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Predictors of Atrial Fibrillation after Coronary Artery Bypass Graft Surgery and its Impact on Patient Outcome

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ABSTRACT

Background: Postoperative atrial fibrillation (POAF) is a common and potentially morbid complication following cardiac surgery. It was reported to be associated with greater in-hospital mortality; prolonged hospital stays. In addition, the long-term survival was worse in patients who developed POAF. Patients who develop POAF incur additional hospital treatment cost and 2-to-4-fold increased risk of major adverse cardiac events.

Objective: To determine the possible predictors of POAF after coronary artery bypass surgery and its impact on outcome.

Methods: Two hundred patients were enrolled; they were divided into 2 groups; Group I (n = 100 patients) developed POAF and group II (n = 100 patients) did not developed POAF. All patients were subjected to history, examination, ECG, echocardiography, laboratory investigation as CBC, coagulation profile, kidney function tests, liver enzymes and high sensitivity troponin and coronary angiography to assess severity of coronary artery disease by SYNTAX score.

Results: POAF score which contain 9 variables: Age >60 y, Smoking, COPD, CP bypass time (min) >86.5, Vent. Time <23.5, PLR >113.4, LVEF <53.5, RV function by TAPSE <2.15 and Syntax score >34.5. Each variable takes points according to multivariate analysis with total score 20. ROC curve analysis was done to pick up the best cut off value of POAF Score and incidence of POAF which revealed POAF Score more than 10 has sensitivity 99 % and specificity 86% Area under the curve 0.99. Conclusion: POAF after CABG is associated with higher morbidity and mortality, prolonged recumbence in the hospital. Prediction of POAF might be useful in detection of patients at risk for these complications using POAF risk score.

Key words: Coronary Artery Bypass Graft, post-operative atrial fibrillation

Introduction

Postoperative atrial fibrillation (POAF) is a common and potentially morbid complication following cardiac surgery, with a peak incidence on the second postoperative day. According to the previous systematic review the incidence of POAF after cardiac surgery ranges from 16-30% **(1).**

The POAF was reported to be associated with greater in-hospital mortality, prolonged hospital stays. In addition, the long-term survival was worse in patients who developed POAF. Patients who develop POAF incur additional hospital treatment cost and 2 to 4 fold increased risk of stroke, reoperation for bleeding, infection, renal or respiratory failure, cardiac arrest, cerebral complications and need for permanent pacemaker placement **(2).**

Although its high frequency after cardiac surgery, the exact pathogenesis of POAF is not well understood. It was hypothesized that its development is multi-factorial and influenced by patient, surgical, anesthetic, and postoperative factors. Cardiac surgery is associated with vast physiological disturbances such as vasoplegia, systemic inflammation, excessive catecholamine release, changes in sympathetic and parasympathetic tone, large fluid shifts, and neuro-humoral activation and all potential stimuli for arrhythmia **(3).**

We aimed to determine the possible predictors of POAF after coronary artery bypass surgery and its impact on outcome.

Material and methods

Patient population

This is a prospective cohort study including a total of 260 patients, 60 were excluded due to MVR in 36 patients and AVR in 24 patients and only 200 patients completed the study and admitted for CABG at Zagazig university hospitals. Patients were enrolled in the study after obtaining their written informed consent, and approval of the local ethics committee of the hospital.

Patients who included in the study were divided according to developing POAF into 2 groups; Group I (n = 100 patients): patients who developed POAF, Group II (n = 100 patients): patients who did not develop POAF.

Exclusion Criteria

Patients with history of any form of preoperative AF, history of myocardial infarction less than 2 weeks before the surgery, heart rate of less than 55 beats/min, advanced heart block or severe conduction disturbance, an implantable defibrillator were excluded from our study.

After exclusion of non-responders, drop out participants and those with exclusion criteria, 200 patients completed the study (this number was considered suitable enough sample for statistical analysis with significant results and correlations).

