CODEN [USA]: IAJPBB ISSN: 2349-7750

INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES

http://doi.org/10.5281/zenodo.1464187

Available online at: http://www.iajps.com *Research Article*

FREQUENCY OF ATRIAL FIBRILLATION AND ITS COMMON CLINICAL OUTCOMES AMONG PATIENTS PRESENTING WITH ACUTE MYOCARDIAL INFARCTION

[1]Dr.Kainat, [2]Dr.Maryam Tariq, [3]Dr.Sunnaina Tahir

[1]Foundation University Islamabad

[2]Rawalpindi Medical University, Rawalpindi

[3] Bahria University Medical and Dental College

Abstract:

Objective: *to regulate the consequences of a severe myocardial infarction related to atrial fibrillation.*

Study design: *Factual study.*

Place and duration of the study: *this study was performed at the Heart Disease Institute of Karachi and at the University Hospital of Karachi Dow OJHA Campus, from July 2017 to December 2017.*

Materials and methods: *311 patients older than 30 years, both existing sexual categories with acute myocardial infarction, participated in the study in the outpatient department or in the emergency room. Patients admitted to the hospital due to CCU due to a severe myocardial infarction (ST ST elevation and non-MI MI elevation) were also included. Patients with severe co-morbidities such as malignant tumors, renal failure, COPD or decompensated liver cirrhosis, patients previously treated with ventricular dysfunction, AF, have been omitted in this study.*

Results: *of 311 patients, 203 or 65.27% were taking STEMI and 108 or 34.72% of patients admitted with Non ST-Elevation Myocardial Infarction (NSTEMI). Atrial fibrillation was discovered in 38 or 12.21 patients. The most typical clinical consequence in patients with atrial fibrillation was ventricular fibrillation, controlled by ventricular tachycardia (VT), the patient's expiration and stroke. Of the 3 patients who had expired, 6 or 15.78% of the patients had VF and 4 or 10.52% of the patients had a cerebrovascular accident, so the clinical consequences occurred in 19 of 38 patients who had had the presence of atrial fibrillation.*

Conclusions: *the relationship regulator therapy and oral anticoagulants should be accessible for patients at danger of expanding atrial fibrillation; these can cause a greater decrease in death rate.*

Key words: *atrial fibrillation, acute myocardial infarction, STEMI, Non ST-Elevation Myocardial Infarction.*

Corresponding author:

Dr.Kainat,

Foundation University,

Islamabad

QR code

Please cite this article in press Kainat et al., ***Frequency of Atrial Fibrillation and Its Common Clinical Outcomes among Patients Presenting With Acute Myocardial Infarction.****, Indo Am. J. P. Sci, 2018; 05(10).*

INTRODUCTION:

Atrial fibrillation is the most typical arrhythmia present in patients with severe myocardial infarction. The main reason for the expansion of atrial fibrillation comprises myocardial ischemia. A few reasons may include hemodynamic disorders, pericarditis, left ventricular dysfunction and increased catecholamines [1]. A populace based study indicated that the prominence of atrial fibrillation in severe myocardial ischemia frequently increased by 13.3 percent in recent decades. Atrial fibrillation between severe myocardial ischemia has a serious influence on the clinic and on the prediction of the disease [2]. Atrial fibrillation was detected in 10.4-12 per cent of the cases with severe myocardial ischemia conducted with thrombolytics or primary percutaneous interventions, with advanced risk levels of left ventricular dysfunction [3]. It was expected that atrial fibrillation would darken about 6-21 Percentage of acute myocardial infarction. It correlates with the advanced rate of hospital mortality, which is 13.8 versus 5.8 percent. The expansion of ventricular fibrillation and ventricular tachycardia are also more obvious among patients who presented atrial fibrillation related to those with sinus rhythm. There is a higher threat rate of succeeding attacks amongst these patients (9.2% vs. 2.6%). [4]. The reason for the expansion of atrial fibrillation is ischemia, although during the arrhythmia the blood supply to the myocardium cooperates even more with shocking consequences. The correlated damage of atrial contraction leads to a reduction in the size of the stroke and an increase in filling pressures of atrial dilation [5]. Atrial fibrillation is only an autonomous hazard factor for confrontational medical consequences in patients with myocardial infarction. It can also accelerate tachyarrhythmias due to increased damage to the blood supply, changing the R-R ranges. Atrial fibrillation can also be correlated with the appearance of the sympathetic nervous system [6,7]. A few of analysts for the expansion of atrial fibrillation after myocardial infarction comprise advanced heart failure (as confirmed by the Killip class), advanced age more than 65 beats at presentation, no history of beta-blocker use, or thrombolytic therapy in the last[8].

MATERIALS AND METHODS:

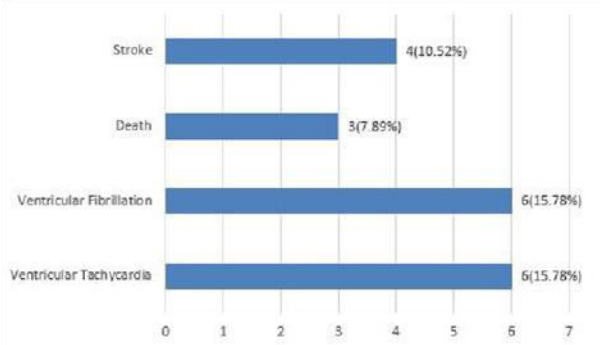
This study was approved at the Karachi Institute of Cardiac Diseases and at the University Hospital Dow OJHA Campus Karachi, from July 2017 to December 2017. "Patients over 30 years, men and women with severe myocardial infarction were included in the study through the outpatient department or the emergency room Patients who are admitted to the hospital for CCU have also been involved due to a severe myocardial infarction

RESULTS:

In this study, a total of 311 patients with severe myocardial infarction were recorded. There were 188 or 60.45% of male patients and 123 or 39.54% of women. Of the 311 patients, 203 or 65.27% had STEMI and 108 or 34.72% of the patients were admitted with Non ST-Elevation Myocardial Infarction NSTEMI (Table 1). Atrial fibrillation was observed in 38 or 12.21 patients. Amongst these 38 patients, 12 were men and 26 women. The age of the studied populace ranged between 30 and 71 years, with an average age of 51.12 ± 6.21 years. The most typical medical consequence in patients with atrial fibrillation was ventricular fibrillation, followed by ventricular tachycardia (VT), patient expiration, and stroke. Of the 3 patients who had expired, 6 or 15.78% of the patients had a VF and 4 or 10.52% of the patients had a stroke, so the clinical consequences happened in 19 of 38 patients who developed AF (Table No. 1).

Table n. 1: clinical outcome of patients

Variable	Patients	Percentage
Age groups (n=311)		
31 – 40 years	65	20.90%
41 – 50 years	88	28.29%
51 – 60 years	109	35.04%
> 60 years	49	15.72%
Gender (n=311)		
Male	188	60.45%
Female	123	39.54%
STEMI and NSTEMI		
STEMI	203	65.27%
NSTEMI	108	34.72%



The graph n. 1: clinical outcome of acute myocardial infarction with atrial fibrillation (n = 38)

DISCUSSION:

There are a few investigators of atrial fibrillation in patients with serious myocardial localized necrosis. A couple of these involve propelled age, event of heart disappointment and lacking left ventricular function [4]. Concentrates with doctor's facility demise rates prescribed that the development of atrial fibrillation in patients with serious myocardial localized necrosis is a sovereign forecast of death. This can be portrayed as atrial fibrillation can be assigned as a demonstrator of heart disappointment. Atrial fibrillation can likewise demonstrate high filling weights or abundance volume. The main comparing FA isn't identified with death and sickness because of the absence of these markers [9]. Atrial fibrillation can likewise trigger other ventricular tachyarrhythmias. This might be because of variable R-R interims, diffuse thoughtful initiation or ischemia8. In our examination, 12.2% of patients created atrial fibrillation after an intense myocardial localized necrosis. The investigation by Crenshaw et al. Shows patients with atrial fibrillation of 10.4% after an extreme myocardial dead tissue. The investigation by Crenshaw et al set up that age is an autonomous indicator of the development of atrial fibrillation after a serious myocardial infarction [10]. The examination by Zahoor et al shows that 9.1% of patients with atrial fibrillation after a serious myocardial infarction4. 7.5% of patients created atrial fibrillation after a myocardial dead tissue in the investigation by Lopes et. Lopes and others have adjusted the individuals from their investigation into two classes. Those with STEMI while those with NSTEMI. Atrial fibrillation was more common among patients with STEMI contrasted with 8 percent of NSTEMI contrasted and 6.4 percent [11]. A meta-investigation was played out that included 20 unique examinations. The outcomes show that up to 6 to 21% of patients with serious myocardial dead tissue advancement to atrial fibrillation amid the intense phase [12,13]. In our examination, passing happened in 7.89% of patients, while the investigation by Zahoor et al demonstrated a death rate of 18.2% of patients [4]. Lopes et al and their peers affirmed a 5.1 percent death rate among patients with myocardial dead tissue who created atrial fibrillation related with 1.6 percent among those with sinus cadence. In our investigation, ventricular fibrillation created in 15.78% of patients, however ventricular tachycardia likewise happened in 15.78% of patients. Stroke happened in 10.52% of patients. These outcomes are equivalent to those of the TASTE I[10,11] process. "It has been seen that with the advancement of thrombolytic treatments, the recurrence of atrial fibrillation has diminished altogether." One investigation said that oral anticoagulants, primarily warfarin, caused a more prominent lessening in the death rate, around 29% of the hazard decrease. Relative mortality, while 7% decrease in the danger of total mortality at 1-year interims [14]. Patients with danger of atrial fibrillation are regularly offered beta blockers for the recurrence controller, albeit beta-blockers or enemies are utilized of myocardial calcium Ischemia can additionally change heart work, in which case it is conceivable to introduce the digitalization.Amiodarone can likewise be added to the regimen [15,16].

