



CODEN [USA]: IAJPBB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.3256551>Available online at: <http://www.iajps.com>

Research Article

**PREVENTION OF CVDs WITH THE UTILIZATION OF
ASPIRIN & STATIN**¹Sidra Rasheed, ²Dr Moatzid Billah, ³Sidra Tahir¹RHC Sheher Farid, Chishtian, Bahawalnagar, ²Medical Officer, BHU Sheikh Wahan, DHA Bahawalpur, ³WMO, DHQ Hospital South City Okara

Article Received: April 2019

Accepted: May 2019

Published: June 2019

Abstract:

Objective: This research work aimed to access implementation of utilization of statin & aspirin among patients of cardiovascular diseases (CVD) is in progress for the prevention of these complications.

Methods: This was a transverse research work. This research work started in March 2018 & lasted up to May 2018 in general OPD of General Hospital, Lahore. Total 312 patients were the part of this research work. The collection of the information carried out from the electronic records of the patients for their traits, prevailing comorbidities & associated outcomes of the laboratory testing. We performed the statistical analysis of all the available variables.

Results: Among total three hundred and twelve patients, there was indication of aspirin for 17% patients but it was not present in prescription. Aspirin was available in indication as well as prescription in 36.20% patients. The indication of the statin was available in 27.20% patients but not in prescription whereas it was in indication & prescription of 63.10% patients.

Conclusion: The amount of the patients who got the target of treatment in our institute were very high in comparison with the other research works, the targets of albeit treatment were not under hand in an important amount of patients.

Key Words: Statin, aspirin, CVD, prevention, methodology, albeit, institute, prescription, indication, OPD, laboratory.

Corresponding author:**Dr. Sidra Rasheed,**

RHC Sheher Farid, Chishtian, Bahawalnagar.

QR code



Please cite this article in press Sidra Rasheed et al., *Prevention Of CVDS With The Utilization Of Aspirin & Statin.*, Indo Am. J. P. Sci, 2019; 06[06].

INTRODUCTION:

There is a severe burden of CVDs among patients suffering from diabetes who have 2-4 fold rise in the prevalence of cardiovascular occasions in comparison with the matched persons with gender and age as well as with no diabetes [1, 2]. The high danger of the occurrence of cardiovascular events & rate of mortality in the patients suffering from diabetes have made the requirement for the professionals to discover more authentic methods for the decrease of the cardiovascular danger. From last thirty years, various attempts have made to confirm the effectiveness of statin & aspirin to decrease CVD events among the patients suffering from diabetes, although with contradictory proofs about the effectiveness of the aspirin for main prevention of the cardiovascular diseases in patients of diabetes mellitus. Various organizations related to this subject in America as ADA, AHA & ACCF made modified recommendations, these instruction are although available in practice but their implementation is very difficult [3]. There are many features influencing the guideline's implementation often depending on the faced circumstances and the goal of the target goal is very hard to achieve.

Some of these features are the awareness & attitude of professional, behavior of patient and facilities of the

not normally in prescription and over prescription of aspirin is present in some practices [4] while statin are present in prescription. The aim of this research work was to interrogate the recommendations or the utilization of statin & aspirin in patients suffering from diabetes are in practice in our institute. So, this casework carried out to evaluate the prescription of the treatment of statin & aspirin in the patients of diabetes for the prevention of cardiovascular diseases.

METHODOLOGY

This transverse research work started on March 2018 and finished in May 2018 in general OPD of General Hospital, Lahore, Pakistan. All the patients suffering from stroke, diseases of kidney & ischemic diseases of heart were not the part of this research work. We collected the information from the electronic records of the patients for characteristics of clinical as well as demography consisting co morbidities and the findings of the laboratory testing. We followed the recommendation of 2014 of American diabetes association [5], which approves the treatment with statin in patients of diabetes and other risk factors of CVD target level of LDL cholesterol of less than one hundred mg/dL are the approval for these patients. The ADA suggests the use of aspirin for patients who are more than fifty year of age or patients have some other risk factors as past history of cardiovascular

| | Variable | Frequency | Percent |
|--------------------|-------------------------|-----------|---------|
| Age Group | < 39 years | 13.0 | 4.20 |
| | 40 to 49 years | 43.0 | 13.80 |
| | 50 to 59 years | 107.0 | 34.30 |
| | 60 to 69 years | 86.0 | 27.60 |
| | 70 to 79 years | 49.0 | 15.70 |
| | 80+ years | 14.0 | 4.50 |
| Gender | Male | 86.0 | 27.60 |
| | Female | 226.0 | 72.40 |
| Marital Status | Single | 10.0 | 3.30 |
| | Married | 283.0 | 93.70 |
| | Divorced / widowed | 9.0 | 3.00 |
| Educational Status | Primary | 45.0 | 19.50 |
| | Intermediate | 67.0 | 29.00 |
| | High school | 66.0 | 28.60 |
| | Graduate | 48.0 | 20.80 |
| | Post graduate and above | 5.0 | 2.20 |

health care. The guidelines of American diabetes association recommend a detail plan of care in patients of diabetes. These guidelines are about the use of the medicines of statin & aspirin depending on the particular standard. In accordance with past research works aspirin & lessening agents of lipids are

diseases in family, High BP, cigarette smoking etc. The ACCF proposes the use of aspirin for the high danger patients of diabetes at high danger of CVD. In the same manner, we obeyed the definition of American diabetes association for treatment with aspirin: 1. Risk of CVD more than ten percent