Methods

All patients were subjected to detailed history, including CAD risk factors, physical examination, Electrocardiography (ECG) was done for all patients to detect development of POAF in the postoperative period and it is defined as any documented AF of more than 5 minutes in duration or for any length of time requiring intervention for angina or hemodynamic compromise. Also, for detection of discharge rhythm was also recorded and noted

Laboratory investigations included CBC (including mean platelet volume, lymphocytic count and platelet lymphocyte ratio), coagulation profile, kidney function tests, liver enzymes, estimated GFR and high sensitivity troponin.

Echocardiographic images were obtained in the parasternal long-axis and short-axis and apical two-chamber and four-chamber views using standard transducer positions. EDD, ESD, PWD, IVSD, FS, LVEF, LA dimension and RV function by TAPSE were estimated using [Philips Epic 7 machine (California, USA) in National heart institute and Vivid 9, General Electric

Healthcare (GE Vingmed, Norway) in Zagazig university] and all measures were taken by blindly by two independent echo experts for all subjects according to ASE recommendations. **(4).**

All patients underwent coronary angiography by femoral approach in multiple views using Sildenger technique; they were analyzed by experienced angiographer who was blinded to clinical status of the patients. Right anterior oblique and left anterior oblique views were used for evaluation of the left and right coronary system, respectively. Scoring was performed for each patient with the following parameters, Coronary dominance, number of lesions, segments included per lesion, the presence of total occlusion, bifurcation, trifurcation, aorto-ostial lesion, severe tortuosity, calcification, thrombus, diffuse /small vessel disease, and lesion length >20 mm.

Syntax Score was determined by two independent experts in coronary angiography blindly, when there was a conflict between them, the mean value was considered.**(5).**

All patients had undergone follow up for six months for stroke, heart failure, ACS and mortality.

Statistical analysis

Statistical analysis was performed using Statistical Package for The Social Sciences Version 22 (IBM Corp., Armonk, NY, USA). Quantitative data are expressed as means and standard deviations.

P-Value ≤ 0.05 was considered to indicate significance. Correlation analysis assesses the strength of association between two variables.

Significant variables entered into Logistic regression model using statistical technique to predict the most significant determinants and to control for possible interactions and confounding effects. Sensitivity and specificity at different cut off points were tested by roc curve.

Receiver operating characteristic curve (ROC) for prediction of POAF by cutoff point for each score criterion and by using multivariate analysis we had β for them as follow; β less than 2 the score criterion take 1 point, β 2 - 3 the score criterion take 2 points, β3 - 5 the score criterion take 3 points and β more than 5 the score criterion take 4 points.

Results

The patients were classified into 2 groups according to developing POAF into group I, 100 patients developed POAF and group II and 100 did not develop POAF.

Regarding demographic data between both groups, mean age was 67.48±3.24 years, and group II mean age was 59.90±3.62 years with statistically significant (P ≤0.001) and for sex distribution it was non-significant p 0.243. Risk factors between the two groups, there was non-significant statistical difference regarding HTN, DM, CKD and dyslipidemia, p values 1, 0.873, 0.579 and 0.765 respectively. There was only significant difference between the two groups regarding smoking, BMI and COPD, p value 0.0.001, ≤0.001 and ≤0.001, as shown in table 1.

Regarding Peri-procedure data between both groups, there was a significant difference regarding Cp bypass time/min and ventilation time/hr with p value ≤0.001 for both, while urgent CABG and use of IABP show non-significant difference p values, 0.845 and 0.096 respectively, table 2.

Regarding CBC parameters between both groups, there was a significant difference between them regarding lymphocytic count/nl and PLR with p value 0.001 and ≤0.001 respectively, while mean HB and MPV had non-significant difference with p value 0.075 and 0.63 respectively (table 3)

Estimated GFR in group I, the mean was 59.57±17.73 ml/min while in group II the mean was 70.39±21.81 ml/min. The difference between the groups was statistically significant with P value ≤0.001, while serum creatinine showed non-significant difference p value 0.578 (Table 4).

Regarding Echo data, there was a significant difference regarding LVEF and RV function between both groups with p value ≤0.001 for all, while LA dimension had non-significant difference p value 0.819, table 5.

For Syntax score, in group I was 49.84±7.69 while in group II the Median was 31.82±5.36. The difference between the groups was statistically significant with P value ≤0.001 (Table 5).