CONCLUSION:

Patients with danger of creating atrial fibrillation ought to be offered a controlled recurrence pharmacological treatment to abstain from crushing results. Different choices incorporate antiarrhythmic operators and prophylaxis for thromboembolism. Patients with cutting edge age, propelled heart disappointment, high pulse and absence of recurrence control treatment ought to be viewed as in light of the fact that they are more inclined to developing atrial fibrillation that can encourage all the more annihilating clinical results.

Conflicts of interest: the study has no conflicts of interest to be declared by a writer.

REFERENCES:

1. Furberg CD, Psaty BM, Manolio TA, Gardin JM, Smith VE, Rautaharju PM. Prevalence of atrial fibrillation in elderly subjects (the Cardiovascular Health Study). Am J Cardiol 1994;74(3):236-41.
2. Gorenek B, Kudaiberdieva G. Atrial fibrillation in acute ST-elevation myocardial infarction: clinical and prognostic features. Current cardiology reviews 2012;8(4):281-9.
3. Vora AN, Wang TY, Li S, Chiswell K, Hess C, Lopes RD, et al. Selection of Stent Type in Patients With Atrial Fibrillation Presenting With Acute Myocardial Infarction: An Analysis From the ACTION (Acute Coronary Treatment and Intervention Outcomes Network) Registry—Get With the Guidelines. J Am Heart Assoc 2017; 6(8):e005280.
4. Khan ZA, Ahmad B, Hussain C, Hassan MU, Amin F, Iqbal A. Frequency of atrial fibrillation and its common clinical outcomes among patients presenting with acute myocardial infarction. Pak Heart J 2014;47(3).
5. Olsson LG, Swedberg K, Ducharme A, Granger CB, Michelson EL, McMurray JJ, et al. Atrial fibrillation and risk of clinical events in chronic heart failure with and without left ventricular systolic dysfunction: results from the Candesartan in Heart failure-Assessment of Reduction in Mortality and morbidity (CHARM) program. J Am Coll Cardiol 2006;47(10):1997-2004.
6. Roy D, Brugada P, Wellens HJ. Atrial tachycardia facilitating initiation of ventricular tachycardia. Pacing and Clinical Electrophysiol 1983;6(1): 47-52.
7. Grönefeld GC, Mauss O, LI YG, Klingenheben T, Hohnloser SH. Association between atrial fibrillation and appropriate implantable cardioverter defibrillator therapy: results from a prospective study. J Cardiovascular Electrophysiol 2000;11(11):1208-14.
8. Schmitt J, Duray G, Gersh BJ, Hohnloser SH. Atrial fibrillation in acute myocardial infarction: a systematic review of the incidence, clinical features and prognostic implications. Eur Heart J 2008; 30(9):1038-45.
9. Schoonderwoerd BA, Smit MD, Pen L, Van Gelder IC. New risk factors for atrial fibrillation: causes of 'not-so-lone atrial fibrillation'. Europace 2008; 10(6):668-73.7
10. Crenshaw BS, Ward SR, Granger CB, Stebbins AL, Topol EJ, Califf RM, Gusto-I Trial Investigators. Atrial fibrillation in the setting of acute myocardial infarction: the GUSTO-I experience fn1. J Am Coll Cardiol 1997;30(2): 406-13.
11. Lopes RD, Pieper KS, Horton JR, Al-Khatib SM, Newby LK, Mehta RH, et al. Short-and long-term outcomes following atrial fibrillation in patients with acute coronary syndromes with or without ST-segment elevation. Heart 2008;94(7):867-73.
12. Pizzetti F, Turazza FM, Franzosi MG, Barlera S, Ledda A, Maggioni AP, et al. Incidence and prognostic significance of atrial fibrillation in acute myocardial infarction: the GISSI-3 data. Heart 2001;86(5):527-32.
13. Lee HY, Yang PS, Kim TH, Uhm JS, Pak HN, Lee MH, Joung B. Atrial fibrillation and the risk of Med. Forum, Vol. 29, No. 463 April, 2018 myocardial infarction: a nation-wide propensity-matched study. Scientific reports 2017;7(1):1-8.
14. Stenestrand U, Lindbäck J, Wallentin L. Anticoagulation therapy in atrial fibrillation in combination with acute myocardial infarction influences long-term outcome: a prospective cohort study from the Register of Information and Knowledge About Swedish Heart Intensive Care Admissions (RIKS-HIA). Circulation 2005; 112(21):3225-31.
15. Zipes DP, Camm AJ, Borggrefe M, Buxton AE, Chaitman B, Fromer M, et al. "ACC/AHA/ESC 2006 guidelines for management of patients with ventricular arrhythmias and the prevention of sudden cardiac death: a report of the American College of Cardiology/American Heart Association Task Force and the European Society of Cardiology Committee for Practice Guidelines (Writing Committee to Develop guidelines for management of patients with ventricular arrhythmias and the prevention of sudden cardiac death) developed in collaboration with the European Heart Rhythm Association and the ...." Europace 2006;8(9):746-837.
16. Vassallo P, Trohman RG. Prescribing amiodarone: an evidence-based review of clinical indications. JAMA 2007;298(11):1312-22.