Results

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This study was conducted on 80 patients who were admitted to coronary care unit with acute myocardial infarction then these patients were subdivided into two groups according to **IDF** definition of cardio metabolic risk into:

-Group 1 :

Including 40 non diabetic patients had AMI and without cardio-metabolic risk.

- Group 2:

Including 40 non diabetic patients had AMI and cardio -metabolic risk.

A) Description and comparison between the two groups:

1)Age and sex:

Grouping		Group 1		Group 2		p-value	
Age		52.58+/-7.493		52.18+/-8.720		0.875	NS
Sex		%	N	%	N		
	Male	95%	38	90.0%	36	0.675	NS
	Female	5%	2	10.0%	4	0.675	NS

Group 1 included 38 males and 2 females with mean age 52.58+/-7.493 years while group 2 included 36 males and 4 females with mean age 52.18+/-8.720 years.

There is no statically significant difference between this two groups as regard age and sex distribution (P>0.05).

2) Comparison between the two groups according to risk factors:

Risk factors	Group 1		Group 2		p-value	
W.circ	91.35+/-2.964		121.25+/-10.352		0.001	S
I.Resist	2.5%	1	15%	6	0.018	S
HTN	22.5%	9	97.5%	39	0.001	S
Dyslipidemia	30%	12	92.5%	37	0.001	S

Group 1 included 40 patients without CMR their mean waist circumference was 91.35+/-2.964, 1(2.5%) patient had insulin resistance, 9 (22.5%) patients had hypertension and 12(30%) patients had dyslipidemia while group 2 included 40 patients with CMR their mean waist circumference was 121.25+/-10.352 , 6 (15%) patients had insulin resistance, 39 (97.5%) patients had hypertension and 37 (92.5%) patients had dyslipidemia .

There was statically significant difference between the two groups with high significance to group 2 as regard waist circumference, hypertension, insulin resistance and dyslipidaemia (p-value <0.05).

3) Comparison between group 1 and group 2 according to ECG finding :

		Group 1		Group 2		p-value	
		%	N	%	N		
MI Type	anterior	35%	14	45%	18	0.628	NS
	inferior	32.5%	13	30%	12	0.628	NS
	NSTEMI	32.5%	13	25%	10	0.628	NS
ST elevation		47.4%	27	52.6%	30	0.459	NS
ST depression		44.3%	31	55.7%	39	0.014	S

Group 1 included 14 (35%) patients with anterior STEMI ,13 (32.5%) patients with inferior STEMI and 13(32.5%) patients with NSTEMI, while group 2 included 18 (45%) patients with anterior STEMI,12 (30%)

patients with inferior STEMI and 10 (25%) patients with NSTEMI , also according to ECG finding group 1 included 27 (47.4%) patients whose their ECG showed ST elevation and 31(44.3%) patients had ST depression while group 2 included 30 (52.6%) patients their ECG showed ST elevation and 39 (55.7%) patients had ST depression .

There was no statically significant difference between the two groups as regard MI type and ST elevation (P>0.05) but there was statically significant difference especially to group 2 as regard ST depression (P<0.05) .

4) Comparison between group 1 and group 2 according to laboratory finding :

	Group 1	Group 2	P-value	
CPK	989.15+/-339.755	1663.73+/-779.407	0.001	S
CK-MB	97.38+/-31.018	166.35+/-67.661	0.001	S
TG	212.68+/-52.108	314.83+/-111.157	0.001	S
HDL	39.45+/-5.724	35.38+/-8.044	0.117	NS

Group 1 included 40 patients without CMR their mean CPK was 989.15+/-339.755, their mean CK-MB was 97.38+/-31.018 , their mean TG level was 212.68+/-52.108 and their mean HDL level was 39.45+/-5.724 while group 2 included 40 patients with CMR their mean CPK 1663.73+/- was 779.407, their mean CK-MB was 166.35+/-67.661,\their mean TG level was 314.83+/-111.157 and their mean HDL level was 35.38+/-8.04.

There was statically highly significant difference between the two groups with high significance to group 2 as regard value of CPK, CK-MB, TG (p-value<0.05) but there was no statically significant difference between the two groups as regard HDL (p-value>0.05).

5) Comparison between group 1 and group 2 as regard the infarction size :

	Group 1	Group 2	P-value
Ejection fraction	40.05+/-7.716	31.15+/-3.646	0.016 S
CK-MB	97.38+/-31.018	166.35+/-67.661	0.001 S

Group 1 included 40 patients without CMR; their mean ejection fraction value was 40.05+/-7.716 and their mean CK-MB was 97.38+/-31.018 while group 2 included 40 patients with CMR; their mean ejection fraction value was 31.15+/-3.646 and their mean CK-MB was 166.35+/-67.661.

There was statically significant difference between the two groups with high significance to group 2 as regard decreased value of ejection fraction and increased mean CK-MB for that increased infarction size in group 2 (p-value<0.05).