Regarding in-hospital outcome; HF, in group I, there were 13% HF patients while in group II there were 10% HF patients. The difference between the groups was statistically non-significant (P 0.506). There were 11% Stroke patients in group I while in group II there were 2 % Stroke patients. The difference between the groups was statistically significant (P =0.01). Six percent of the patients in group I had SCD while in group II it was1 % of the patients. The difference between the groups was statistically non-significant (P =0.118) (Table 6).

ROC curve analysis was done to pick up the best cut off value of POAF Score criteria which revealed for CP bypass time it was >86.5 with 76% sensitivity and 55% specificity, for vent. time it was <23.5with 88% sensitivity and 54% specificity, for PLR it was >113.4 with 77% sensitivity and 60% specificity, for LVEF it was <53.5 with91% sensitivity and 63% specificity, for TAPSE it was <2.15 with 90% sensitivity and 65% specificity and for Syntax score it was >**3**4.5 with 99% sensitivity and 72% specificity, table 7, figure 1.

A multivariate logistic regression was performed to predict the effects of Age >60 y, Smoking, COPD, CP bypass time (min) >86.5, Vent. Time <23.5 hrs, PLR >113.4, LVEF %< 53.5, RV function by TAPSE <2.15cm and Syntax score >34.5on the likelihood that participants would have high incidence of POAF, table 8. The result showed that POAF score (table 9) is an independent predictor for incidence of POAF (p≤0.001). (Table 10)

ROC curve analysis was done to pick up the best cut off value of POAF Score and incidence of POAF which revealed POAF Score more than 10 with sensitivity 99 % and specificity 86% Area under the curve 0.9. (Table 11, figure 2).

Table (1): Demographic data and risk factors among POAF and no AF groups

Variables	POAF (n=100)	No AF (n=100)	Test of Value	P value
Age (years) Mean ± SD	67.48±3.24	59.90±3.62	t=15.59	≤0.001*
Male **Female**	80 (80%) 20 (20%)	73 (73%) 27 (27%)	χ^2=1.36	0.243
Smoking	67 (67%)	44 (44%)	χ^2=10.17	0.001*
HTN	53 (53%)	53 (53%)	χ^2=0	1.0
Dyslipidemia	67 (67%)	65 (65%)	χ^2=0.089	0.765
DM	74 (74%)	73 (73%)	χ^2=0.026	0.873
BMI	29±1.40	26.06±0.91	t=17.78	≤0.001*
COPD	36 (36%)	13 (13%)	χ^2=14.29	≤0.001*

CKD	8 (8%)	6 (6%)	χ^2=0.307	0.579

Table (2): Peri-procedure (CABG) among POAF and no AF groups.

Variables	POAF (n=100)	No AF (n=100)	Test of value	P value
Urgent CABG	16 (16%)	15 (15%)	χ^2=0.038	0.845
CP bypass time (mi	100.78±22.8	84.18±20.55	t=5.41	≤0.001*
Use IABP	4 (4%)	10 (10%)	χ^2=2.76	0.096
Vent. Time (hrs)	16.12±5.64	23.63±6.73	t=8.54	≤0.001*

Table (3): CBC among POAF and no AF groups.

CBC	POAF (n=100)	No AF (n=100)	Test	P value
HB mg/dl	12.76±1.63	13.15±1.41	1.79	0.075
MPV	8.92±1.56	9.02±1.39	0.483	0.630
Lymphocyte /nL	1.87±0.72	2.2±0.64	3.40	0.001*
PLR	154.46±52.83	107.89±30.28	7.65	≤0.001*

Table (4): Renal function tests among POAF and no AF groups

Renal function test	POAF (n=100)	No AF (n=100)	Test	P value
Creatinine mg/dl	0.91±0.27	0.89±0.27	0.557	0.578
eGFR (ml/min)	59.57±17.73	70.39±21.81	3.85	≤0.001*

Table (5): ECHO data and SYNTAX score

ECHO data	POAF (n=100)	No AF (n=100)	Test of value	P value
LVEF %	45.52±5.97	54.99±6.01	t=11.18	≤0.001*
LA dimension cm	3.51±0.30	3.52±0.31	t=0.230	0.819
RV function by TAPSE cm	1.82±0.27	2.21±0.16	t=12.18	≤0.001*
Syntax score	49.84±7.69	31.82±5.36	t=17.54	≤0.001*

