences as compared with control group ( $P < 0.01$ ).

### **Table (4) :**

Shows that AST-24h. was greatly increased in gp. I ( $106.6 \pm 41.6$ ) Followed by gp III ( $87.8 \pm 15.6$ ) and it is moderately increased in gp. II ( $23 \pm 7.7$ ) with statistically significant differences as compared with control group ( $P < 0.05$ ).

### **Table (5) :**

Shows that AST-48h. was greatly increased in gp. I ( $177.3 \pm 77.6$ ) Followed by gp. III ( $123.3 \pm 23.3$ ) and it is moderately increased in gp.

II ( $23.4 \pm 6.8$ ) with statistically significant differences as compared with control group ( $P < 0.05$ ).

**Table (6) :**

Shows that AST-72h. was greatly increased in gp. I ( $95.8 \pm 48.7$ ) Followed by gp. III ( $62.5 \pm 18.8$ ) and it is moderately increased in gp. II ( $23.5 \pm 7.9$ ) with statistically significant differences as compared with control group ( $P < 0.05$ ).

**Table (7) :**

Shows that LDH-24h. was greatly increased in gp. I ( $339.6 \pm 191.6$ ) Followed by gp. III ( $225.3 \pm 74.4$ ) and it is moderately increased in gp. II ( $102 \pm 37.1$ ) with statistically significant differences as compared with control group ( $P < 0.05$ ).

**Table (8) :**

Shows that LDH-48h. was greatly increased in gp. I ( $444.5 \pm 262.7$ ) Followed by gp. III ( $338.5 \pm 61$ ) and it is moderately increased in gp. II ( $107.1 \pm 35.2$ ) with statistically significant differences as compared with control group ( $P < 0.05$ ).

**Table (9) :**

Shows that LDH-72h. was greatly increased in gp. I ( $534.5 \pm 302$ ) Followed by gp. III ( $413.9 \pm 126.6$ ) and it is moderately increased in gp. II ( $110.5 \pm 27$ ) with statistically significant differences as compared with control group ( $P < 0.05$ ).

**Table (10) :**

Shows that CK/AST-24h. was greatly increased in gp. II ( $8 \pm 3.8$ ) Followed by gp. III ( $3.5 \pm 2.1$ ) and it is moderately increased in gp. I

( $3.4 \pm 1.4$ ) with statistically significant differences as compared with control group ( $P < 0.05$ ).

**Table (11) :**

Shows that CK/AST-48h. was greatly increased in gp. II ( $9.3 \pm 4.3$ ) Followed by gp. III ( $4 \pm 2.5$ ) and it is moderately increased in gp. I ( $3.3 \pm 1.1$ ) with statistically significant differences as compared with control group ( $P < 0.05$ ).

**Table (12) :**

Shows that CK/AST-72h. was greatly increased in gp. II ( $7.8 \pm 3.6$ ) Followed by gp. III ( $4.8 \pm 2.1$ ) and it is moderately increased in gp. I ( $3.6 \pm 1.2$ ) with statistically significant differences as compared with control group ( $P < 0.01$ ).

**Table (13) :**

Shows that CK was greatly increased in gp. I at 24, 48 and 72 hours ( $384.9 \pm 230.6$ ), ( $588.1 \pm 314.5$ ) and ( $339.9 \pm 193.2$ ) respectively. Followed by gp. III at 24, 48 and 72 hours ( $259.4 \pm 173.6$ ), ( $488.9 \pm 314.9$ ) and ( $285.8 \pm 139.8$ ) respectively and it is moderately increased in gp. II at 24, 48 and 72 hours ( $167.1 \pm 60.9$ ), ( $201.5 \pm 75.5$ ) and ( $164.7 \pm 47.9$ ) respectively. With statistically significant differences as compared with control group ( $P < 0.05$ ).