6) Comparison between the two groups according to short term in hospital complication :

complication	Group 1	Group 2	p-value
Chest pain	40(100%)	40 (100%)	>0.05 NS
Arrhythmia	0 (0%)	5 (12.5%)	<0.05 S
H. Failure	8 (20.0%)	23 (57.5%)	0.001 S
Re .infarction	0 (0%)	0 (0%)	>0.05 NS
Death	0 (0%)	0 (0%)	>0.05 NS

Group 1 included 40 (100%) patients complicated with chest pain, 8 (20%) patients complicated with heart failure and no patient complicated with arrhythmia, re-infarction or death while group 2 showed 40 (100%) patients complicated with chest pain, 5 (12.5%) patients complicated with arrhythmia, 23 (57.5%) patients complicated with heart failure and no patient complicated with re-infarction or death. `

There was statically significant difference between the two groups with high significance to group 2 as regard heart failure and arrhythmia (p-value<0.05) but there was no statically significant difference between the two groups as regard chest pain, re-infarction and death (p-value>0.05) .

7) Comparison between group 1 and group 2 according to the result of their angiographic data :

		Group 1		Group 2		p-value	
Type of Lesion	A	85%	34	55%	22	0.003	S
	B	15%	6	25%	10	0.003	S
	C	0%	0	20%	8	0.003	S
TIMI Flow	0	0%	0	15%	6	0.001	S
	1	10%	4	42.5%	17	0.001	S
	2	37.5%	15	35%	14	>0.05	NS
	3	52.5%	21	7.5%	3	0.001	S
Presence of thrombus		35%	14	77.5%	31	0.001	S
presence of collateral		0%	0	77.5%	31	0.001	S
% Stenosis		78.22+/-18.31		89.10+/-8.921		0.002	S
No. Of Vessels affected		1.63+/-2.00		2.18+/-2.00		0.001	S

According to ACC/AHA classification about type of lesion group 1 showed that 34 (85%) patients had type A, 6 (15%) patients had type B and no patients had type C, but on the other side group 2 showed that 22

(55%) patients had type A, 10 (25%) patients had type B and 8 (20%) patients had type C .

According to the Thrombolysis in Myocardial Infarction (TIMI) group 1 showed that 21(52.5%) patients had grade 3, 15 (37.5%) patients had grade 2, 4 (10%) patients had grade 1 and no patients had grade 0 while group 2 included 3 (7.5%) patients had grade 3, 14 (35%) patients had grade 2, 17 (42.5%) patients had grade 1 and 6 (15%) patients had grade 0 .

Group 1 included 14 (35%) patients their coronary angiography showed presence of thrombus and no patients show presence of collateral on the other hand Group 2 included 31(77.5%) patients their coronary angiography showed presence of thrombus and 31 (77.5%) patients their coronary angiography show presence of collateral .

Also group 1 included 40 patients without CMR whose their agiographic data showed that their mean percentage of stenosis was 78.22+/-18.317 % and their mean number of vessels affected was 1.63+/-2.00 while group 2 included 40 patients with CMR their mean percentage of stenosis was 89.10+/-8.921% and their mean number of vessels affected was 2.18+/-2.00.

There was statically significant difference between the two groups with high significance to group 2 as regard presence of the worst type of lesion (type C), presence of grade 0 and 1 TIMI flow, presence of thrombus and collateral also increased percentage of stenosis and number of vessels affected (p-value<0.05) while group 1 showed that type A lesion was the most predominant type of lesion this in association with presence of grade 3 TIMI flow (p-value<0.05).

8) Comparison between the two groups according to type of management:

Result	Group 1		Group 2		p-value
Stent	100%	40	65%	26	>0.05 NS
CABG	0%	0	35%	14	0.001 S

Group 1 included 40 patients all had stent implantation and no patient referred to CABG while group 2 included 26(65%) patients who had stent implantation and 14(35%) patients who were referred to CABG but no patient referred to medical treatment in both groups.

There was statically significant difference between the two groups with high significance to group 2 as regard referral to CABG (p-value<0.05).

9) Comparison between the two groups according to the vessel affected:

		Group 1	Group 2
Calprit artery	LAD	15 (37.5%)	24 (60%)
	RCA	13 (32.5%)	12 (30%)
	LCX	10 (25%)	3 (7.5%)
	Left main	0 (0%)	1 (2.5%)
	D1	2 (5%)	0 (0%)

Group 1 included 40 patients without CMR their coronary angiography showed that 15 patients had LAD affection, 13 patients had RCA affection, 10 patients had LCX affection, 2 patients had first diagonal affection and no patient had left main affection, while group 2 included 40 patients with CMR their coronary angiography showed that 24 patients had LAD affection, 12 patients had RCA affection, 3 patients had LCX affection, 1 patient affected with left main and no patient had first diagonal affection .