Table (6): Comparison between POAF and no AF groups regarding in-hospital outcome

Hospital Outcom	POAF (n=100)	No AF (n=100)	Test of value	P value
HF	13 (13%)	10 (10%)	χ^2=0.442	0.506
Stroke	11 (11%)	2 (2%)	χ^2=6.66	0.01*
SCD	6 (6%)	1 (1%)	FET	0.118

Table (7): Receiver operating characteristic curve (ROC) for prediction of POAF by score criteria

	AUC	95% CI		Cutoff	Sensitivity	Specificity	PPV	NPV	Accuracy
		Lower	Upper						
CP bypass time (min)	0.714	0.785	0.785	**>86.5**	76%	55%	62.8	69.6	65.5%
Vent. Time (hrs)	0.798	0.734	0.862	**<23.5**	88%	54%	65.7	81.8	71%
PLR	0.767	0.700	0.834	**>113.4**	77%	60%	65.8	72.3	68.5%
LVEF %	0.871	0.823	0.920	**<53.5**	91%	63%	71.1	87.5	77%
TAPSE (cm)	0.889	0.844	0.934	**<2.15**	90%	65%	72	86.7	77.5%
Syntax score	0.973	0.955	0.991	**>4.5**	99%	72%	77.9	98.6	85.5%

Table (8): Multivariate logistic regression analysis for independent predictors of POAF

Independent predictors	β	Std. Error	P value	OR (95% CI)
Age >60 y Score 1	1.792	0.581	0.002	6 (1.9-18.7)
Smoking Score 1	0.982	0.351	0.005	2.7 (1.3-5.3)
COPD Score 1	1.729	0.670	0.01	5.6 (1.5-20.9)
CP bypass time >86.5 Score 2	2.175	1.102	0.048	8.8 (1.1-76)
Vent. Time <23.5 Score 2	2.496	1.100	0.023	12.1 (1.4-104)
PLR >113.4 Score 3	3.217	1.185	0.007	24.9 (2.4-254)
LVEF <53.5 Score 3	4.253	1.231	0.001	70.3 (6.2-785)
RV function by TAPSE <2.15 Score 3	3.494	1.055	0.001	32.9 (4.2-260)
Syntax score >34.5 Score 4	8.667	1.967	≤0.001	580 (123-2741)

OR: odds ratio, CI: confidence interval

Table (9): POAF Score

POAF score parameters	score
Age >60 y	1
Smoking	1
COPD	1
CP bypass time (min) >86.5	2
Vent. Time <23.5	2
PLR >113.4	3
LVEF <53.5	3
RV function by TAPSE <2.15	3
Syntax score >34.5	4
Total	**20**

Table (10): POAF score among POAF and no AF groups

	POAF (n=100)	No AF(n=100)	Iann Whitney	P value
POAF score Median (Min-Max)	16 (10-19)	7 (0- 15)	12.01	≤0.001*

Table (11): Receiver operating characteristic curve for prediction of POAF-by-POAF score

AUC	95% CI		Cutoff	Sensitivity	Specificity	PPV	NPV	Accuracy
	Lower	Upper						
0.99	0.98	0.99	**> 10**	99%	86%	87.6	98.8	92.5%