**Table (14) :**

Shows that AST was greatly increased in gp. I at 24, 48 and 72 hours ( $106.6 \pm 41.6$ ), ( $177.3 \pm 77.6$ ) and ( $95.8 \pm 48.7$ ) respectively, with statistically significant differences as compared with control group ( $P < 0.01$ ). Followed by gp. III at 24, 48 and 72 hours ( $87.8 \pm 15.4$ ), ( $123.3 \pm 23.3$ ) and ( $62.5 \pm 18.8$ ) respectively, with statistically significant

differences as compared with control group ( $P < 0.01$ ). and it is moderately increased in gp. II at 24, 48 and 72 hours ( $23 \pm 7.7$ ), ( $23.4 \pm 6.8$ ) and ( $23.5 \pm 7.9$ ) respectively with statistically insignificant differences.

**Table (15) :**

Shows that LDH was greatly increased in gp. I at 24, 48 and 72 hours ( $339.6 \pm 191.6$ ), ( $44.5 \pm 262.7$ ) and ( $534.5 \pm 302$ ) respectively, with statistically significant differences as compared with control group ( $P < 0.01$ ) Followed by gp. III at 24, 48 and 72 hours ( $225.3 \pm 74.4$ ), ( $338.5 \pm 61$ ) and ( $413.9 \pm 126.6$ ) respectively, with statistically significant differences as compared with control group ( $P < 0.05$ ) and it is moderately increased in gp. II at 24, 48 and 72 hours ( $102 \pm 37.1$ ), ( $107.1 \pm 35.2$ ) and ( $110.5 \pm 27$ ) respectively with statistically insignificant differences.

**Table (16) :**

Shows that CK/ AST was greatly increased in gp. II at 24, 48, and 72 hours ( $8 \pm 3.8$ ), ( $9.3 \pm 4.3$ ) and ( $7.8 \pm 3.6$ ) respectively with statistically significant differences as compared with control group ( $P < 0.05$ ). Followed by gp. III at 24, 48 and 72 hours ( $3.5 \pm 2.1$ ), ( $4 \pm 2.5$ ) and ( $4.8 \pm 2.1$ ) respectively with statistically significant differences as compared with control group ( $P < 0.05$ ) and it is moderately increased in gp. I at 24, 48 and 72 hours ( $3.4 \pm 1.4$ ), ( $3.3 \pm 1.1$ ) and ( $3.6 \pm 1.2$ ) respectively, with statistically insignificant differences.

**Table (17) :**

Shows a significant positive relationship between all the cardiac enzymes at 24, 48 and 72 hours ( $P < 0.05$ ) except the relation between CK/ AST- 48h. and CK- 24h. as well as CK- 48h.

**Table (18) :**

Shows a significant positive relationship between the cardiac enzymes at 24, 48 and 72 hours ( $P < 0.05$ ) except the relation between CK-/AST- 24h. and AST- 24h., AST- 48h. as well as AST 72h. and also, except the relation between CK/AST- 72h. and AST- 24h., AST- 48h. as well AST- 72h.

**Table (19):**

Shows insignificant relationship between CK/AST- 24h., CK/AST- 48h. and CK/AST- 72., and LDH- 24h., LDH- 48h. as well as LDH- 72h.

**Table (20) :**

Shows that (65%) of gp. I (AMI), (40%) of gp. II (Fallen) and (53.3%) of gp. III (AMI and Fallen) showed high CK levels during the first 24 hours. These percentages increased to (80%), (53.3%) and (66.7%) respectively at 48 hours, then decrease to (60%), (33.3%) and (53.3%) with statistically insignificant differences between the three groups ( $P > 0.05$ ).

**Table (21) :**

Shows that (60%) of gp. III and (30%) of gp. I had values of CK/AST at 24h. which are diagnostic for ischaemic heart disease with statistically significant differences ( $P < 0.05$ ). At 48h. the percentage of these cases decreased to (46.7%) among gp. III and 25%) among gp. I

with statistically significant differences between gp. I, gp. II and gp. III.  
another decrease of the percentage of these cases was obtained at 72h.  
(20% and 10% respectively) with the only significant differences  
between gp. II and gp. III.

