



Clinical Profile of Depression and Treatment with Antidepressants in Post Acute Coronary Syndrome Patients

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Abstract

Acute coronary syndrome (ACS) among Cardiovascular diseases (CVDs) is the major cause of mortality worldwide and are the leading cause of death in India also. ACS refers to any group of clinical symptoms compatible with acute myocardial ischemia and covers the spectrum of clinical conditions ranging from unstable angina to non-ST-segment elevation myocardial infarction (NSTEMI) to ST-segment elevation myocardial infarction (STEMI). Several surveys were conducted across the country over the past few years have shown a rising of major risk factors for CVD in all population. Depressive disorders are estimated as the second largest cause of loss in connection with social people and increased risk for death. Patients with post- ACS depression have significantly had more hospital visits and huge health care costs than similar patients without depression. The main aim of our study was to determine the clinical efficacy of antidepressants in post-acute coronary syndrome patients. A prospective observational study was done for about 6 months in general medicine and cardiology departments of Rajiv Gandhi Institute of medical sciences, a 750 bedded tertiary care teaching hospital. A total of 100 ACS patients were taken. Among 100 post ACS patients, 76 were found to have depressive episodes and were diagnosed with becks depression score by using 21 questionnaires and with DSV-V criteria. Most commonly used antidepressant was Sertraline. A Supportive measure such as preoperative counseling should be provided to prevent post-ACS depression was undertaken prior to therapy was significant to reduce the depressive condition.

Keywords: CVDs, ACS, STEMI, NSTEMI, Depression.

Introduction

Cardiovascular diseases (CVDs) are the major cause of mortality worldwide and are the leading cause of death in India also^(1,4). Several surveys were conducted across the country over the past few years have shown a rising of major risk factors for CVD in all population. The problem of increased risk factors for CVD in India is because of the lack of standard guidelines and system, proper diagnosis and appropriate treatment⁽⁴⁾.

Acute coronary syndrome (ACS) refers to any group of clinical symptoms compatible with acute myocardial ischemia and covers the spectrum of clinical conditions ranging from unstable angina to non-ST-segment elevation myocardial infarction (NSTEMI) to ST-segment elevation myocardial infarction (STEMI). ⁽²⁾STEMI occurs by developing a complete obstruction of a major coronary artery previously affected by atherosclerosis⁽²⁾. Unstable angina and NSTEMI

are intimately related conditions through pathophysiology and clinical manifestations are similar, but they vary in severity. Patients with suspected acute coronary syndrome should be assessed immediately by an appropriate health care professional⁽²⁾. In the general population, the 1-year record of Depression is approximately 7 %, but studies have found that as many as 20% of post-Acute coronary syndrome(ACS) patients have Depression and 65% of post-myocardial infarction (MI) patients have increased depression symptoms⁽³⁾. Depressive disorders are estimated as the second largest cause of loss in connection with social people and increased risk for death⁽⁶⁾. Patients with post- ACS depression have significantly had more hospital visits and huge health care costs than similar patients without depression⁽⁶⁾. The main aim of our study was to determine the incidence of depression in post ACS patients along with incidence of usage of antidepressants in post-acute coronary syndrome depressive patients.

Methodology

A prospective observational study was done for about 6 months in general medicine and cardiology departments of Rajiv Gandhi Institute of medical sciences, a 750 bedded tertiary care teaching hospital. A total of 100 ACS patients were taken. Patients of age group above 20 years who are diagnosed with the acute coronary syndrome, Patients with Unstable angina, STEMI, NSTEMI are on medication, post percutaneous transluminal coronary angioplasty (PTCA) and post Coronary artery bypass surgery(CABG) were included and patients who are not interested to participate in the study were excluded. All the patient's demographics were collected and followed. After 1 week of therapy, patients were assessed for depressive episodes by using becks depression score and DSV-V criteria and antidepressants were prescribed for patients who are diagnosed with depression for about 6 weeks and regular follow up of patients were done.

Results

A total of 100 patients were taken, among them, males were 26 and females were found to be 74 was represented in table 1. Among them 1 patient was with age group of 20-25,2 patients were in between 26-30,8 patients were in between 31-35,12 patients were in age group of 36-40,9 patients were in between 41-45,22 patients were at age group of 45-50,26 patients were at age group of 51-55,13 patients were at age group of 56-60,4 patients were at age group of 60-65,3 patients were at age group of 65-70 and completely illustrated in table 2.