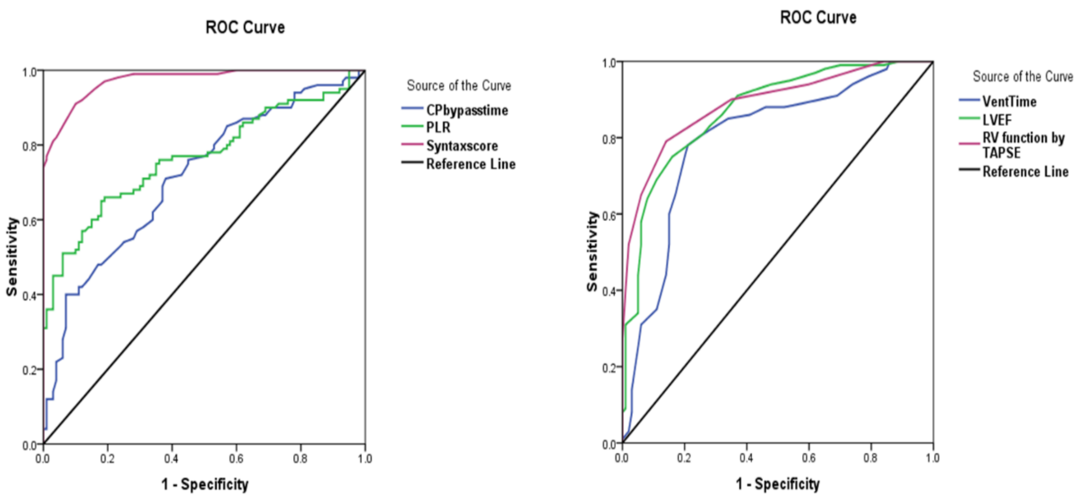

Figure 1: Receiver operating characteristic curve (ROC) for prediction of POAF by score criteria

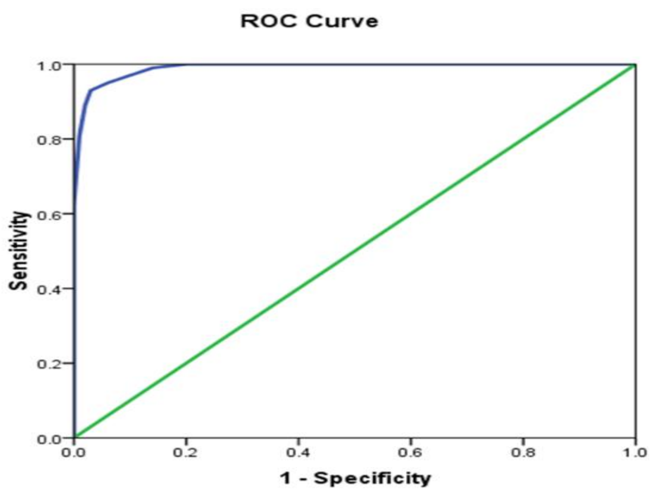

Figure 2: ROC for prediction of POAF-by-POAF score

Discussion

Atrial fibrillation was recognized as a major cause of morbidity soon after the introduction of CABG for the treatment of atherosclerotic CAD. Postoperative atrial fibrillation (POAF) is one of the most common complications after coronary artery bypass graft (CABG) surgery, with an incidence of 20%– 50% **(6).**

Targeting patients at risk of postoperative AF with intensive prophylactic measures may drastically reduce the length of hospital stay and the associated high costs **(7).**

The aim of our study was evaluation of predictors of AF after coronary artery bypass surgery. Two hundred adult patients underwent coronary artery bypass graft surgery at Zagazig University Hospitals and National heart institute.

In in group I the mean age was 67.48±3.24 years, and group II mean age was 59.90±3.62 years with statistically significant difference ($P \leq 0.001$). This was in agreement with **(8)** who study Factors influencing postoperative atrial fibrillation in patients undergoing on-pump coronary artery bypass grafting on 252 Patients divided into two groups; Group A included patients who did not develop PO AF (168 patients) and Group B patients who developed PO AF (84 patients) with the mean age for patients with POAF was 65 years ($P<0.0001$).

While in disagreement with **(9)** who study Predictors of atrial fibrillation occurrence after coronary artery bypass graft surgery and with the mean age for patients with POAF was 68.53 ± 9.38 years and 64.50 ± 10.59 for NO POAF and there was no difference between the two groups (p 0.065). This discrepancy is due to our study included younger patients compared to Topal and Eren, **(9)**

Smoking is an important modifiable risk factor for cardiovascular diseases, such as coronary heart disease and cardiac arrhythmias. In several case reports, nicotine (a constituent of tobacco) has been linked to the development of AF. Nicotine may induce pro-arrhythmic atrial fibrosis with a resulting increased susceptibility to catecholamine. **(10)**

Regarding smoking, group I there were 67 % smoker and group II there were 44 % smoker (P 0.001).