**Table (1) :**

*Comparison Between the Studied  
Groups Regarding CK at 24 hours*

St.gp.	CK-24h.	$\bar{x}$	$\pm$ S.D.	Test of signif. * Controls	
				T	P
I- (AMI) (n = 20)		384.9	$\pm$ 230.6	6.385	< 0.01
II- (Fallen) (n = 15)		167.1	$\pm$ 60.9	8.136	< 0.01
III- (AMI and Fallen) (n = 15)		259.4	$\pm$ 173.6	5.274	< 0.01
Controls (n = 20) :		55.4	$\pm$ 8.5	-	-



**Table (2) :**

***Comparison Between the Studied  
Groups Regarding CK at 48 hours***

St.gp.	CK-48 h.	$\bar{X}$	$\pm$ S.D.	Test of signif. * Controls	
				T	P
I- (AMI) (n = 20)		588.1	$\pm$ 314.5	7.572	< 0.01
II- (Fallen) (n = 15)		201.5	$\pm$ 57.5	8.620	< 0.01
III- (AMI and Fallen) (n = 15)		488.9	$\pm$ 314.9	6.185	< 0.01
Controls (n = 20) :		55.4	$\pm$ 8.5	-	-

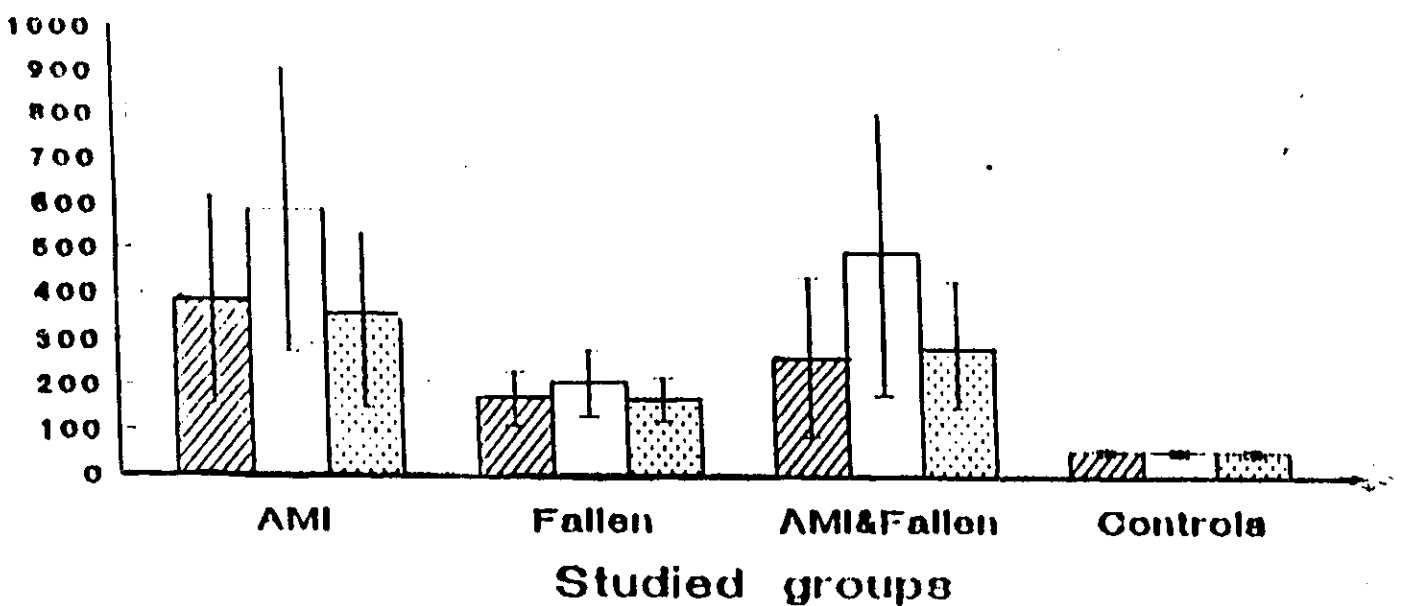
**Table (3) :**

*Comparison Between the Studied Groups  
Regarding CK at 72 hours*

St.gp.	CK-72h	$\bar{x}$	$\pm$ S.D.	Test of signif. * Controls	
				T	P
I- (AMI) (n = 20)		339.9	$\pm$ 193.2	6.577	< 0.01
II- (Fallen) (n = 15)		164.7	$\pm$ 47.9	10.034	< 0.01
III- (AMI and Fallen) (n = 15)		285.8	$\pm$ 139.8	7.388	< 0.01
Controls (n = 20) :		55.4	$\pm$ 8.5	-	-

**Fig.(1):Comparison between the studied groups regarding CK at different times.**

▨ At 24 hr.    □ At 48 hr.    ▤ At 72 hr.



**Table (4) :**

***Comparison Between the Studied Groups  
Regarding AST at 24 hours***

St.gp.	AST-24h.	$\bar{x}$	$\pm$ S.D.	Test of signif. * Controls	
				T	P
I- (AMI) (n = 20)		106.6	$\pm$ 41.6	8.285	< 0.01
II- (Fallen) (n = 15)		23	$\pm$ 7.7	3.114	< 0.05
III- (AMI and Fallen) (n = 15)		87.8	$\pm$ 15.4	16.474	< 0.001
Controls (n = 20) :		29.2	$\pm$ 3.8	-	-

**Table (5) :**

***Comparison Between the Studied Groups  
Regarding AST at 48 hours***

St.gp.	AST-48h.	$\bar{x}$	$\pm$ S.D.	Test of signif. * Controls	
				T	P
I- (AMI) (n = 20)		177.3	$\pm$ 77.6	8.827	< 0.01
II- (Fallen) (n = 15)		23.4	$\pm$ 6.8	3.208	< 0.05
III- (AMI and Fallen) (n = 15)		123.3	$\pm$ 23.3	17.703	< 0.001
Controls (n = 20) :		29.2	$\pm$ 3.8	-	-

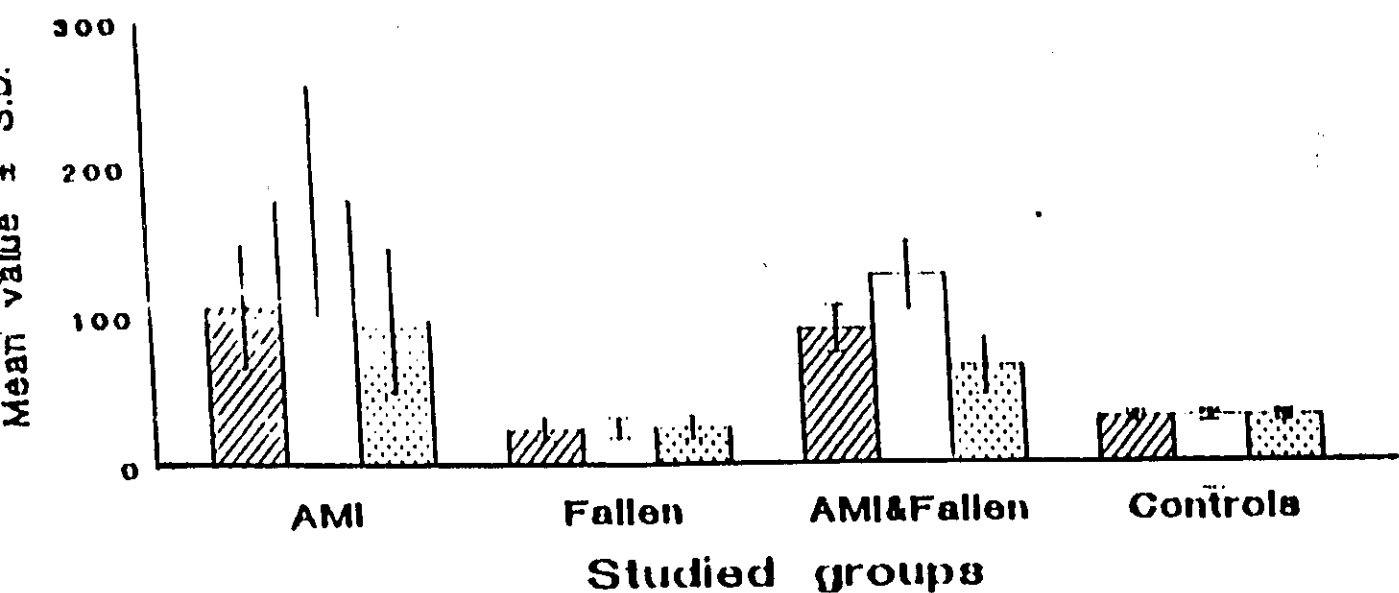
**Table (6) :**

*Comparison Between The Studied Groups  
REgarding AST at 72 hours*

St.gp.	AST-72h.	$\bar{x}$	$\pm$ S.D.	Test of signif. * Controls	
				T	P
I- (AMI) (n = 20)		95.8	$\pm$ 48.7	6.102	< 0.01
II- (Fallen) (n = 15)		23.5	$\pm$ 7.9	2.825	< 0.05
III- (AMI and Fallen) (n = 15)		62.5	$\pm$ 18.8	7.730	< 0.01
Controls (n = 20) :		29.2	$\pm$ 3.8	-	-

**Fig.(2):Comparison between the studied groups regarding AST at different times.**

 At 24 hr.    
  At 48 hr.    
  At 72 hr.



**Table (7) :**

***Comparison Between the studied Groups  
Regarding LDH at 24 hours***

St.gp.	LDH-24h.	$\bar{x}$	$\pm$ S.D.	Test of signif. * Controls	
				T	P
I- (AMI) (n = 20)		339.6	$\pm$ 191.6	4.702	< 0.01
II- (Fallen) (n = 15)		102	$\pm$ 37.1	2.506	< 0.05
III- (AMI and Fallen) (n = 15)		225.3	$\pm$ 74.4	4.729	< 0.01
Controls (n = 20) :		134.2	$\pm$ 38	-	-



**Table (8) :**

***Comparison Between the Studied Groups  
Regarding LDH at 48 hours***

St.gp.	LDH-48h.	$\bar{x}$	$\pm$ S.D.	Test of signif. * Controls	
				T	P
I- (AMI) (n = 20)		444.5	$\pm 262.7$	5.228	< 0.01
II- (Fallen) (n = 15)		107.1	$\pm 35.2$	2.156	< 0.05
III- (AMI and Fallen) (n = 15)		338.5	$\pm 61$	12.177	< 0.01
Controls (n = 20) :		134.2	$\pm 38$	-	-

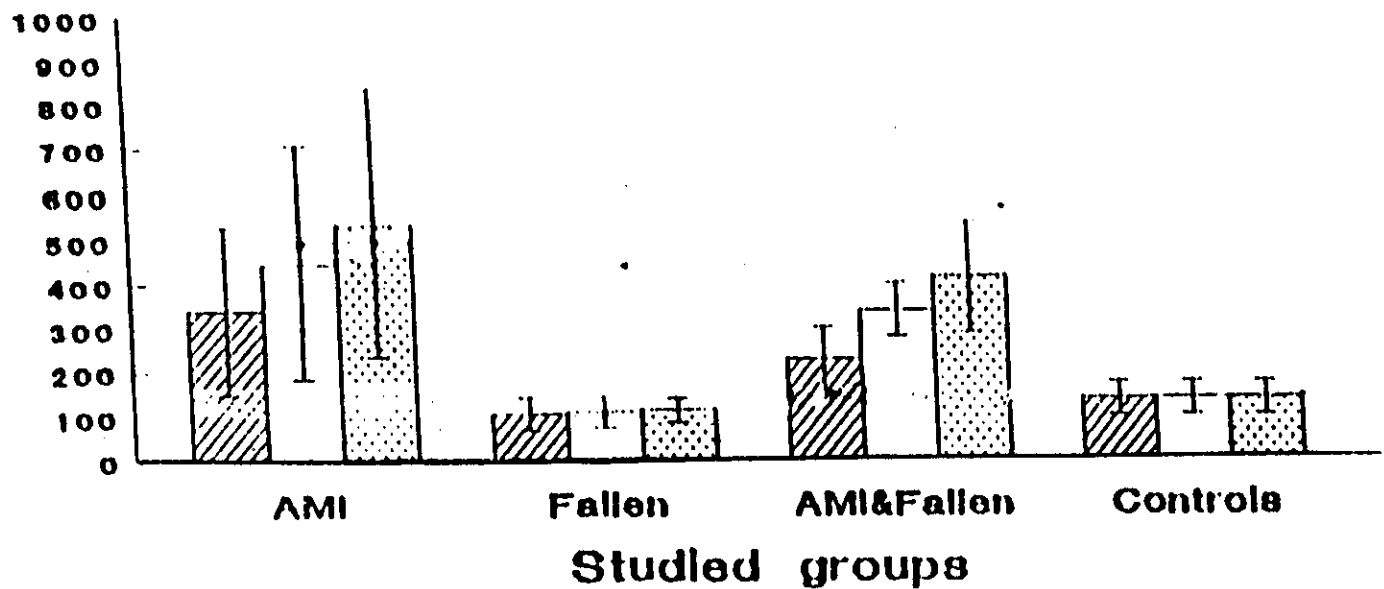
**Table (9) :**

***Comparison Between the Studied Groups  
Regarding LDH at 72 hours***

St. gp.	LDH-72h.	$\bar{x}$	$\pm$ S.D.	Test of signif. * Controls	
				T	P
I- (AMI) (n = 20)		534.5	$\pm$ 302	5.878	< 0.01
II- (Fallen) (n = 15)		110.5	$\pm$ 27	2.055	< 0.05
III- (AMI and Fallen) (n = 15)		413.9	$\pm$ 126.6	9.372	< 0.01
Controls (n = 20) :		134.2	$\pm$ 38	-	-

**Fig.(3):Comparison between the studied groups regarding LDH at different times.**

**At 24 hr.      At 48 hr.      At 72 hr.**



**Table (10) :**

*Comparison Between the Studied Groups  
Regarding CK/AST at 24 hours*

St.gp.	CK/AST-24h.	$\bar{x}$	$\pm$ S.D.	Test of signif. * Controls	
				T	P
I- (AMI) (n = 20)		3.4	$\pm 1.4$	4.770	< 0.01
II- (Fallen) (n = 15)		8	$\pm 3.8$	7.240	< 0.01
III- (AMI and Fallen) (n = 15)		3.5	$\pm 2.1$	3.345	< 0.05
Controls (n = 20) :		1.9	$\pm 0.3$	-	-

**Table (11) :**

***Comparison Between the Studied Groups  
Regarding CK/AST at 48 hours***

St.gp.	CK/AST-48h.	$\bar{x}$	$\pm$ S.D.	Test of signif. * Controls	
				T	P
I- (AMI) (n = 20)		3.3	$\pm$ 1.1	4.175	< 0.01
II- (Fallen) (n = 15)		9.3	$\pm$ 4.3	7.434	< 0.01
III- (AMI and Fallen) (n = 15)		4	$\pm$ 2.5	3.429	< 0.05
Controls (n = 20) :		2	$\pm$ 0.7	-	-

**Table (12) :**

*Comparison Between the Studied Groups  
Regarding CK/AST at 72 hours*

St. gp.	CK/AST-72h.	$\bar{x}$	$\pm$ S.D.	Test of signif. * Controls	
				T	P
I- (AMI) (n = 20)		3.6	$\pm 1.2$	5.114	$< 0.01$
II- (Fallen) (n = 15)		7.8	$\pm 3.6$	6.916	$< 0.01$
III- (AMI and Fallen) (n = 15)		4.8	$\pm 2.1$	5.474	$< 0.01$
Controls (n = 20) :		2	$\pm 0.7$	-	-

Table (13) :

*Comparison Between the Results of CK at Different  
Periods (or Occasions) Among the Studied Groups*

Results	CK-24 h.	CK-48 h.	CK-72 h.	Test of Significance		
	$\bar{x} \pm S.D.$	$\bar{x} \pm S.D.$	$\bar{x} \pm S.D.$	Between	Pairedt	P
Gp. I (AMI) :	384.9 $\pm$ 230.6	588.1 $\pm$ 314.5	339.9 $\pm$ 193.2	1*2	7.325	< 0.01
				1*3	2.588	< 0.05
				2*3	7.292	< 0.01
Gp. II (Fallen) :	167.1 $\pm$ 60.9	201.5 $\pm$ 75.5	164.7 $\pm$ 47.9	1*2	7.56	< 0.01
				1*3	0.302	> 0.05
				2*3	3.778	> 0.05
Gp. III (AMI and Fallen):	259.4 $\pm$ 173.6	488.9 $\pm$ 314.9	285.8 $\pm$ 139.8	1*2	3.403	< 0.05
				1*3	0.807	> 0.05
				2*3	4.136	< 0.01

Table (14) :

*Comparison Between the Results of AST at Different Periods  
(or Occasions) Among the Studied Groups*

Results	AST-24h.	AST-48h.	AST-72h.	Test of Significance		
	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	Between	Paired t	P
Gp. I (AMI) :	106.6±41.6	177.3±77.6	95.8±48.7	1*2	5.683	< 0.01
				1*3	1.560	> 0.05
				2*3	8.200	< 0.01
Gp. II (Fallen) :	23±7.7	23.4±6.8	23.5±7.9	1*2	0.462	> 0.05
				1*3	0.739	> 0.05
				2*3	0.093	> 0.05
Gp. III (AMI and Fallen):	87.8±15.4	123.3±23.3	62.5±18.8	1*2	9.662	< 0.01
				1*3	5.664	< 0.01
				2*3	9.682	< 0.08



**Table (15) :**

*Comparison Between the Results of LDH at Different  
Periods (or Occasions) Among the Studied Groups*

Results	LDH-24h.	LDH-48h.	LDH-72h.	Test of Significance		
	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	Between	Paired t	P
<b>Gp. I</b> <b>(AMI) :</b>	339.6±191.6	444.5±262.7	534.5±302	1*2	4.667	< 0.01
				1*3	5.473	< 0.01
				2*3	5.063	< 0.01
<b>Gp. II</b> <b>(Fallen) :</b>	102±37.1	107.1±35.2	110.5±27	1*2	0.451	> 0.05
				1*3	0.834	> 0.05
				2*3	0.829	> 0.05
<b>Gp. III</b> <b>(AMI and Fallen):</b>	225.3±74.4	338.5±61	413.9±126.6	1*2	4.875	< 0.01
				1*3	5.067	< 0.01
				2*3	3.204	< 0.05

**Table (16) :**

*Comparison Between the Results of CK/AST at Different  
Periods (or Occasions) Among the Studied Groups*

Results	CK/AST-24 h.	CK/AST-48 h.	CK/AST-72 h.	Test of Significance		
	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	$\bar{X} \pm S.D.$	Between	Pairedt	P
<b>Gp. I</b> <b>(AMI) :</b>	3.4±1.4	3.3±1.1	3.6±1.2	1*2	0.696	> 0.05
				1*3	0.931	> 0.05
				2*3	2.129	< 0.05
<b>Gp. II</b> <b>(Fallen) :</b>	8±3.8	9.3±4.3	7.8±3.6	1*2	3.465	< 0.05
				1*3	0.442	> 0.05
				2*3	2.905	< 0.05
<b>Gp. III</b> <b>(AMI and Fallen):</b>	3.5±2.1	4±2.5	4.8±2.1	1*2	1.338	> 0.05
				1*3	2.884	< 0.05
				2*3	2.829	< 0.05

**Table (17) :**

*Correlation Coefficients (r) & Probability Value of the Variables Related to CK Among the Studied Groups*

Variables	CK- 24 h.		CK-48 h.		CK- 72 h.	
	r	p	r	p	r	p
AST-24	0.767	< 0.01	0.780	< 0.01	0.796	< 0.01
AST- 48	0.740	< 0.01	0.764	< 0.01	0.748	< 0.01
AST-72	0.739	< 0.01	0.702	< 0.01	0.772	< 0.01
LDH- 24	0.621	< 0.01	0.551	< 0.05	0.582	< 0.05
LDH-48	0.628	< 0.01	0.587	< 0.05	0.593	< 0.05
LDH-72	0.611	< 0.01	0.576	< 0.05	0.572	< 0.05
CK/AST-24	0.280	< 0.05	0.248	< 0.05	0.281	< 0.05
CK/AST-48	0.177	> 0.05	0.199	> 0.05	0.217	< 0.05
CK/AST-72	0.243	< 0.05	0.284	< 0.05	0.303	< 0.05

**Table (18) :**

*Correlation COefficients (r) & Probability Value of the  
Varrables Related to AST Among the Studied Groups*

Variables	AST- 24 h.		AST-48 h.		AST- 72 h.	
	r	p	r	p	r	p
LDH- 24	0.789	< 0.01	0.671	< 0.01	0.671	< 0.01
LDH-48	0.846	< 0.01	0.745	< 0.01	0.682	< 0.01
LDH-72	0.851	< 0.01	0.757	< 0.01	0.677	< 0.01
CK/AST-24	0.184	≥ 0.05	0.137	≥ 0.05	0.146	≥ 0.05
CK/AST-48	0.235	< 0.05	0.241	< 0.05	0.241	< 0.05
CK/AST-72	0.129	≥ 0.05	0.134	≥ 0.05	0.209	≥ 0.05

**Table (19) :**

*Correlation Coefficient (r) & Probability Value of the Variables Related to LDH Among the Studied Groups*

Variables	LDH- 24 h.		LDH-48 h.		LDH- 72 h.	
	r	p	r	p	r	p
CK/AST-24	0.136	> 0.05	0.152	> 0.05	0.163	> 0.05
CK/AST-48	0.175	> 0.05	0.198	> 0.05	0.209	> 0.05
CK/AST-72	0.112	> 0.05	0.103	> 0.05	0.109	> 0.05

Table (20) :

*Distribution of Cases with High CK Among the Studied Groups*

CK St. Gp.	Highl	24 Hrs.						48 Hrs.						72 Hr.					
		No.	%	Test of Proportion			No.	%	Test of Proportion			No.	%	Test of Proportion					
				Gps.	Z	P			Gps.	Z	P			Gps.	Z	P			
I-AMI (n = 20)	13	65.0	I * II	1.469	> 0.05	16	80.0	I * II	1.682	> 0.05	12	60.0	I * II	1.562	> 0.05				
II- Fallen (n = 15)	6	40.0	II * III	0.732	> 0.05	8	53.3	II * III	0.745	> 0.05	5	33.3	II * III	1.105	> 0.05				
III-AMI & Fallen (n = 15)	8	53.3	I * III	0.697	> 0.05	10	66.7	I * III	0.893	> 0.05	8	53.3	I * III	0.364	> 0.05				

Table (21) :

*Distribution of Cases with CK/AST Values Diagnostic for AMI (< 2.62)  
Among the Studied Groups*

CK St. Gp.	High						24 Hrs.						48 Hrs.						72 Hr.					
	No.	%	Test of Proportion			No.	%	Test of Proportion			No.	%	Test of Proportion			No.	%	Test of Proportion						
			Gps.	Z	P			Gps.	Z	P			Gps.	Z	P									
I-AMI (n = 20)	6	30.0	I * II	2.330	< 0.05	5	25.0	I * II	2.092	< 0.05	2	10.0	I * II	1.261	> 0.05									
II- Fallen (n = 15)	0	0.0	II * III	3.586	< 0.05	0	0.0	II * III	3.022	< 0.05	0	0.0	II * III	1.826	< 0.05									
III- AMI & Fallen (n = 15)	9	60.0	I * III	1.775	< 0.05	7	45.7	I * III	1.336	> 0.05	3	20.0	I * III	0.837	> 0.05									