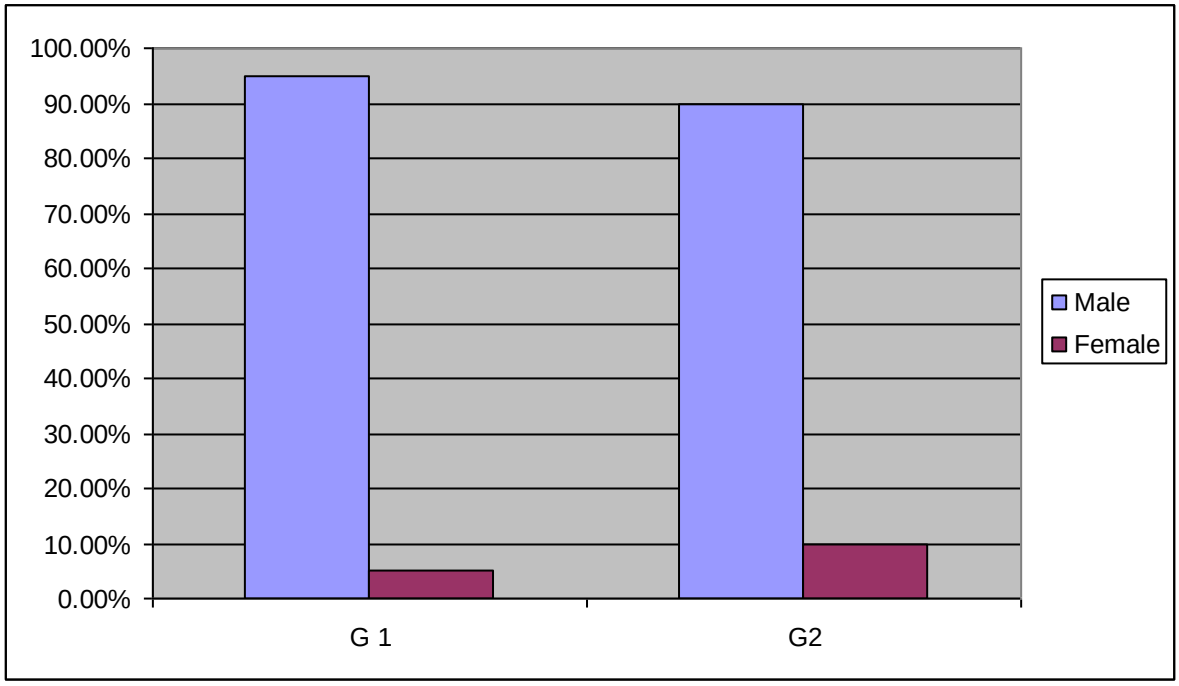

Figure (3) comparison between the two groups as regard sex .

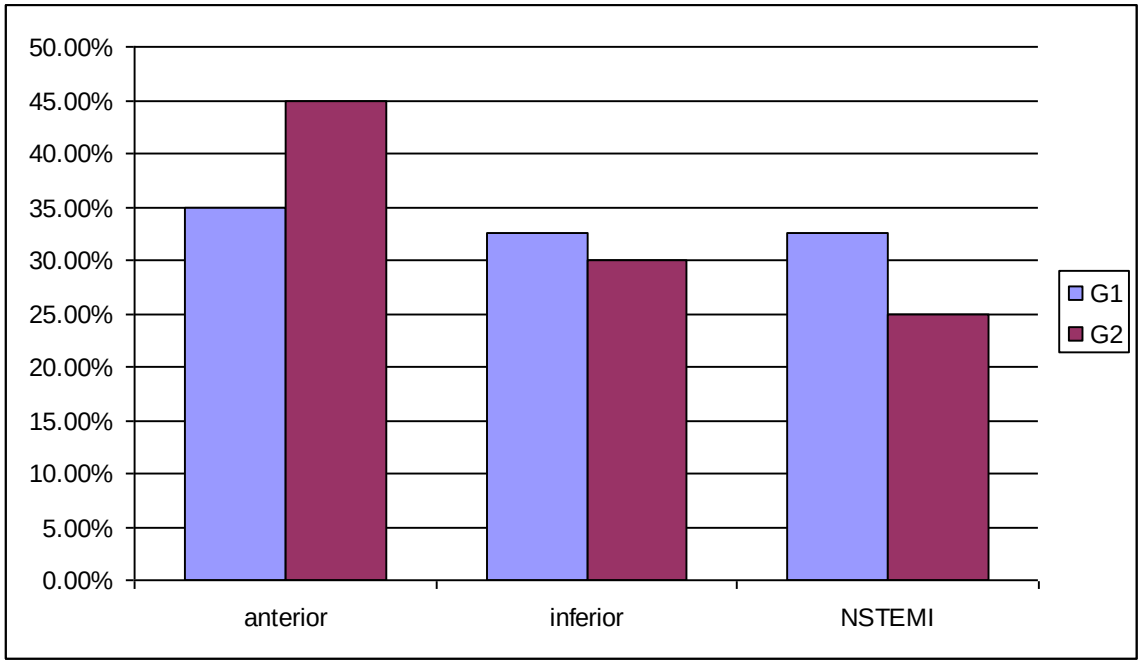

Figure (4) Comparison between the two groups as regard MI type.

