

# COMPLIANCE TO DISCHARGE TREATMENT AMONG ACUTE CORONARY SYNDROME PATIENTS IN A TERTIARY CARE HOSPITAL

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## ABSTRACT

**Background:** Medicine compliance is a matter of concern for clinicians and policy makers. **Objective:** To assess the compliance to drug treatment after discharge from hospital among acute coronary syndrome patients in a tertiary care hospital. **Methodology:** This was a cross sectional study conducted over a period of six months from 1<sup>st</sup> January to 30<sup>th</sup> June 2015 at Sheikh Zayed Medical College/Hospital, Rahim Yar Khan. Out of 126 patients of acute coronary syndrome, discharged from CCU of Sheikh Zayed Medical College/Hospital, Rahim Yar Khan, we were able to contact 80 patients on phone, 47 were alive and have given information regarding medicine use, 3 were reported died during study period while 30 has given inadequate information so were excluded from study. The patients also having other diseases like; Diabetes Mellitus, Renal failure, Hepatitis, Endocrinal diseases were excluded. Informed verbal consent was taken from each patient before inclusion in study. Baseline data regarding medicines prescribed was noted in a questionnaire including demographic variables, number and types of medicines prescribed on discharge. Patients were contacted on phone, after six months of discharge from hospital, with the purpose to get information on compliance of drug intake. Variables included were number of medicines prescribed; grouped as three drugs, four drugs, five drugs and six drugs. Compliance was noted from; no drug to five drugs. The data was entered and analyzed by using SPSS version 20. **Results:** The mean age of patients was 54± 12 years with 37(78.7%) males. Our study showed that 24(51%) were prescribed three drugs at time of discharge. 18(38%) were prescribed 4 drugs, 4(8.5%) were prescribed 5 drugs and 1 (2%) was prescribed 6 drugs on discharge. This study showed that 11(23%) of patients did not use a single drug after six months of discharge from hospital, 6 (12.7%) only two drugs compliance, 18(38%) showed three drugs compliance and 10(21%) showed compliance to four drugs where as 2(4%) showed compliance to five drugs after 6 months of discharged from CCU. Our results showed that 3(6%) patient died after discharge from CCU. **Conclusion:** Our study showed that compliance to the recommended treatment for acute coronary syndrome patients at discharge was poor within six months after discharge from hospital and resulting even in death to many of the patients. We suggest that appropriate interventions for secondary care may be planned to improve compliance among acute coronary syndrome patients.

**Keywords:** Compliance, Treatment, ACS, Discharge

## INTRODUCTION

Coronary artery disease (CAD) is one of the leading causes of morbidity and mortality globally and in Indo Pak region.<sup>1,2,3</sup> Non compliance to medications and other management, is a major public health problem. It has been reported that majority of patients do not adhere to their prescribed therapies and this results to “substantial worsening of disease, death, and increased health care costs”. Non compliance to medical advise is common in medical practice, while the consequences of non compliance to cardiovascular secondary prevention are especially profound.

There is strong evidence that prescription for different drugs reasonable, like; beta-blockers, statins, angiotensin-converting enzyme (ACE) inhibitors, clopidogrel and aspirin for the secondary prevention of adverse cardiovascular events, all of which are endorsed by the American Heart Association (AHA) and American College of Cardiology (ACC) as Class I recommendations.<sup>4,5</sup>

It is established that there are certain modifiable factors that may contribute to the reoccurrence of coronary artery diseases. Such factors if recognized and acted upon may prevent MI or its recurrence.<sup>8</sup> Interventions that are being tried to improve compliance are mainly health education. While there are lack of diversity in use of interventions to improve compliance in coronary artery patients. Medication non compliance is a growing concern to clinicians and healthcare systems because of increasing evidence that it is prevalent and associated with adverse outcomes and higher costs of care.<sup>9</sup> The objective of this study was to assess the compliance to drug treatment after discharge from hospital, among acute coronary syndrome patients in a tertiary care hospital.

## METHODOLOGY

This was a cross sectional study conducted over a period of six months from 1<sup>st</sup> January to 30<sup>th</sup> June 2015 at Sheikh Zayed Medical College/Hospital, Rahim Yar Khan. Out of 126 patients of acute coronary syndrome, discharged from CCU of

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Received: 03-10-2017

Accepted: 25-10-2017

Sheikh Zayed Medical College/Hospital, Rahim Yar Khan, we were able to contact 80 patients on phone, 47 were alive and have given information regarding medicine use, 3 were reported died during study period while 30 has given inadequate information so were excluded from study. The patients also having other diseases like; Diabetes Mellitus, Renal failure, Hepatitis, Endocrinal diseases were excluded. Informed verbal consent was taken from each patient before inclusion in study. Baseline data regarding medicines prescribed was noted in a questionnaire including demographic variables, number and types of medicines prescribed on discharge. Patients were contacted on phone, after six months of discharge from hospital, with the purpose to get information on compliance of drug intake. Variables included were number of medicines prescribed; grouped as three drugs, four drugs, five drugs and six drugs. Compliance to drugs was noted as: No drug, two drugs, three drugs, four drugs and five drugs, The data was entered and analyzed by using SPSS version 20.

## RESULTS

This was a cross sectional study, conducted to assess the compliance of treatment among patients of ACS. The mean age of patients was  $54 \pm 12$  years, and 37(78.7%) were males.

**Table I : Discharge medicines prescribed to ACS patients.**

Discharge medicines	Frequency	Percentage
3 drugs	24	51.25
4 drugs	18	38.29
5 drugs	4	8.51
6 drugs	1	2.12
Total	47	100%

**Table II: Medicine compliance at 6 months post discharge among AS patients**

Compliance to drugs	Frequency	Percent
No drug	11	23.40
Two drugs	6	12.76
Three drugs	18	38.29
Four drugs	10	21.27
Five drugs	2	4.25
Total	47	100%

Table I shows that 24 (51%) were prescribed three drugs at time of discharge. 18(38%) were prescribed 4 drugs, 4(8.5%) were prescribed 5

drugs and 1 (2%) was prescribed 6 drugs on discharge. Table II shows that 11(23%) of patients did not use a single drug after six months of discharge from hospital, 6 (12.7%) have only two drugs compliance, 18(38%) showed three drugs compliance and 10(21%) showed compliance to four drugs where as 2(4%) showed compliance to five drugs after 6 months of discharged from CCU.

**Table III: Mortality among ACS patients within six months after discharge**

Status	Frequency	Percentage
Dead	3	6
Alive	47	94
Total	50	100%

Table III shows that 3(6%) patient died after discharge from CCU.

## DISCUSSION

This descriptive study was planned to assess the compliance to treatment, basically a form of secondary prevention among patients of myocardial infarction. Evidence shows that there is not only lack of ideal recommended management of patients admitted to hospitals with an ACS,<sup>10</sup> but insufficient application of the recommended therapies at discharge after ACS by physicians, moreover adding to problem is the gap between medical prescription and compliance to treatment.<sup>11,12</sup>

Regarding discharge medicine to ACS patients our study showed that 24 (51%) were prescribed three drugs at time of discharge, 18 (38%) were prescribed 4 drugs, 4 (8.5%) 5 drugs and 1 (2%) were prescribed 6 drugs on discharge. Compliance to treatment do affect clinical outcomes among ACS patients on long term and short term basis. A study showed that those with poor adherence, has increased risk of death and all cause hospitalization compared with patients with higher adherence.<sup>13,14</sup> Another study, on patients with established CAD showed, non-adherence to beta-blockers, ACE inhibitors, and statins was associated with a high (50 % to 85 %) risk of all-cause mortality.<sup>15</sup>

Our study showed that almost one fourth 11 (23%) of patients did not use a single drug after six months of discharge from hospital, 6 (12.7%) showed only two drugs compliance, 18 (38%) showed three drugs compliance and 10 (21%) showed compliance to four drugs where as 2 (4%) showed compliance to five drugs after 6 months of discharged from CCU.

Evidence favors our findings in that over the long term, nearly half of CAD patients adhere to post ACS secondary prevention medicines 1 year after an acute MI.<sup>16,17,18,19</sup>

It has been reported that adherence in ACS patients stand at around one third to two third and is dependent on follow-up time and definition of adherence.<sup>20,21</sup> Non-adherence to management, however, results into poor outcomes including mortality.<sup>22</sup> Our study showed that 3(6%) patient died within six months after discharge from CCU. Following are limitations of our study; relatively small sample size, low response rate, outcome variables were limited to only compliance to treatment and mortality, hence ignoring other outcomes like compliance to investigations advised at discharge.

## CONCLUSION

Our study showed that compliance to the recommended treatment for acute coronary syndrome patients at discharge was poor within six months and resulting even in death for many of the patients. We suggest that appropriate interventions for secondary care may be planned to improve compliance among acute coronary syndrome patients.

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**Article Citation:** Javaid A, Mustafa G, Rao SA. Compliance to discharge treatment among acute coronary syndrome patients in a tertiary care hospital. *JSZMC*; 2017;8(4):1287-90