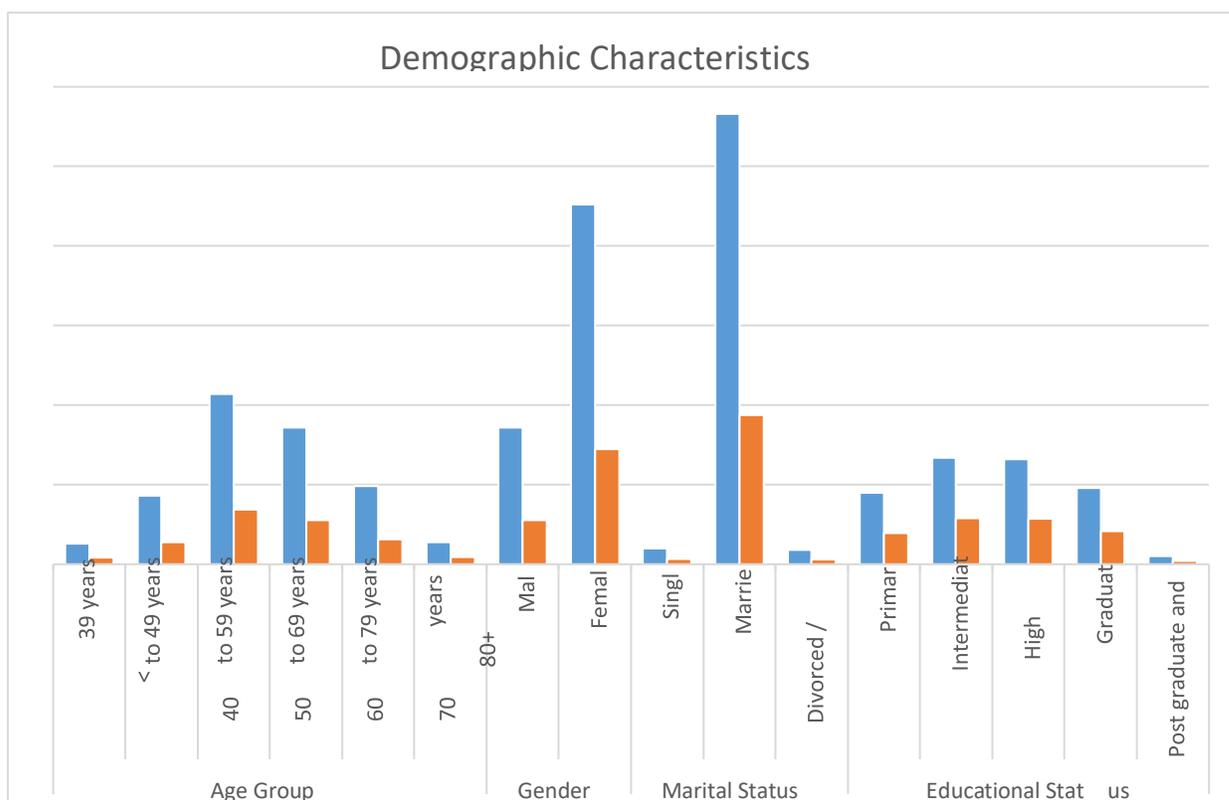
2. Male of fifty year of age and females with sixty year of age with one additional factor of risk. Ethical committee of the hospital gave the permission to conduct this research work. SPSS V. 16 was in use for the statistical analysis of the collected information. Shapiro-Wilk's method was in use for the calculation of normal distribution of the information. Average and SD used for the presentation of the quantitative variables. Percentages were in use for the measurement of qualitative variables.

RESULTS

There were total three hundred and twelve patients from fifty two to sixty seven year of age. The average age of patients was 59.60 ± 11.80 years. Female gender was responsible for 72.60% samples. Most of the patients (93.70%) were enjoying their married life. The samples were from various groups of ethnicity and races, most

of the patients were form Pakistan. About 77.10% patients were available with minimum high school education (Table-1).