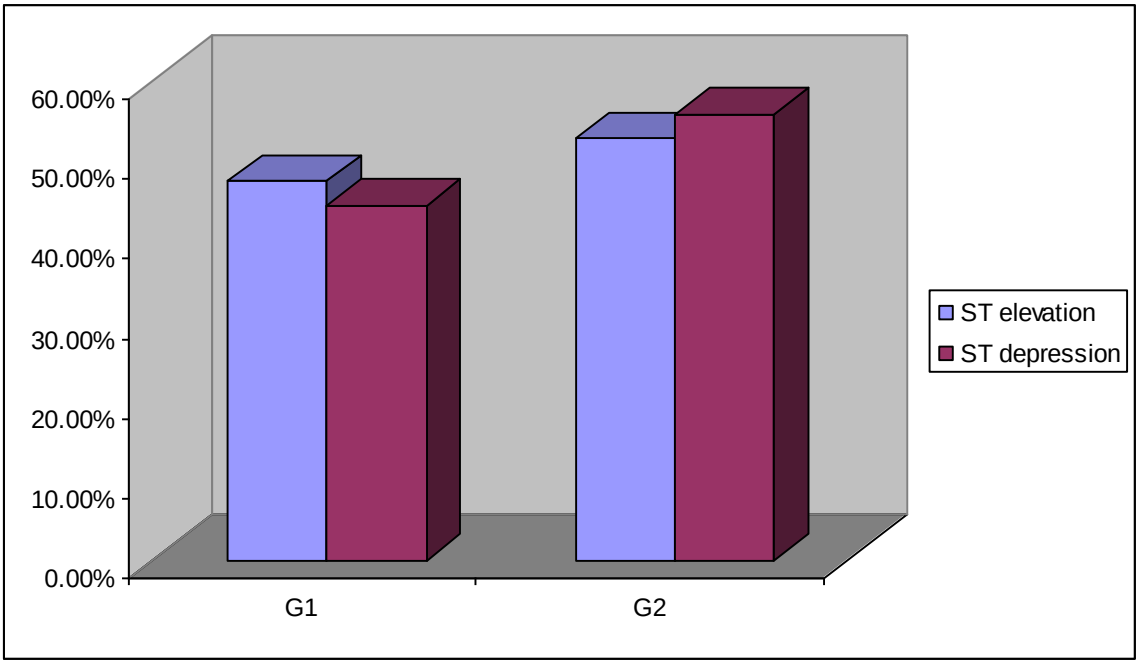

Figure (5) Comparison between the two groups as regard st elevation or depression .

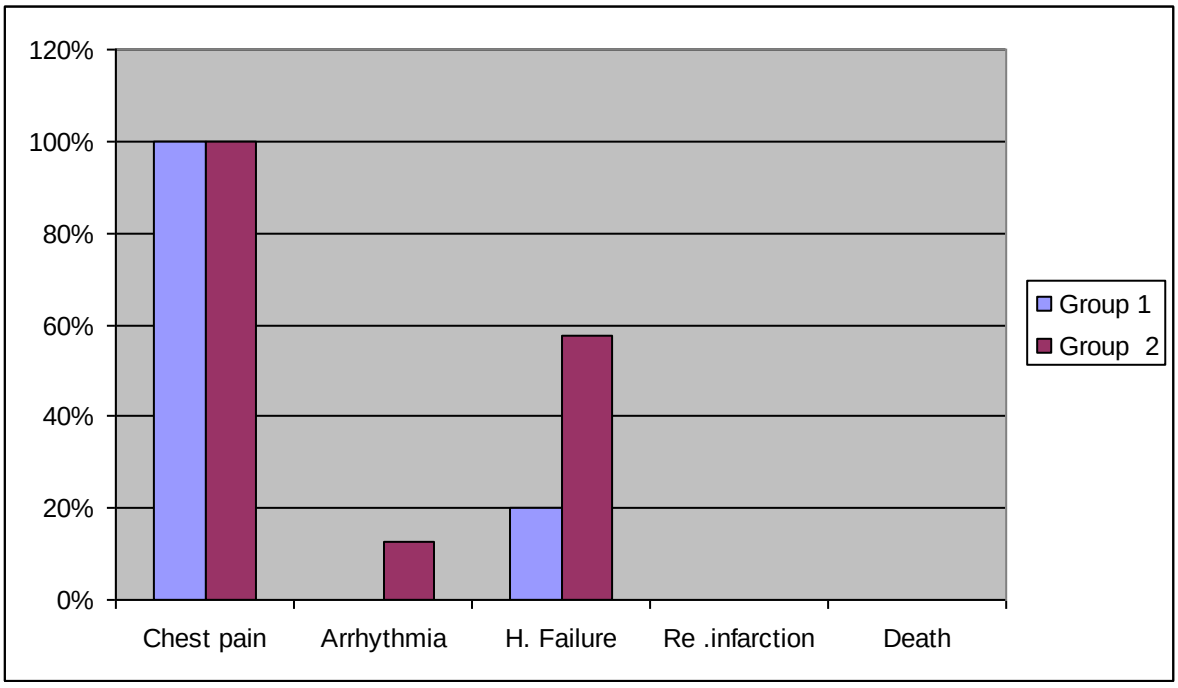

Figure (6) Comparison between the two groups as regard complication .

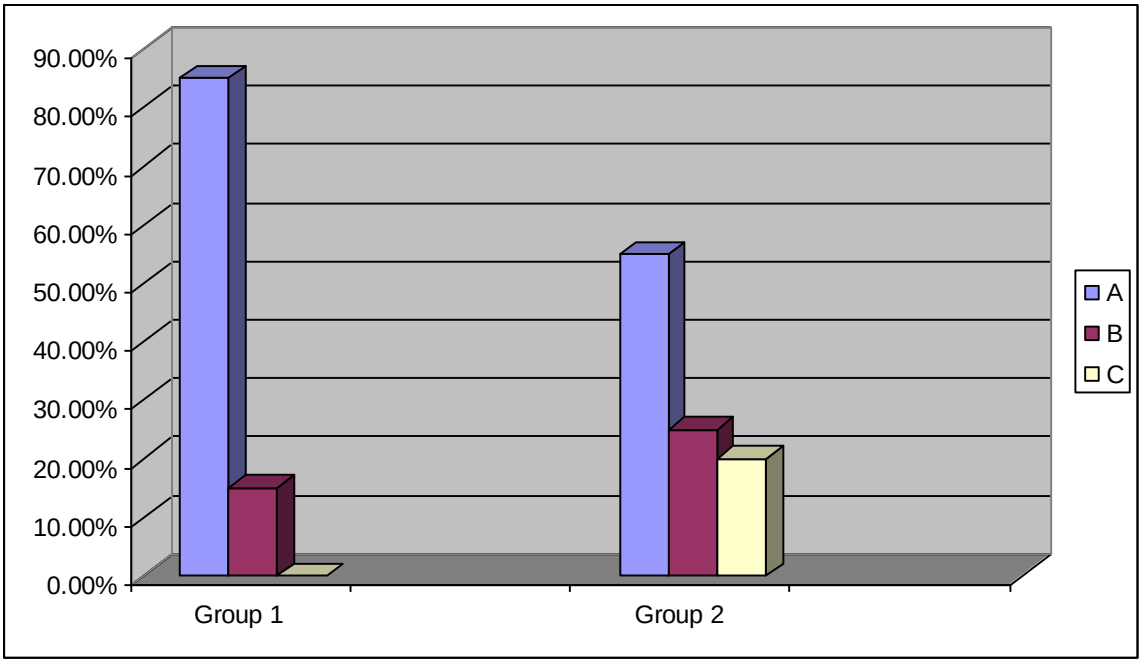

Figure (7) Comparison between group 1 and group 2 as regard type of lesion.

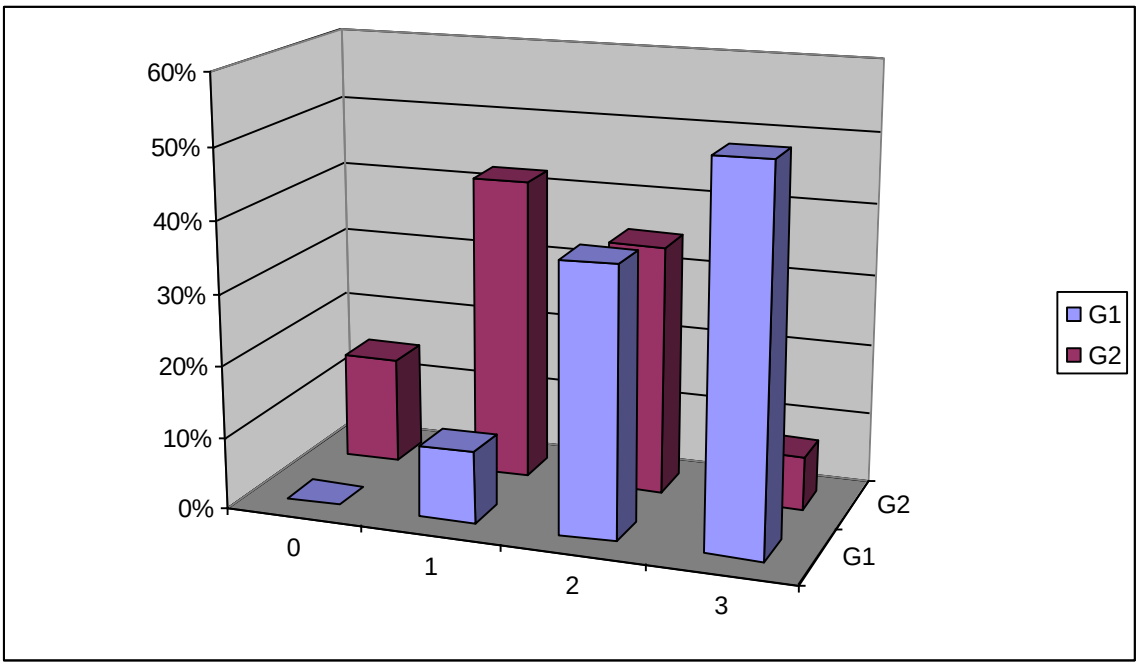

Figure (8) Comparison between group 1 and group 2 as regard TIMI flow.

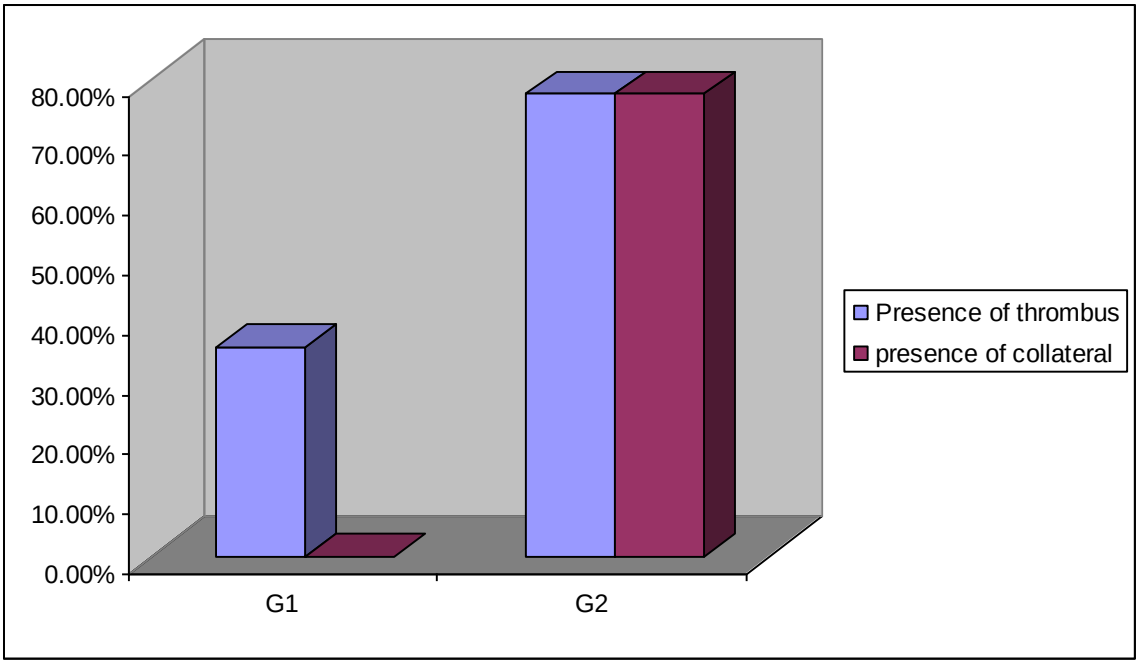

Figure (9) Comparison between group 1 and group 2 as regard presence of thrombus and presence of collateral .

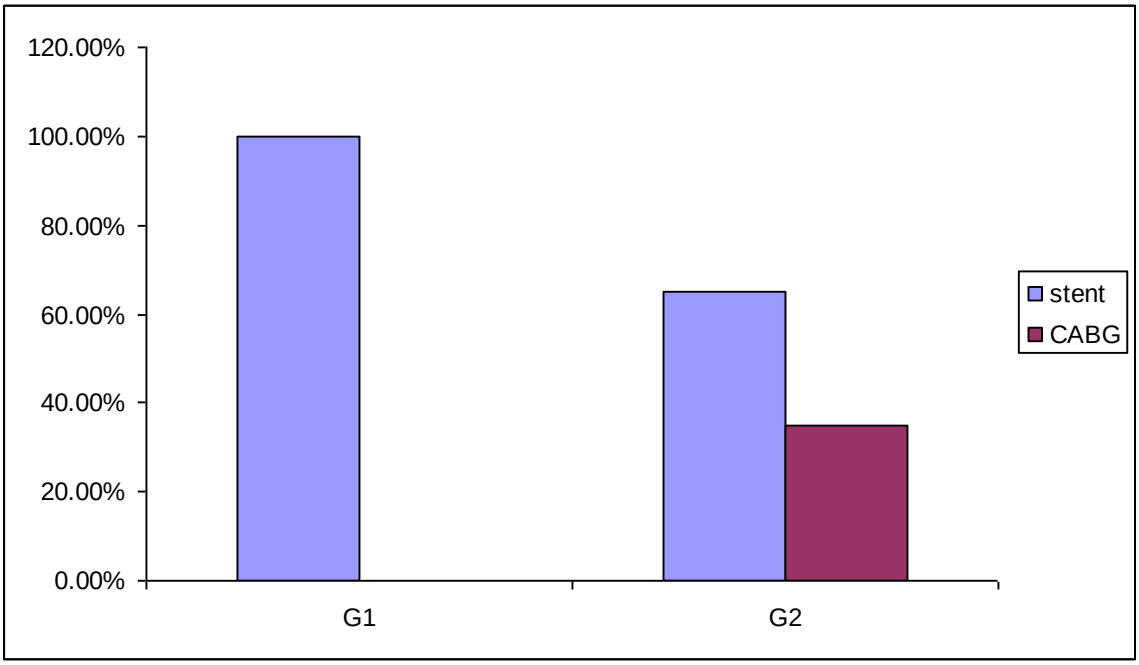

Figure (10) Comparison between group 1 and group 2 according to type of management .