This was in agreement with **(11)** who studied Predictors of Atrial Fibrillation after Coronary Artery Bypass Grafting in 1481 patients divided into two groups according to the incidence of POAF with 806 (54.4%) smokers (P 0.002). Our results was discordant with **(8)** who studied effect of smoking in POAF in 800 patients, they found 404 were smokers and 396 were not with ($P = 0.063$).

Our study showed statistically non-significant difference between the groups regarding HTN and DM with p value > 0.05. This was in agreement with (Perrier et al., 2017)who study 1481 After Coronary Artery Bypass Grafting for incidence of AF and found statistically non-significant difference between the groups regarding HTN and DM with p value > 0.05.

Regarding COPD, in group I, there were 36% COPD patients while in group II there were 13% COPD patients ($P \leq 0.001$). This was in agreement with **(5)** who study Predictors of Atrial Fibrillation after On-Pump Coronary Artery Bypass Graft Surgery and divided the study population into two groups regarding incidence of AF and found COPD had significant difference between the groups with (p 0.004). This was against **(12)** in which A total of 125 patients were retrospectively analyzed for Predictors of Atrial Fibrillation After Coronary Artery Bypass Grafting and divided the study population into two groups regarding incidence of AF and found COPD had non-significant difference between the groups with p value 0.152.

This discrepancy as small sample size of the previous study (125 patients, 50 with AF).In COPD, left ventricular function may also be affected by the wide swings in intra-thoracic pressure and by hypertrophy of the right ventricle. Arrhythmias are common in patients with hypoxemia and abnormalities of carbon dioxide tension. Emerging risk factors for the development of AF include a variety of breathing disorders: among them chronic obstructive disease (COPD) has been associated with a high frequency to cardiac arrhythmias. **(13)**

Regarding BMI, it was higher in group I compared to group II (29.00±1.40 and 26.06±0.91) respectively (P ≤0.001). This was against **(14)** who study Predictors of atrial fibrillation after off-pump coronary artery bypass graft surgery on 296 consecutive patients who underwent off-pump CABG surgery and divided the study population into two groups regarding incidence of AF and found non-significant difference in BMI between the groups p 0.54.

Obesity has been associated with increased cardiovascular risk and could be responsible for almost 60% of the increase in atrial fibrillation incidence. Obese patients have a 1.5- times higher risk of developing atrial fibrillation as compared with normal weight individuals, this association is not well understood, changes in atrial and ventricular structure, diastolic function, autonomic function, and increased total blood volume might play a role. Furthermore, obesity is associated with left atrial enlargement which may lead to AF. **(15)**

Regarding the CP bypass time (min), in group I the Mean time was 100.78±22.8 minutes, and group II mean time was 84.18±20.55 minutes (P ≤0.001). This was in agreement with **(12)** who made a study on 125 patients and divided the study population into two groups regarding incidence of AF and found Cardiopulmonary bypass time (min) statistically significant (97.9 ± 35.2 vs. 92.7 ± 35.1 min, p =0.022).

Also, was in agreement with **(16)** who study Predicting the Risk of Postoperative Atrial Fibrillation After Cardiac Surgery on 17262 patients undergoing adult cardiac surgery and divided the study population into two groups regarding incidence of AF and found Cardiopulmonary bypass time (min) statistically significant (76.9±53.1 vs. 88.8±56.1 min, p <0.001).

Regarding the Ventilation Time, in group I the Mean time was 16.12±5.64 hrs, and group II mean time was 23.63±6.73hrs with statistically significant difference (P ≤0.001). This was in agreement with **(16)** who divided the study population into two groups regarding incidence of AF and found Ventilation time (hours) statistically significant (6 (4 to 11) vs. 8.5 (5 to 17) hours, p <0.001).

Also, was in agreement with **(8)** who divided the study population into two groups regarding incidence of AF and found Ventilation time (hours) statistically significant (16.1 ± 12.12 vs. 23 ± 15.1 hours, p = 0.003).