Table 1 shows gender-wise distribution of patients

Gender	Total Number	Percentage
Males	26	26%
Females	74	74%

Table 2. Shows age wise distribution of patients

Age	Total Number	Percentage
20-25	1	1%
26-30	2	2%
31-35	8	8%
36-40	12	12%
41-45	9	9%
46-50	22	22%
51-55	26	26%
56-60	13	13%
61-65	4	4%
66-70	3	3%

Among 100 post ACS patients, 52 patients had undergone CABG, 31 patients had undergone PTCA and 17 patients were under medication management with antiplatelets, beta blockers, angiotensin-converting enzyme inhibitors (ACEI)/ Angiotensin receptor blockers (ARB), Statins for the Acute coronary syndrome.

Among 100 post ACS patients, 76 were found to have depressive episodes and 12 patients among them had complaints of Non organic chest pain, after 1 week of therapy with antidepressants patient's chest pain was subsided, and were diagnosed with becks depression score by using 21 questionnaires and with DSV-V criteria.

Among these 76 patients, males were 22 and females were found to be 54. 2 patients are in between age group of 20-30, 16 patients were in between 31-40, 25 patients were in 41-50, 31 patients were in age group of 51-60 and 2 patients were in between 61-70 years of age and were illustrated in table 3.

Table 3 shows Age wise and gender-wise distribution of depression patients with Post ACS.

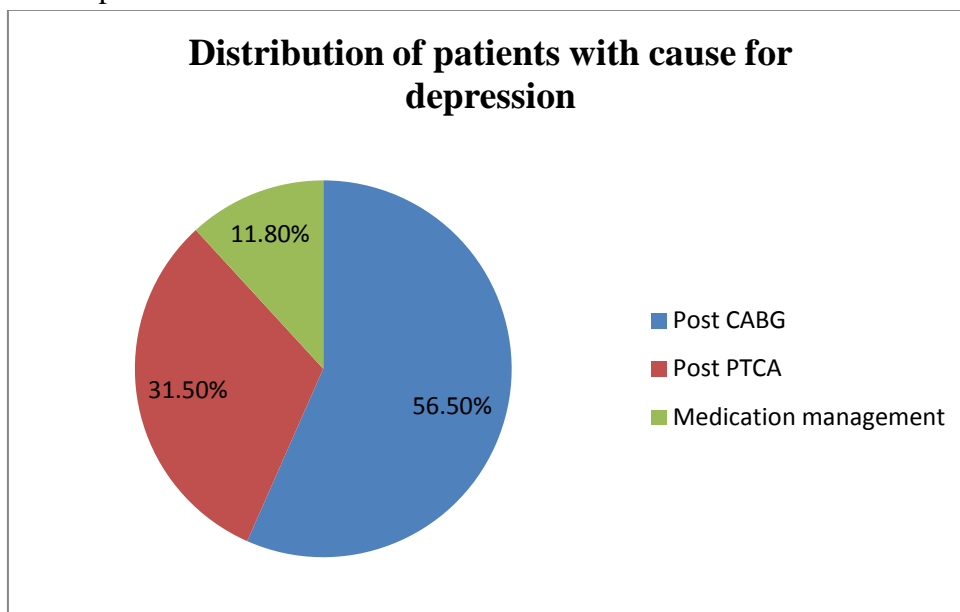
Parameter	Total Number	Percentage
Age		
20-30	2	2.6%
31-40	16	21%
41-50	25	32.8%
51-60	31	40.7%
61-70	2	2.6%
Gender		
Males	22	29%
Females	54	71%

Among 76 patients, 43 patients with post CABG were found to have depression, followed by 24 patients with post-PTCA had depression followed by 9 patients with post ACS were found to have depression was represented in table 4 and Fig.1.

Table 4 shows that distribution of patients with cause for depression

Cause	Total Number	Percentage
Post CABG	43	56.5%
Post PTCA	24	31.5%
Medication management	9	11.8%

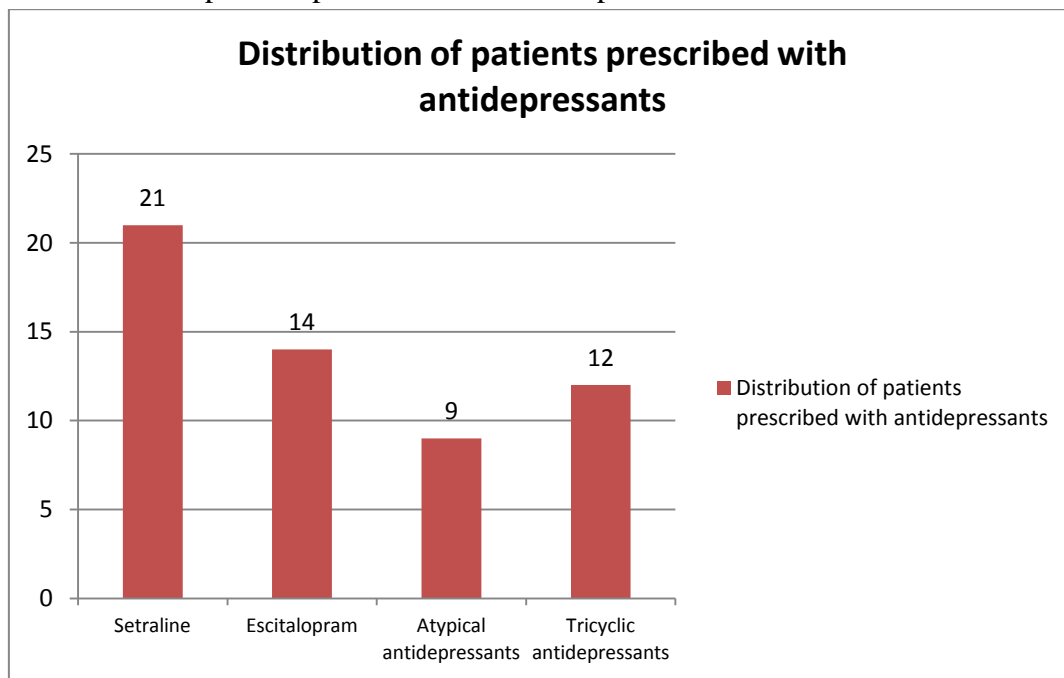
Fig 1. shows distribution of patients with cause for disease



After diagnosing depressive episodes among 76 patients, Physicians were prescribed antidepressants for 56 patients and remaining 20 patients were not prescribed with any antidepressants. 21 patients were prescribed with sertraline, 14 patients were prescribed with escitalopram, 9 patients were prescribed with atypical antipsychotics and 12 patients were prescribed with tricyclic antidepressants was illustrated in Table 5 and Fig 2.

Table 5 shows the distribution of patients prescribed with antidepressants.

Drugs	Total Number	Percentage
Setraline	21	34.2%
Escitalopram	14	25%
Atypical antipsychotics	9	18.4%
Tricyclic antidepressants	12	22.3%

Fig 2 Shows distribution of patients prescribed with antidepressants

Discussion

In our study among 100 patients, 26 (26%) patients were males and 74 (74%) patients were females, here females are more prone to ACS than males, but Abhishek Ghosh et al.⁽⁵⁾ in 2012 concluded that males were more prone to ACS than females. In our study, the majority of patients 26 (26%) were in between the age group of 51-55, which is supported by Abhishek Ghosh et al.⁽⁵⁾. In their study, most patients were in between the age group of 51-70 years.

In our study assessment of depressive episodes by using Beck's depression score and DSV-V criteria was supported by Centralized, Stepped, Patient Preference-Based Treatment for Patients With Post-Acute Coronary Syndrome Depression by Karina W. Davidson, J. Thomas Bigger, et al.⁽⁶⁾ in 2013 and Enhanced Depression Care for Patients With Acute Coronary Syndrome and Persistent Depressive Symptoms: Coronary Psychosocial Evaluation Studies Randomized Controlled Trial; Karina W. Davidson, Nina Rieckmann, et al.⁽⁷⁾ in 2010. Prescribing of antidepressants for about 6 weeks in our study, whereas Karina W. Davidson et al.⁽⁶⁾ study shows prescribing of antidepressants for about 8 weeks.

Among 100 patients, 76 patients were diagnosed with Post ACS depressive episodes. In our study most of the patients (56.5%) with depression were found in post CABG patients, followed by post-PTCA patients (31.5%), followed by Patients with medication management (11.8%).

In our study commonly used antidepressants are Sertraline, Escitalopram, atypical antipsychotics and tricyclic antidepressants which is supported by a Systematic Review Diagnostic Accuracy of Screening and Treatment of Post-Acute Coronary Syndrome Depression in Evidence Summary done in 2017⁽⁸⁾.

Among 76 patients, the majority of patients (34.2%) were prescribed with sertraline (selective serotonin reuptake inhibitor) which is supported by John T. Parissis et al.⁽⁹⁾, Lydia Poole et al.⁽¹⁰⁾ and Jeffrey J. Ellisa et al.⁽¹¹⁾

Conclusion

As the cardiovascular diseases are a major cause for morbidity and mortality, Depression may cause due to post-acute coronary syndrome (ACS). This study concludes that female patients were more prone to Post ACS depression mostly diagnosed in Post CABG patients followed by Post PTCA patients and patients under medication

management and most commonly used antidepressant was Sertraline. A supportive measure such as preoperative counseling should be provided to prevent post-ACS depression was undertaken prior to therapy was significant to reduce the depressive condition.

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