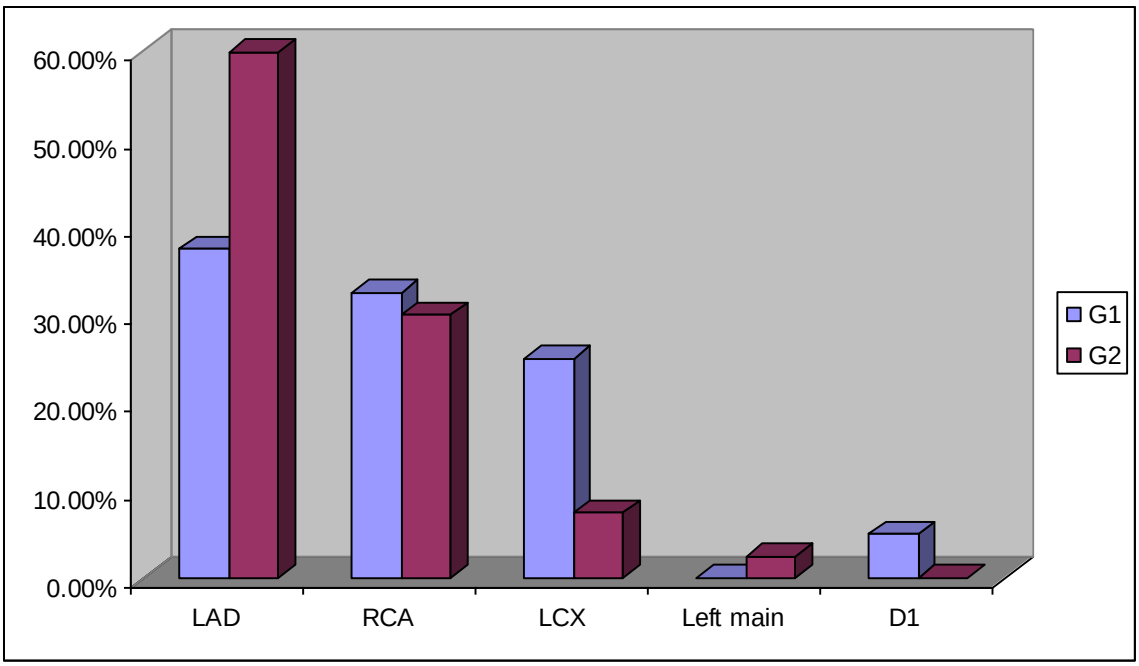

Figure (11) Description and frequency of vessel affected between group 1 and group 2 .

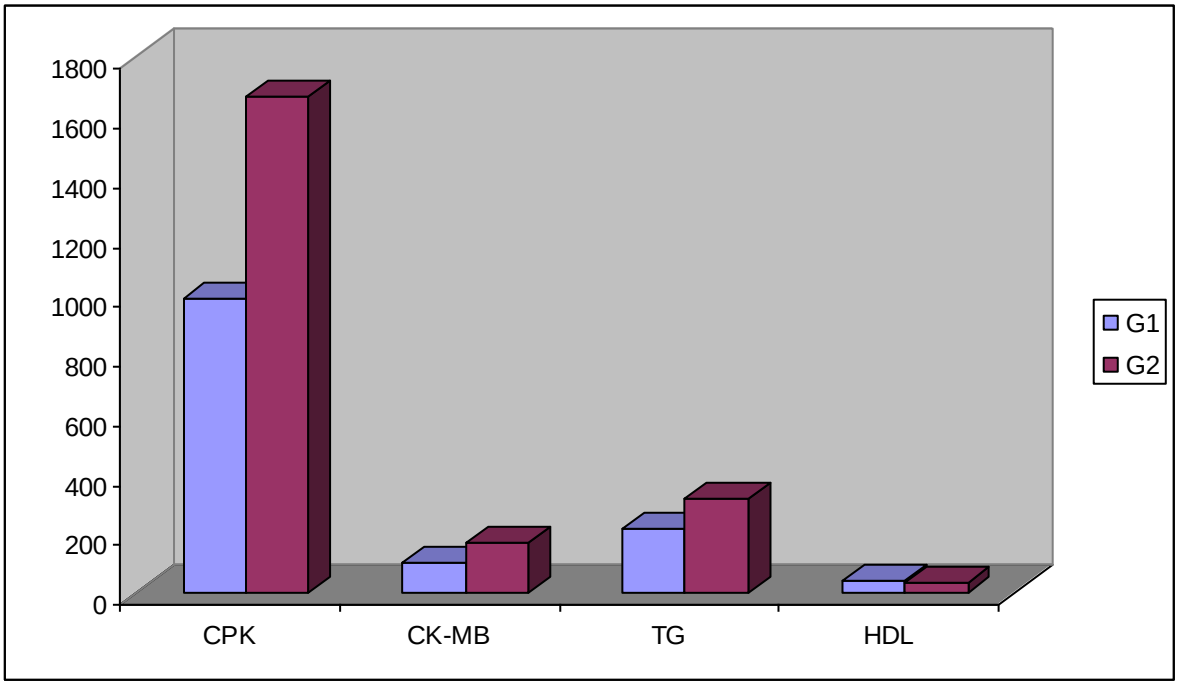

Figure (12) Comparison of laboratory finding between group 1 and group 2.

