Original Article

Aspirin and Statin as Prevention for Cardiac Disease

The Use of Aspirin and Statin as Primary Prevention for Cardiovascular Disease: Our Experience at Teaching Hospital; Punjab

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ABSTRACT

Objectives: To determine whether the use of statin and aspirin as primary prevention in patients with diabetes whether correctly used or not in our institute.

Study Design: Cross sectional study

Place and Duration of Study: This study was conducted at the Department of Medicine, Bahawal Victoria Hospital, Bahawalpur from February 2016 to April 2016.

Materials and Methods: 150 patients participated in this scrutiny. Data was taken from patients with medical characteristics of electronic medical records, the results of existing co morbidities and laboratory investigations. Patients with ischemic heart disease. Kidney disease and stroke were excluded. We followed the recommendations of American Diabetes Association 2014.

Results: Of the 150 participants, the indication of aspirin was for19%, but not prescribed in these patients. It was shown that 37% of cases were prescribed. Treatment with Statins was indicated in 28% of patients, but it does not prescribe, although in 62% cases it is expressed &prescribed

Conclusion: The frequency of patients achieving proper treatment goals in our institute is far greater as compared to other studies.

Key Words: Aspirin; Statin; Primary prevention; Diabetes; Cardiovascular disease.

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INTRODUCTION

The burden of cardiovascular disease is considerably increased by two to four times the incidence of diabetes in patients with Cardiovascular events are matched with age and gender, and non-diabetic persons.[1, 2] There is a great chances of cardiovascular changes in diabetic patients, and mortality rate increases that stress the researchers to find out most affective plans and inventions to minimize the chances of cardiovascular changes.

Since many years, trials have done to find out the usefulness of the use of aspirin and statin in decreasing and minimize the cardiovascular changes in diabetics despite opposite results in the usefulness of aspirin used as primary prevention of cardiovascular disease in diabetics.

Although the American Diabetes Association (ADA), the American Heart Association (AHA), and the American College of Cardiology Foundation (ACCF) give guidelines and recommendations, these are practically very difficult to be implimented.[3]

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Many factors influence the implementations of these guidelines; these factors may be the knowledge attitude of the physician, the behavior of the patient, and availability of health facilities so it is not easy to achieve the goal.

The guidelines of American Diabetes Association, recommend a comprehensive care plan for people with diabetes. These guidelines include aspirin and statins for prophylaxis according to specific criteria. According to previous studies,[4] often without proper prescribing of aspirin and lipid-lowering drugs are: In some practices aspirin prescriptions are prescribed under statins. While it is critical to understand the current practice in diabetes care to improve the prognosis of people with diabetes, there are several data to show to what extent these guidelines are followed.

MATERIALS AND METHODS

This cross-sectional study was conducted in the Department of Medicine Bahawal Victoria Hospital, Bahawalpur from February 2016 to April 2016. 150 patients participated in the study. Data was collected from patients with medical characteristics of electronic medical records, the results of existing co morbidities and laboratory investigations. