RESULTS

This randomized study included 40 patients who were admitted to cardiac care unit of Benha University Hospital with the diagnosis of unstable angina.

They were classified into two groups. The 1st group received standered therapy of unstable angina including 40mg Atorvastatin and the 2nd group received 0.5mg Colchicines twice daily beside the standered treatment of unstable angina including 40 mg Atorvastatin.

The study revealed the following result:

Comparison between two groups as regard demographic data.

The mean age of group I was 55.7+10.9 while the mean age of group II was 54.4+8.9 , 15 patients of each group were males (75%) ,11 patients (55%) in group I &6 patients (30%) in group II were diabetic , 12 patients (60%) in group I &5 patients (25%) in group II were hypertensive ,7 patients (35%) in group I &5 patients (25%) in group II were smoker , 7 patients (35%) in group I & 10 patients (50%) in group II were dyslipidemic , 10 patients (50%) of each group were ischemic We found that there was no significant difference between two groups as regard age, sex, risk factors such as (DM, HTN, Smoking and dyslipidemia) and past history of IHD as shown in table I, figure I&II and III.

Table (1): Comparison between two groups as regard demographic data

Items	Group I	Group II	*Test of comparison	P.Value
Sex males Females	15 (75%) 5 (25%)	15 (75%) 5 (25%)	-----	-----
Age Range Mean SD±	40-79 55.7±10.9	40-68 54.4±8.9	0.4	0.68
DM yes Not	11 (55%) 9 (45%)	6 (30%) 14 (70%)	1.6	0.2
HTN yes No	12 (60%) 8 (40%)	5 (25%) 15 (75%)	2.5	0.06
Smoking yes No	7 (35%) 13 (65%)	5 (25%) 15 (75%)	0.1	0.7
Dyslipidemic yes No	7 (35%) 13 (65%)	10 (50%) 10 (50%)	0.4	0.5
Past history yes Of IHD No	10 (50%) 10 (50%)	10 (50%) 10 (50%)	-----	-----

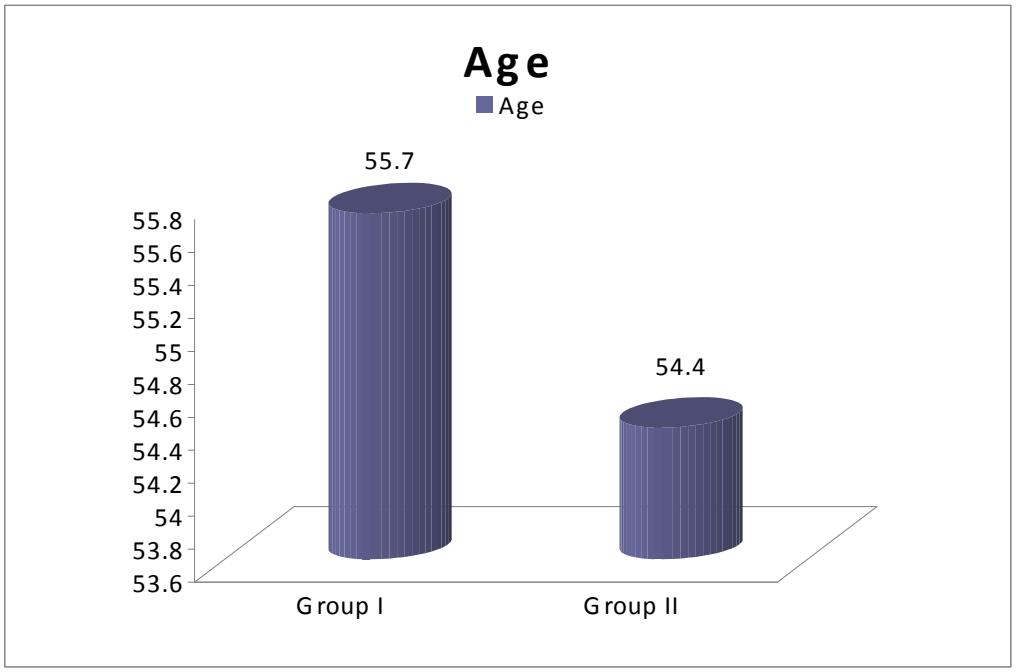


Fig. (1) Difference between two groups as regard age.

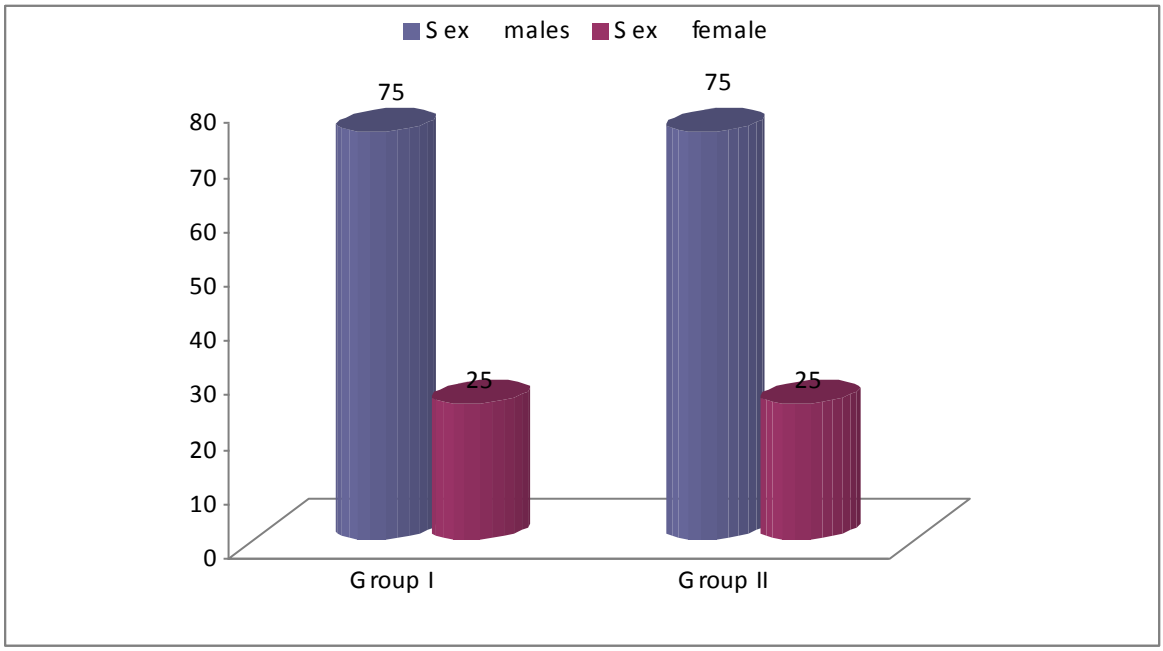


Fig. (2): Difference between two groups as regard sex.

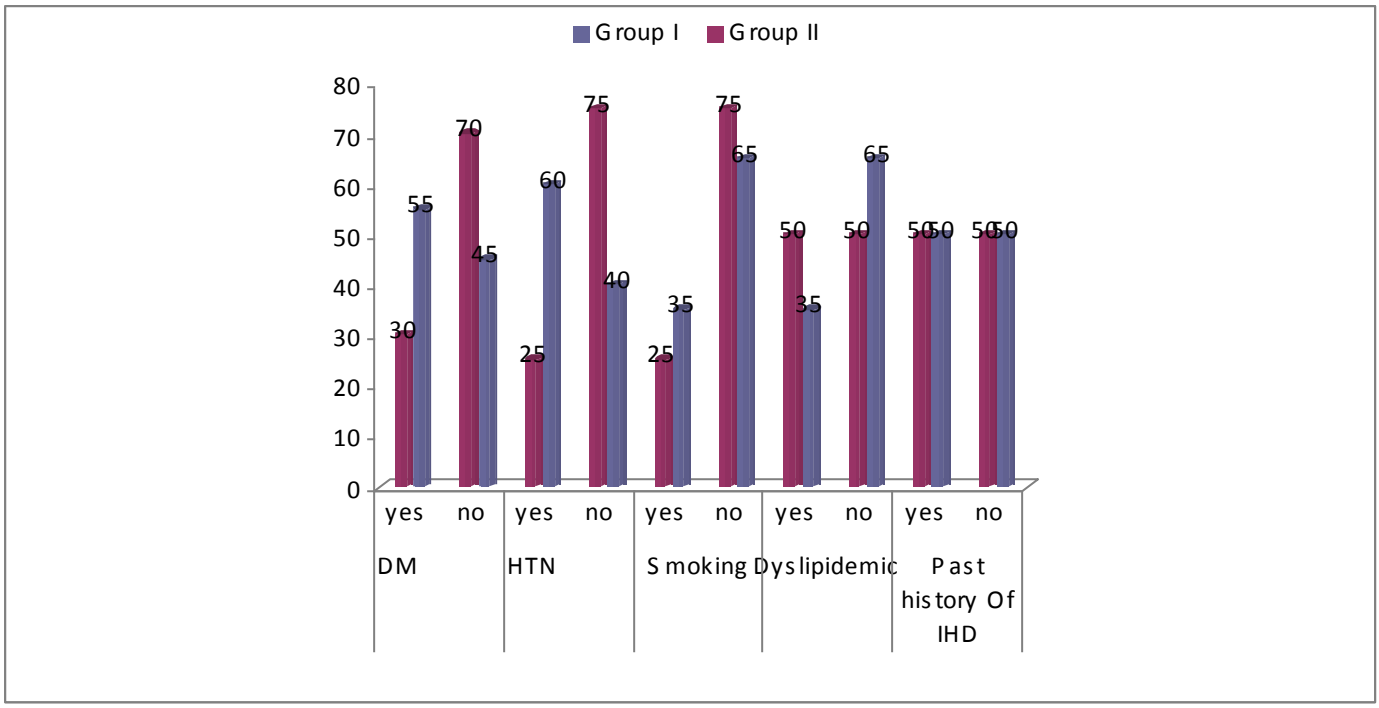


Fig. (3): Demographics, past history of both groups.

Comparison between the two groups as regard vital data.

The mean HR in group I was 92.4+16.9 while that of group II was 96.7+21.7 , the mean systolic Bp in group I was 151+36 while the mean systolic Bp in group II was 149+36.1 , the mean diastolic Bp in group I was 92.3+18.4 while the mean diastolic Bp in group II was 96.8+27.9. There was no significant difference between the two groups as regards HR, SBp, DBp as shown in table 2 and figure 4.

Table (2): Comparison between the two groups as regard vital data.

Items	Group I	Group II	Test of comparison	P.Value
HR Rang Mean±SD	60-120 92.4±16.9	60-135 96.7±21.7	0.7	0.49
Systolic Bp Rang Mean±SD	100-210 151±36	80-230 149±36.1	0.18	0.86
Diastolic Bp Rang Mean±SD	70-120 92.3±18.4	20-160 96.8±27.9	0.6	0.55

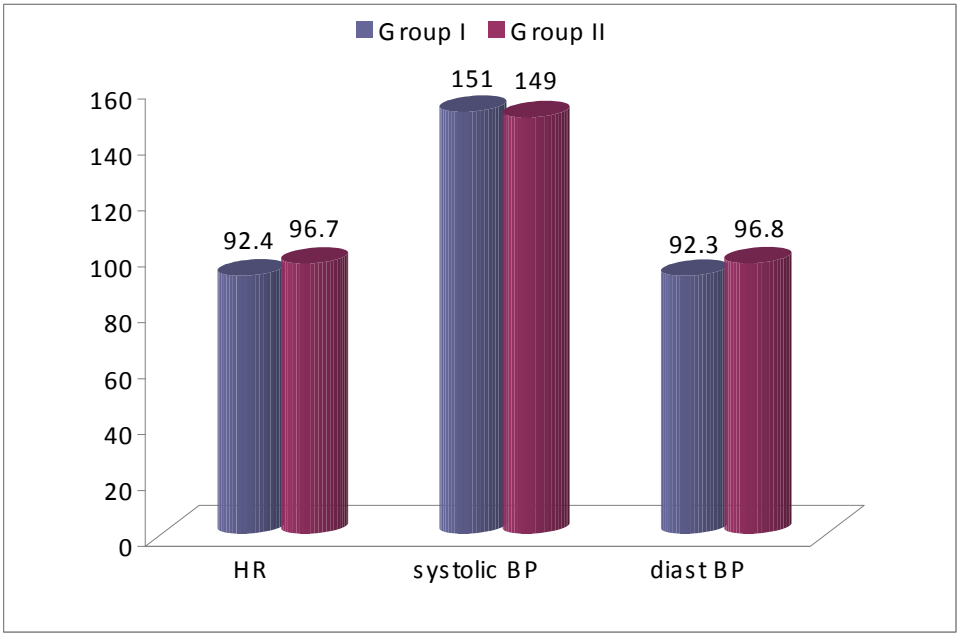


Fig. (4): Difference between two groups as regard heamodynamics

Comparison between the two groups as regards Diagnostic lab tests done on admission:

The mean random blood sugar in group I was 253.3+162.1mg/dl while that of group II was 170.3+94.4mg/dl , the mean serum creatinine in group I was 0.9+0.3mg/dl while that of group II was 0.9+0.4mg/dl , the mean blood urea in group I was 37.4+14.5mg/dl while that of group II was 36.7+13.6mg/d , the mean HB in group I was 12.6+0.9 g/dl while that of group II was 11.7+1.8 g/dl , the mean SGPT in group I was 35.5 +21.9 u/l while that of group II was 39.1+15u/l ,the mean cholesterol level in group I was 169.9+36.6mg/dl while that of group II was 151.9+79.2mg/dl ,the mean LDL in group I was 114.3+29.1mg/dl while that of group II was 109.4+55.5 mg/dl ,the mean HDL in group I was 41.2+11.9mg/dl while that of group II was 37.6+9.5mg/dl ,the mean TG in group I was 147.3+81.6mg/dl while that of group II was 198.7+114.3mg/dl ,the mean hs-CRP level in group I was 4.3+4mg/dl while that of group II was 4.4+4.1mg/dl. We found that no detectable difference between both groups Lab done on admission (RBS, S. Cr, urea, HB, SGPT, Lipid profile and hs-CRP) as shown in table 3 and figure 5.

Tabel (3): Comparison between the two groups as regards Diagnostic lab tests done on admission:

Items	Group I	Group II	*Test of comparison	P.Value
Random blood sugar Mean±SD Rang	253.3±162.1 89-509 mg/d	170.3±94.4 60-360 mg/dl	1.9	0.06
Serum creatinine Mean±SD Rang	0.9±0.3 0.6 – 1.4 mg/dl	0.9±0.4 0.2 – 1.5 mg/dl	0.05	0.96
Blood urea Mean±SD Rang	37.4±14.5 14-65 mg/dl	36.7±13.6 12-57 mg/dl	0.2	0.8
HB g /dl Mean±SD Rang	12.6±0.9 11.49- 16.29 g/dl	11.7±1.8 6.6-15.8 g/dl	1.8	0.08
SGPT Mean±SD Rang	35.5±21.9 9-69 u/l	39.1±15 10-69 u/l	0.61	0.55
Cholesterol Mean±SD Rang	169.9±36.6 135-230 mg/dl	151.9±79.2 73-269 mg/dl	0.92	0.36
LDL Mean±SD Rang	114.3±29.1 74-158 mg/dl	109.4±55.5 50-180 mg/dl	0.35	0.73
HDL Mean±SD Rang	41.2±11.9 22-58 mg/dl	37.6±9.5 24-48 mg/dl	1.1	0.29
TG Mean±SD Rang	147.3±81.6 76-297mg/dl	198.7±114.3 102-321 mg/dl	1.6	0.11
Hs CRP Mean ±SD Rang	4.3±4 0.307-14.7mg/dl	4.4±4.1 0.612-12.6	0.1	0.96

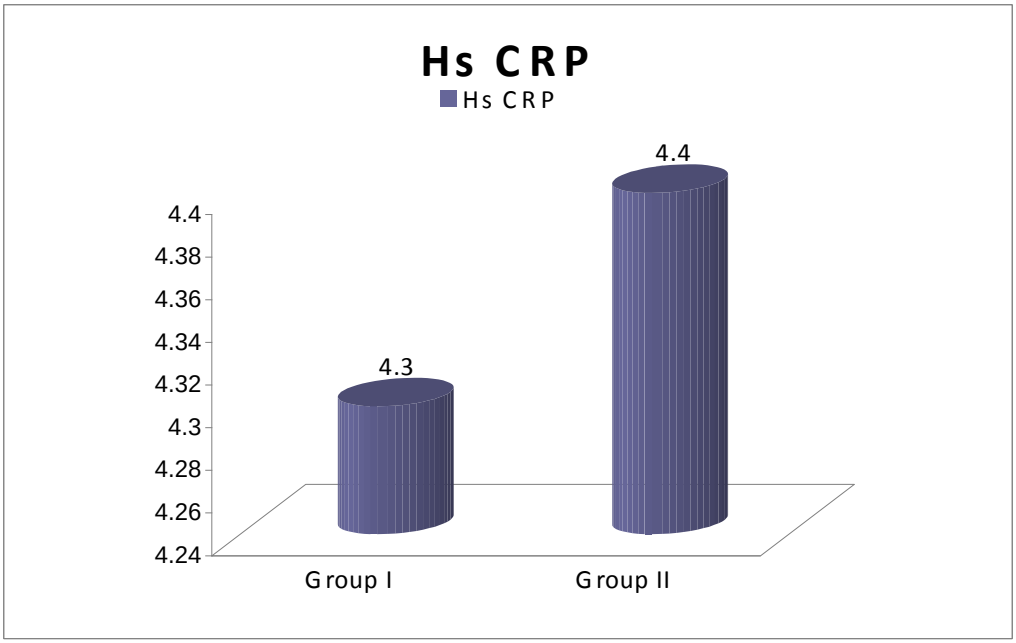


Fig. (5): Difference between two groups as regard HS-CRP on addmesion showing non significant difference between two groups.

Comparison between the two groups as regard ECG done on admission.

All patients (100%) were sinus rhythm ,8 patients (40%) in group I and 10 (50%) patients in group II with normal ECG ,5 patients (25%) in group I and 8 (40%) patients in group II had both ST-segment depression and T wave inversion while 5 patients (25%) of group I and 1 patient (5%) in group II had only T wave inversion .Two patients (10%) in group I and 1 patient (5%) in group II had both Q-wave and T wave inversion in their ECG. We found that there was no detected difference between two groups as regard ECG on admission as shown in table 4.

Table (4): Comparison between the two groups as regard ECG done on admission.

Items	Group I 20patients	Group II 20patients
Rhythm sinus AF Other	(100%) 0 0	(100%) 0 0
Conduction Abnormalities LBBB RBBB	0 0	0 0
Normal ECG	8 (40%)	10 (50%)
ST-T wave changes		
ST depression and T wave inversion	5(25%)	8(40%)
T wave inversion	5 (25%)	1 (5%)
Q-wave and T wave inversion	2(10%)	1 (5%)

Comparison between two groups as regards Echocardiography & EFdone on admission.

The mean EF value in group I was 63.3+12.4 while the mean EF value in group II was 58.5+10.8. We found that there was no significant difference between both groups as regard echo done on admission as shown in table 5 and figure 6.

Table (5): Comparison between two groups as regards Echocardiography & EF done on admission.

Items	Group I	Group II	Test of comparison	P.Value
LA Range Mean	3.5-4.7 3.8±0.29	3.7-5 3.9±0.45	0.056	>0.05
EDD Range Mean	46-64 52.25±4.68	41-67 52.35±6.35	0.056	>0.05
ESD Rang Mean	26-47 35.25±5.15	29-55 35.3±5.62	0.029	>0.05
EF Rang Mean	40-87% 63.3±12.4	40-77% 58.5±10.8	1.3	>0.05

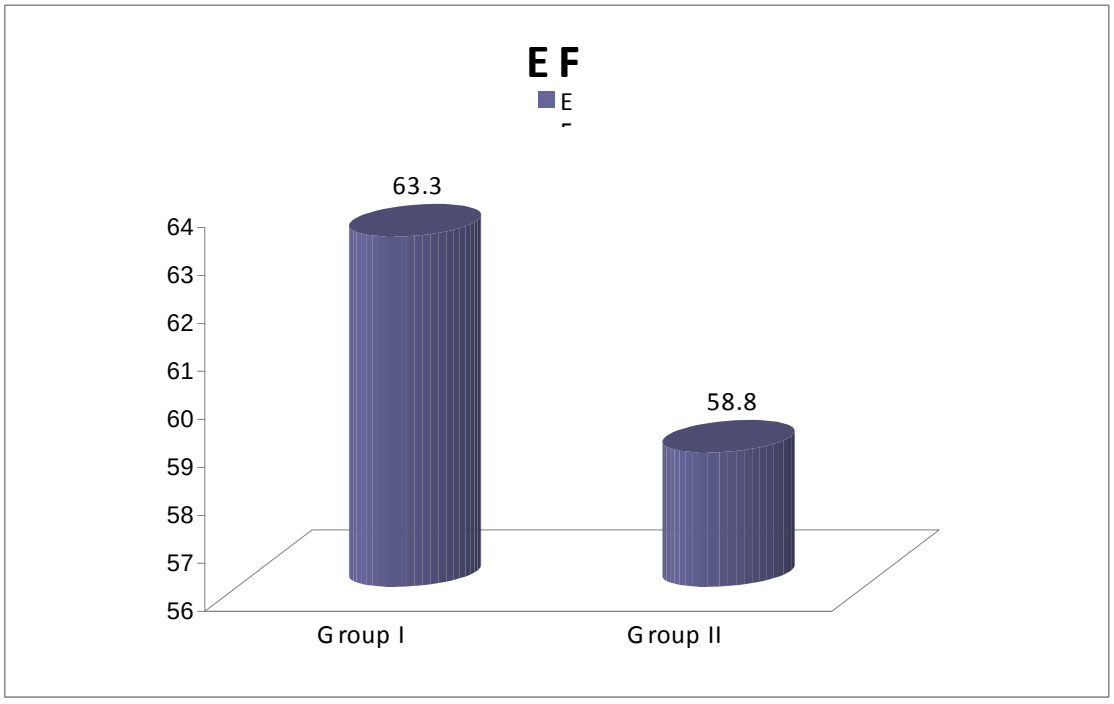


Fig. (6): Difference between two group as regard EF by ECHO showing non significant difference between two groups.

Comparison between two groups as regard changes of Canadian Class Score (CCS) on admission &after 15 days.

The mean value of CCS on admission in group I was 3.4+0.5 while that of group II was 3.1+0.8 , and after 15 days of follow up the mean CCS in both groups were 1.4+0.5. We found that there was significant improvement in both groups (I&II) from time of admission to follow up (after 15 days) as shown in table 6.

Table (6): Comparison between two groups as regard changes of Canadian Class Score (CCS) on admission &after 15 days.

Items	Group I	Group II
CCS On Admission		
Rang	3-4	2-4
Mean	3.4	3.1
SD±	0.5	0.8
CCS After 2 weaks		
Rang	1-2	1-2
Mean	1.4	1.4
SD±	0.5	0.5
****Test of comparison**	12.4	11.9
P.Value	<0.001	<0.001

Comparison between two groups as regard Canadian Class Score (CCS) after 15 days of follow up.

The mean value of CCS after two weeks in both groups(I&II) was 1.4+0. We found that there was no significant difference in CCS between both groups during follow up (after 15 days) as shown in table 7 and figure 7.

Table (7): Comparison between two groups as regard Canadian Class Score (CCS) after 15 days of follow up**.**

Items	Group I	Group II	Test of comparison	P value
CCS After 2 weeks				
Rang	1-2	1-2		
Mean	1.4	1.4	0.2	0.85
SD+	0.5	0.5		

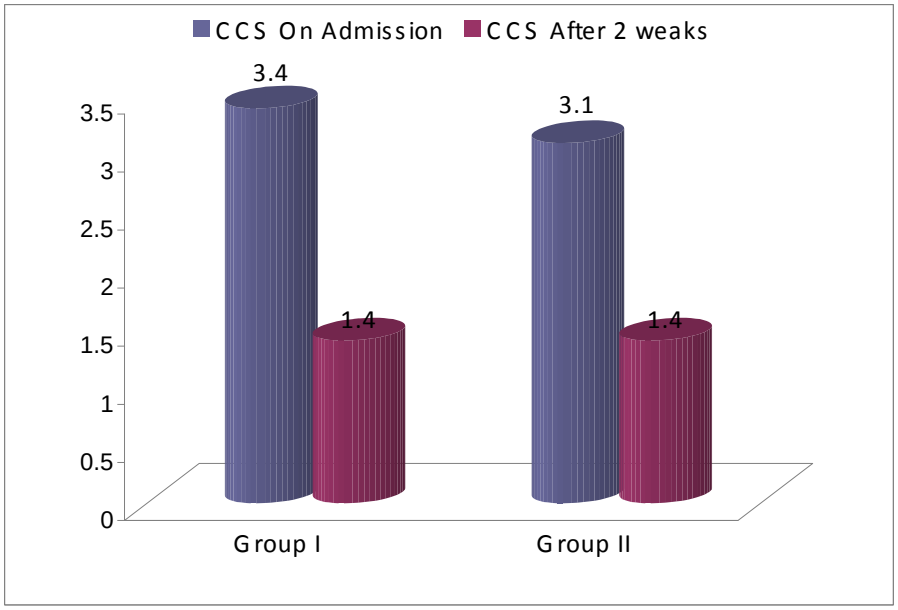


Fig. (7): Difference between two groups as regard CCS on admission and after 15 days showing non significant difference between two groups.

Comparison between two groups as regard incidence of complication

Five patients in group I developed complications (25%), while only 3 patients in group II suffered from complications (15%).P value was >0.05 as there was non significant incidence of complication between two groups as shown in table 8 and figure 8.

Table (8): Comparison between two groups as regard incidence of complication

Items	Group I	Group II	Test of comparison	P value
Incidence of complication	5 patients were complicated (25%)	3 patients were complicated (15%)	0.8	>0.05

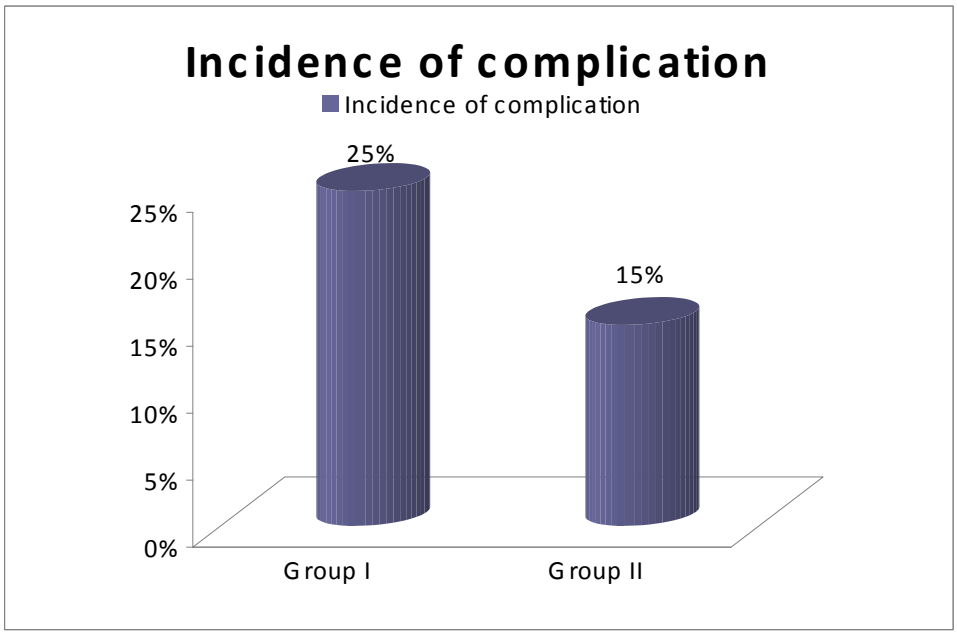


Fig. (8): Difference between two groups as regard incidence of complication

Study of complications occurred in group I

The total number of complicated patients in group I was 5 ,1 patient admitted to CCU due to recurrent chest pain (20%), 3 patients admitted by symptoms of heart failure (60%) and 1 patient died (20%) as shown in table 9.

Table (9): Study of complications occurred in group I

Items	Number of complicated patients(5)	
Recurrent unstable angina	1	(20%)
Arrhythmias	0	(0%)
HF	3	(60%)
Stroke	0	(0%)
Bleeding	0	(0%)
Sudden death	1	(20%)

Study of complications occurred in group II

Three patients developed complications, one of them developed unstable angina (33%) and 2 patients complicated by AF (66%) as shown in table 10.

Table (10): Study of complication occurred in group II

Items	Number of complicated patients	
Recurrent unstable angina	1	(33%)
Arrhythmias **(AF)**	2	(66%)
HF	0	(0%)
Stroke	0	(0%)
Bleeding	0	(0%)
Sudden death	0	(0%)

Comparison between two groups as regards complications

One patient from each group complicated by recurrent unstable angina, 3 patients of group I complicated by HF, 2 patients of group II complicated by AF, 1 patient from group I died. We found that there was non significant difference of incidence of unstable angina or short term mortality between two groups while there was significant incidence of HF in group I & arrythmias in group II as shown in table 11 and figure 9, 10.

Tale (11): Comparison between two groups as regards complications

Items	Number of patients in Group I	Number of patients in Group II	Test of comparison	P value
Recurrent UA	1	1	0.4	>0.05
Arrhythmias	0	2	2.1	<0.05
HF	3	0	1.7	<0.05
Stoke	0	0	--	--
Bleeding	0	0	--	--
Death	1	0	0.8	>0.05

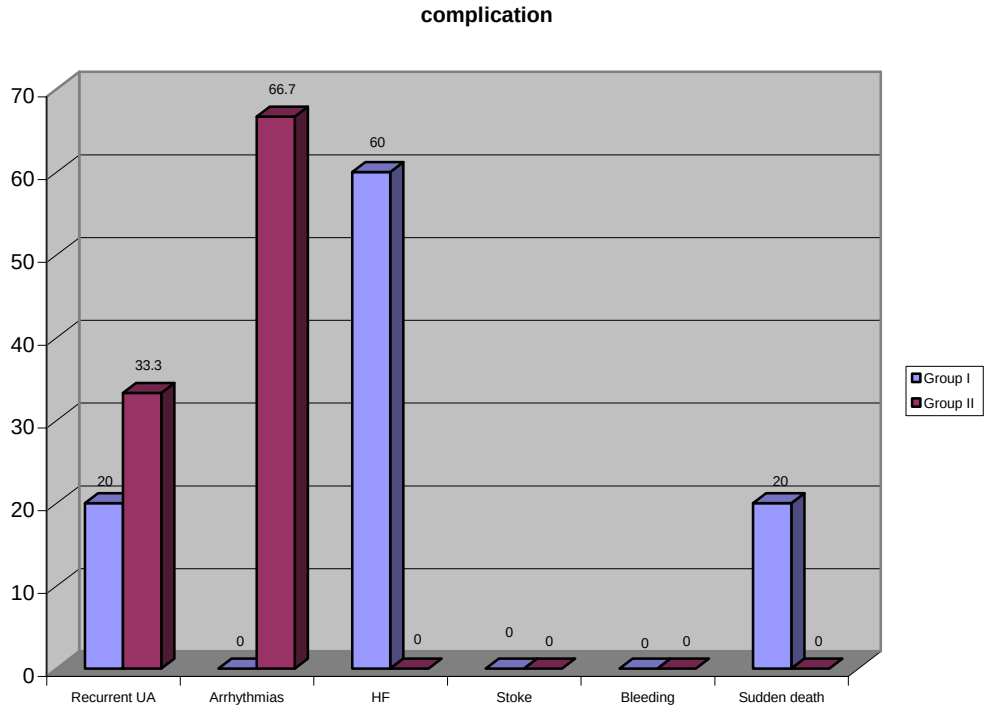


Fig. (9): Comparison between two groups as regard complications

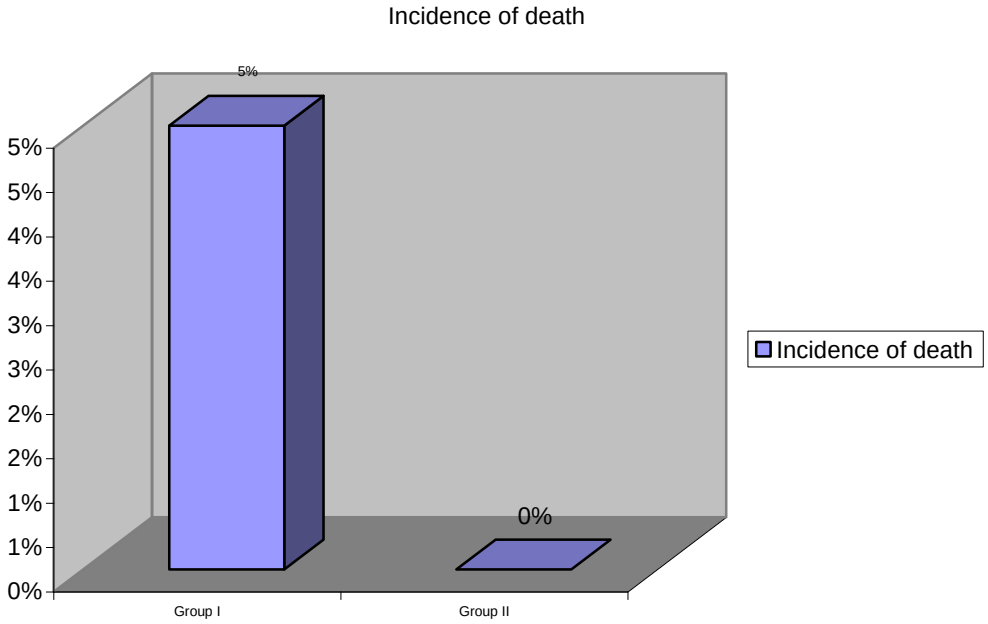


Fig. (10): Comparison between two groups as regards incidence of death.

Comparison between hs- CRP on admission and 2 weeks after in each group.

The mean value of hs-CRP on admission in group I was 4.3+4 & in group II was 4.4+4.1 while the mean value of hs-CRP after 15 days in group I was 0.97+0.55 & in group II was 0.46+0.29. We found that there was significant decrease in hs-CRP after 15 days in both groups (I&II) as shown in table 13 and figure 12.

Table (12): Comparison between hs- CRP on admission and 2 weeks after in Each group.

Items	Group I	Group II
Hs- CRP on admission Rang Mean ±SD	 0.307-14.7 4.3±4	 0.612-12.6 4.4±4.1
Hs- CRP after 15 days Rang Mean ±SD	 0.207-2.02 0.97±0.55	 0.11-0.95 0.46±0.29
Percentage of reduction%	77.4%	89.9%
*Test of comparison	3.7	4.8
P value	<0.05	<0.05

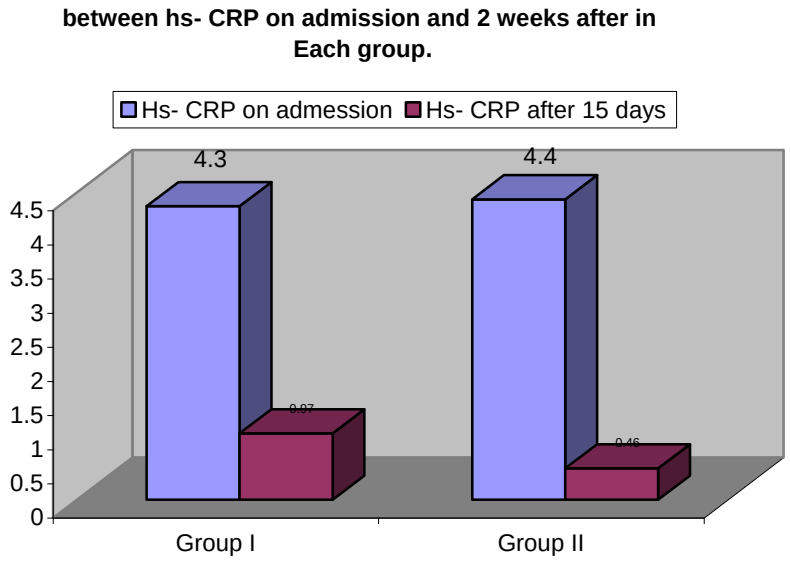


Fig. (11): Comparison between hs- CRP on admission and 2 weeks after in each group.

Comparison between the two groups as regards CRP after 2 weeks

The mean value of hs-CRP in group I was 0.97+0.55 while that of group II was 0.46+0.29. We found that there was significant difference in reduction of hs-CRP in group II more than in group I as shown in table 14 and figure 13**.**

Table (14): Comparison between the two groups as regards CRP after 2 weeks:

Items	Group I	Group II	Test of comparison	P.Value
Hs. CRP Rang	0.207-2.02	0.11-0.95	3.1	0.002
Mean ±SD	0.97±0.55	0.46±0.29		

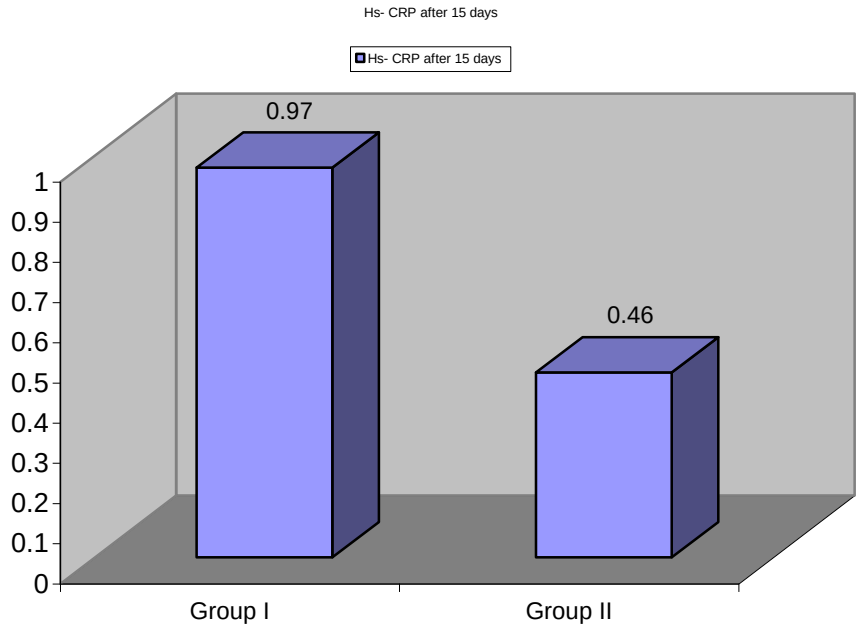


Fig. (13): Comparison between the two groups as regards CRP after 2 weeks:

Comparsion between complicated and non-complicated patients of both groups.

The mean value of hs-CRP in complicated patient on admission in group I was 10.1±2.9 while in non complicated patient was 2.2±1.8 And the mean value of hs-CRP in complicated patient in group II was 11.4±1.3 while in non complicated patient was 2.6±2.3 .We found that there was significant rise in hs-CRP in complicated patients of both groups.

Table (14): comparsion between complicated and non-complicated patients of both groups as regard level of hs-CRP.

Group	Complicated patient	Non-Complicated patient	t	P value
Group I ±SD range	10.1±2.9 (7.38-14.6)	2.2±1.8 (0.307-6.25)	7.2	<0.001
Group II ±SD Range	11.4±1.3 (10-12.6)	2.6±2.3 (0.612-8.76)	6.2	<0.001

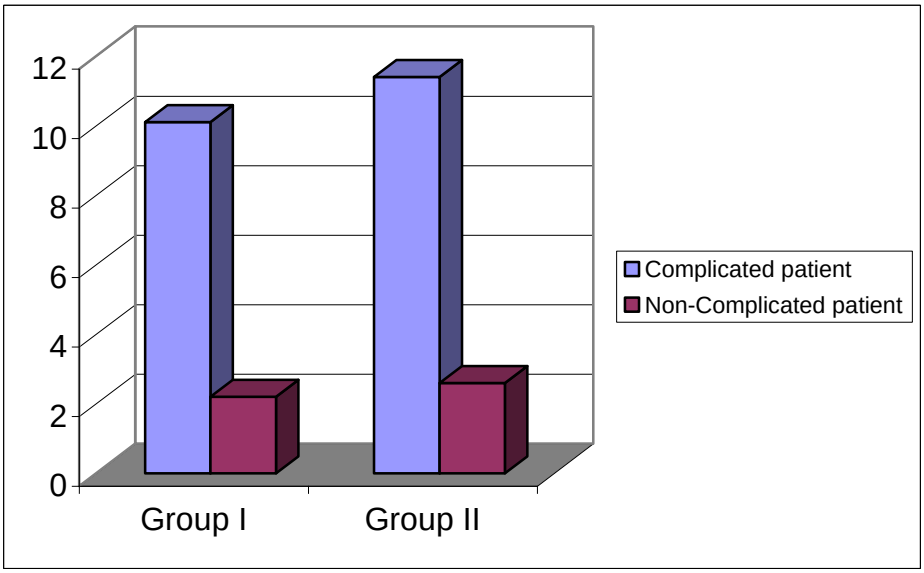
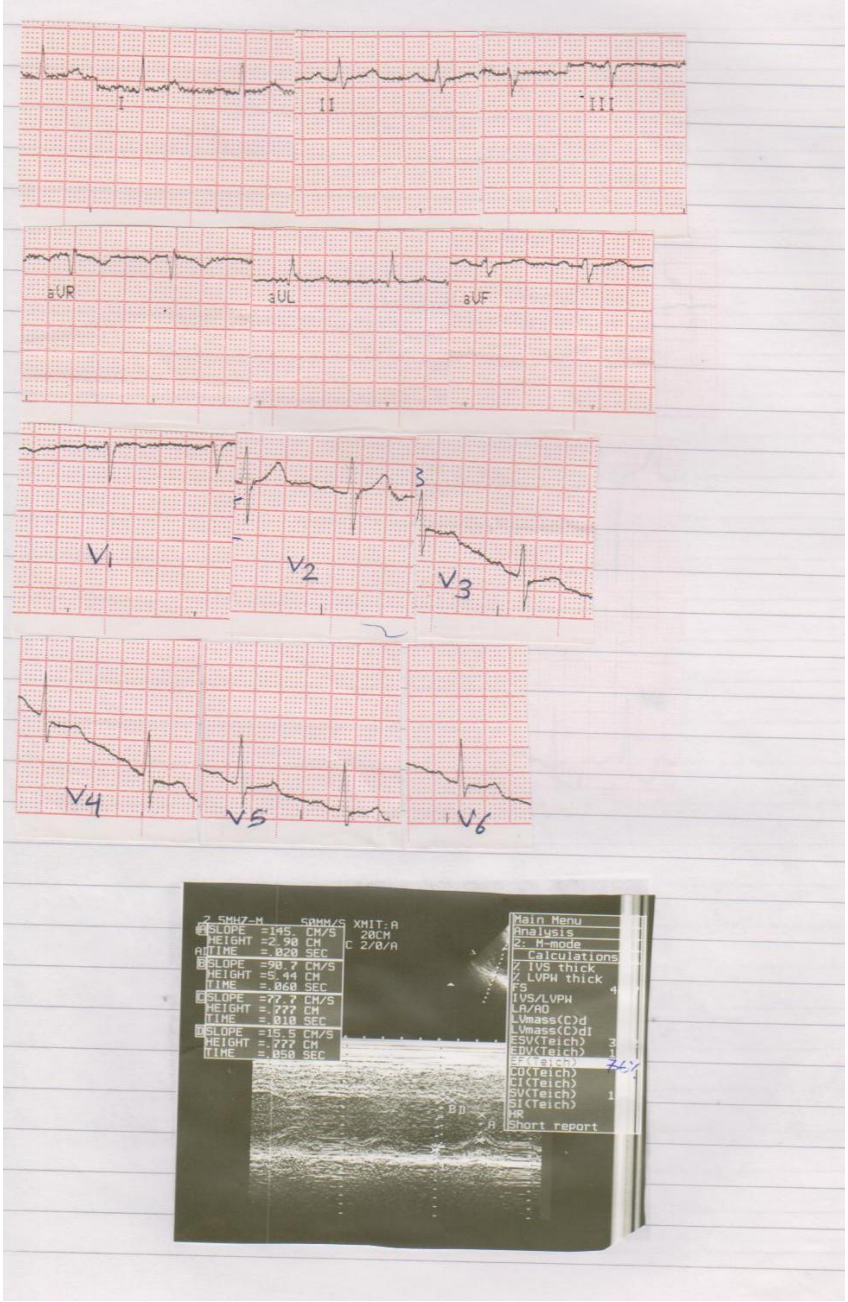


Fig. (14): Comparsion between complicated and non-complicated patients of both groups as regard level of hs-CRP.