On the other hand, a study by **(17)** in which 1240 patients with preoperative normal sinus rhythm underwent operations for isolated coronary artery bypass grafting with cardiopulmonary bypass assessed for predictors and laboratory effect and found Cardiopulmonary bypass time [min] (95.28±20.8 in group I and 93.55±20.55 in group II, p 0.45) and Intubation time [h] (22.77±5.64 in group I and 23.18±5.25 in group II, p 0.13) was non-significant between both groups.

Regarding PLR, in group I, the mean was 154.46±52.83 while in group II the mean was 107.89±30.28 with statistically significant difference with P value ≤0.001. This was in agreement with **(12)** who studied Association of Preoperative Platelet-to-Lymphocyte Ratio with Atrial Fibrillation after Coronary Artery Bypass Graft Surgery on 125 patients and divided the study population into two groups regarding incidence of AF and found PLR statistically significant (152.8 ± 82.2 for AF group vs. 118.2 ± 32.9 for non-AF group, p = 0.012).

Gungor et al, **(12)** also found statistically non-significant difference between the groups regarding liver and renal function which is was in agreement with our study.

Regarding LVEF, in group I was 45.52±5.97 % while in group II the Median was 54.99±6.01 % with statistically significant difference with P value ≤0.001. This was in agreement with **(8)** who had Group A included patients who did not develop PO AF (168 patients) and Group B patients who developed PO AF (84 patients) and found LVEF statistically significant (44.8 ± 5.7 for AF group vs. 56.7 ± 6.2 for non-AF group, p <0.001).

Also, was in agreement with **(11)** who performed a prospective observational study from October 2008 to December 2013 of 1,481 patients who underwent isolated CABG with cardiopulmonary bypass and had no history of AF and found LVEF statistically significant (57.79 ± 6.4 for AF group vs. 47.55 ± 3.4 for non-AF group, p <0.001).

While our results was discordant with **(18)** who studied predictors of postoperative atrial fibrillation after Coronary artery bypass graft surgery and found LVEF statistically non-significant (42.39 ± 8.2 for AF group vs. 44.2 ± 7.8 for non-AF group, p =0.15).

Atrial fibrillation is common in patients with heart failure and is estimated to occur in 15% to 30% of patients during the course of their disease. LV systolic dysfunction leads to myocardial energy depletion, myocardial ischemia, abnormalities of calcium regulation, or extracellular matrix remodeling. Exacerbation of LV dysfunction also may be due to AF irregularity, because impaired hemodynamic and sympathetic activation are found in patients paced at irregular rhythm **(19).**

Regarding LA dimension, in group I was 3.51±0.30 cm. while in group II the Median was 3.52±0.31 cm. with statistically non-significant difference P value 0.819. This was in agreement with **(17)** who studied variable predictors for development of postoperative atrial fibrillation in patients undergoing isolated coronary artery bypass grafting and found LA dimension had no effect on AF incidence with statistically non-significant (P value 0.33).

Regarding RV function by TAPSE, in group I was 1.82±0.27 while in group II the Median was 2.21±0.16 with statistically significant difference with P value ≤0.001. This was against **(20)** who study 92 patients undergoing elective cardiac surgery for the relationship between right ventricular function and atrial fibrillation after cardiac surgery and found RV function by TAPSE was statistically non-significant (12.5 ± 4 for AF group vs. 13.4 ± 4 for non-AF group, p =0.306).

This discrepancy as Ting et al **(20)** use trans-esophageal echocardiography (TEE) in recording two specific timeframes: before sternotomy (T1); after sternal closure (T2).

Regarding Syntax score, in group I it was 49.84±7.69 while in group II the mean was 31.82±5.36 with P value ≤0.001. This was in agreement with **(5)** who study SYNTAX Score as a Predictor of Atrial Fibrillation after On-Pump Coronary Artery Bypass Graft Surgery and divided the study population into two groups regarding incidence of AF and found Syntax score had significant difference between the groups with p value <0.001 (26.7 ± 5.7 for AF group vs. 22.1 ± 4.1 for non-AF group).

Conclusion

POAF after CABG is associated with higher morbidity and mortality, prolonged recumbence in the hospital. Prediction of POAF might be useful in detection of patients at risk for these complications using POAF risk score.

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