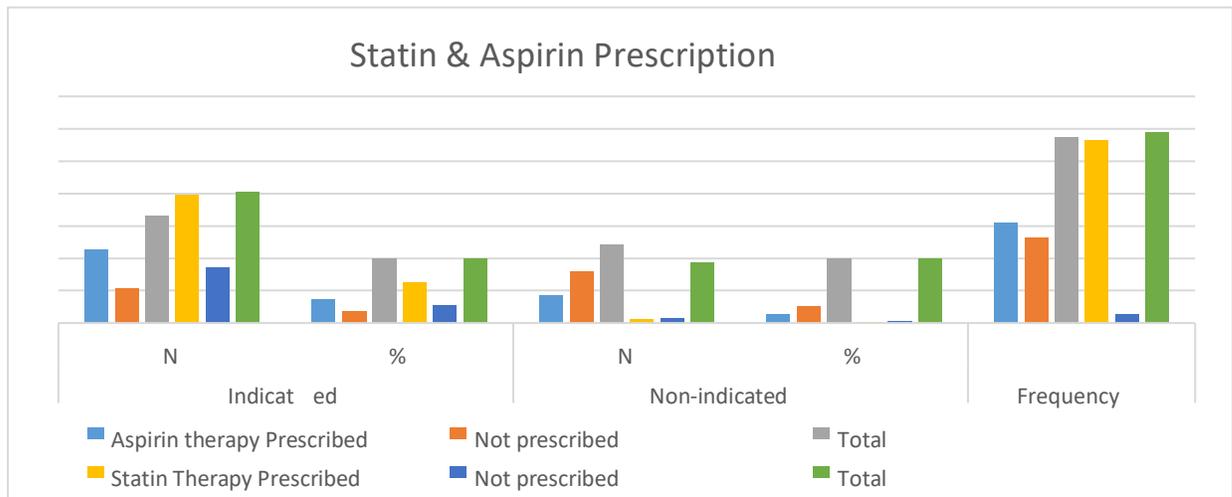
Table-I: Demographic characteristics of the patients



There was indication of aspirin for 17% patients but it was not present in prescription. Aspirin was available in indication as well as prescription in 36.20% patients. The indication of the statin was available in 27.20% patients but not in prescription whereas it was in indication & prescription of 63.10% patients (Table-2).

Table-II: Statin and Aspirin prescription among indicated and non-indicated cases.

| Variable | Indicated | | Non-indicated | | Frequency |
|----------------------------|-----------|--------|---------------|--------|-----------|
| | N | % | N | % | |
| Aspirin therapy Prescribed | 113.0 | 36.20 | 42.0 | 13.50 | 155.0 |
| Not prescribed | 53.0 | 17.00 | 79.0 | 25.30 | 132.0 |
| Total | 166.0 | 100.00 | 121.0 | 100.00 | 287.0 |
| Statin Therapy Prescribed | 197.0 | 63.10 | 5.0 | 1.60 | 282.0 |
| Not prescribed | 85.0 | 27.20 | 8.0 | 2.60 | 13.0 |
| Total | 202.0 | 100.00 | 93.0 | 100.00 | 295.0 |



DISCUSSION

Depending upon the proposal of ADA, ACCF & AHA, majority of the patients was present with high risk for CVDs, about 1/5th patients were present with fifty or more age and co morbid conditions were present in about 65.0% patients. About 17% & 27.20% patients were present with high danger for CVDs who did not get the treatment of aspirin & statin correspondingly. This showed the gaps in the management of CVDs. Some other research works also reported the same lapse in the management of CVDs. Millions of persons in the whole world are using aspirin especially for the prevention of the cardiovascular diseases majority of the patients with established cardiovascular diseases are not utilizing aspirin [6]. One research work found that there was not prescription of statin for 41.0% patients of diabetes with high risk of CVDs. Current research work shows that indication of aspirin is very limited in the CVD prevention. The lapses between proposed guideline and general practice in the management of blood pressure & lipids are very high in comparison with the lapses in the control of blood glucose [9].

A current research work from Italy shows that 46.30% patients with high risk of cardiovascular diseases utilized aspirin to prevent it [10] whereas in on other research work, 35.0% professional showed that most of the patients were utilizing it for primary deterrence [11]. In the same manner, a survey showed the prescribed aspirin for fewer amounts of patients [12]. One research work also showed the over use of aspirin among patients without recommendation [13]. So, the prescription of aspirin should be proper [14]. There should be shared decisions by the professionals [15].

There can be improvement in the utilization of aspirin & prescription of statin with the help of heart scoring system [16].

In one research work only 35.10% patients were present with prescribed statin [17] but in current study, this was present for 63.0% patients. There is very less risk with the use of statin for start of diabetes mellitus, there is proposal of its use in the groups present with high risk in guidelines as well as very beneficial [18]. There are some limitations of this research work as this research work conducted in a single center. So, we cannot generalize the findings of this research work. There was free health care facility to the patients as consultation with dietician and medication. We also did not perform the inferential statistics to find out that if the disparities among patients were important enough. In this research work, there was no debate on the diabetic complications. This is suggestion from this casework that there is need of future research work keeping in mind the limitations of this research work to find out the effectualness of these drugs for the prevention of cardiovascular diseases in the patients suffering from diabetes.

CONCLUSION

The findings of this research work showed that patients with the better control on blood glucose, there can be improvement for the utilization of statin & aspirin to prevent the cardiovascular disease among patients suffering from diabetes. This shows the requirement to interrogate the cause of this failure rate to develop the methods for awareness & a good approach for the achievement of the targets of treatment. We also suggest further research for better understanding of the

achieved targets with this treatment. This will provide us trends of current times for the formulation of modified procedures for the prevention of such complication.

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