(Case I)

Group:	II
AGE:	65y
SEX:	Male
DM:	yes
HTN:	yes
SMOKING:	No
IHD:	yes
DYSLPEDIMIC:	yes
S Bp:	110mm Hg
D Bp:	70mm Hg
PULSE:	100B/M
Heart Ex:	free
Chest Ex:	Wheezy
CCS on admission:	2
CCS after 15 d:	1
ECG:	Q wave in III&AVF

ECHO: gradeI&EF#73%	Distolic dysfunction
Blood sugar:	360 mg/dl
HB:	6.6 g/dl
S.Cr:	0.2 mg/dl
Urea:	12 mg/dl
SGPT:	12u/l
Cholesterol:	240mg/dl
LDL:	180mg/dl
HDL:	24mg/dl
TG:	300mg/dl
hs-CRP 1:	11.7 mg/dl
Hs-CRP 2:	0.65mg/dl
Clinical complication: admission by unstable angina	Complicated by recurrent

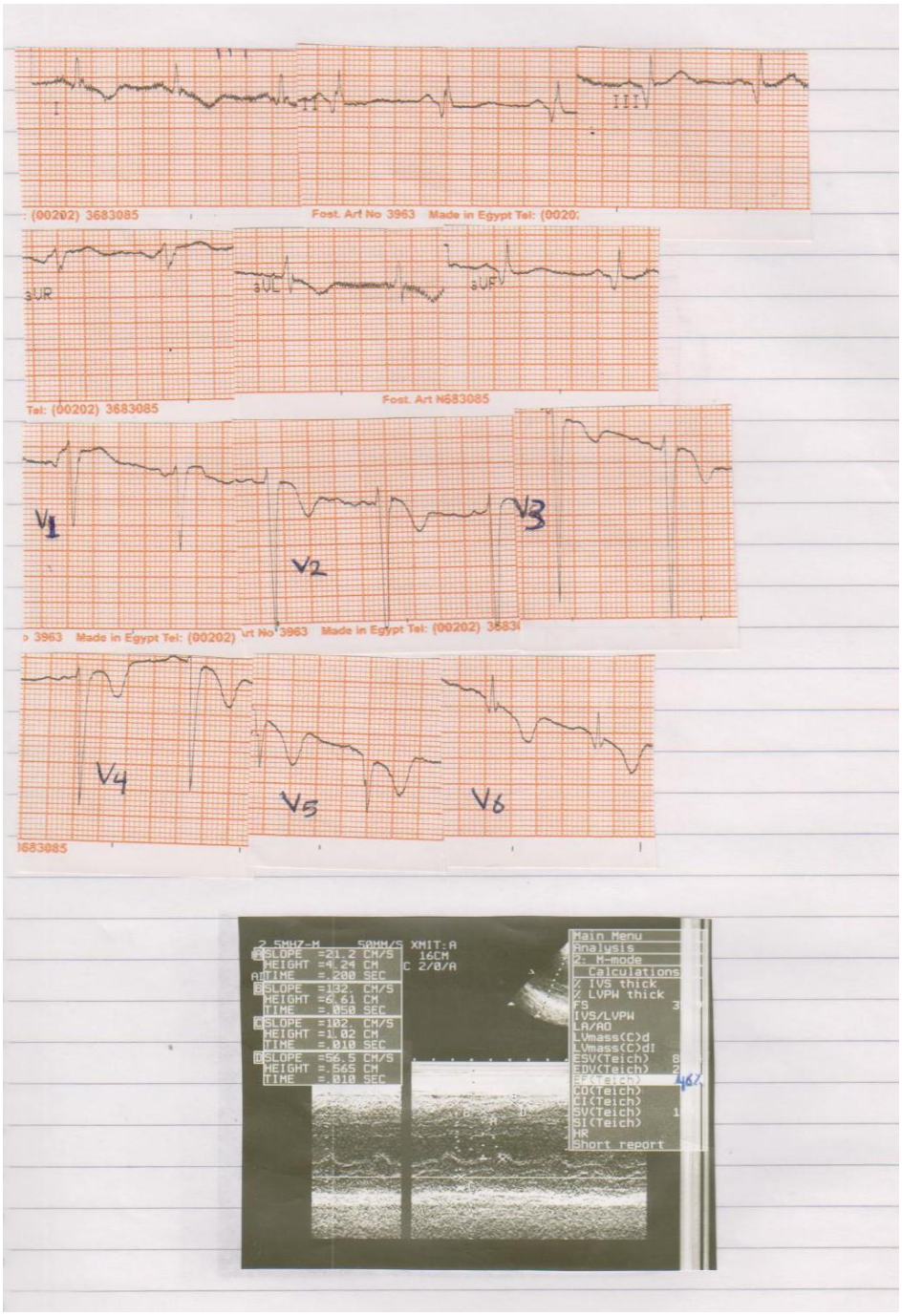


ECG: within normal

(Case II)

Group:	I
Age:	55y
SEX:	Male
DM:	NO
HTN:	NO
SMOKING:	YES
IHD:	YES
Dyslepdimic:	NO
S Bp:	110 mm Hg
D Bp:	80mm Hg
Pulse:	75B/M
Heart Ex:	Free
Chest ex:	Free
CCS on admission:	4
CCS after 15 d:	2
ECG:	Q waves & T wave inversion in inferior leads&Twave inversion in anterior leads,

ECHO:	Diastolic dysfunction, EF#46%
Blood sugar:	89mg/dl
HB:	11.8g/dl
S.Cr:	0.8mg/dl
Urea:	35mg/dl
SGPT:	11u/dl
Cholesterol:	133mg/dl
LDL:	88mg/dl
HDL:	50mg/dl
TG:	83mg/dl
hs-CRP 1:	6.25mg/dl
hs-CRP 2:	1.88mg/dl
Clinical complication:	Complicated by heart failure.



ECG: showing Q wave in III & AVF & T wave inversion in anterior leads