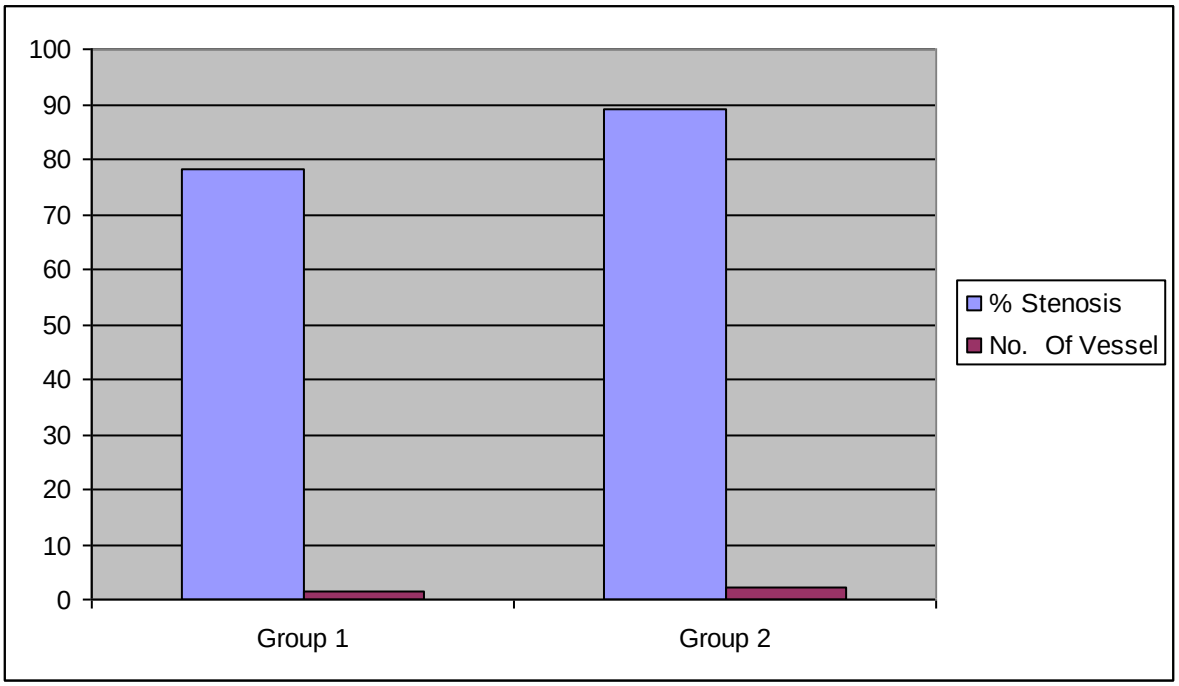

Figure (13) Comparison between group 1 and group 2 as regard % stenosis and number of vessel affected .

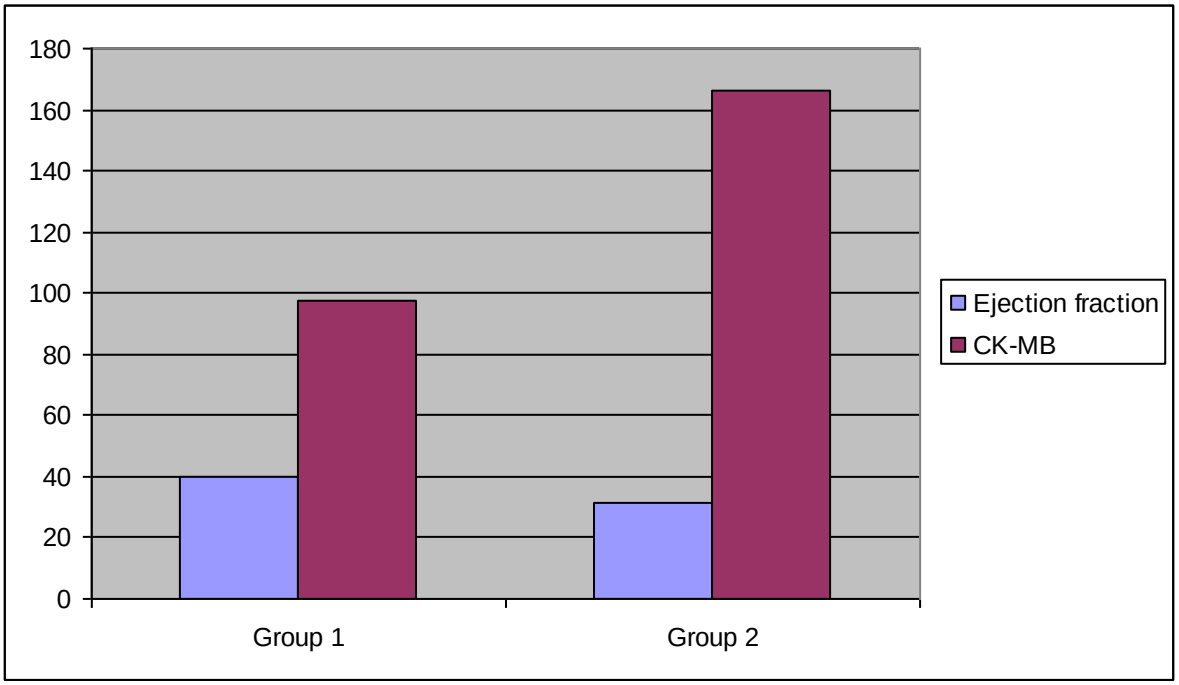

Figure (14) Comparison between group 1 and group 2 as regard peak value of CK-MB and EF% as an estimation of infarction size .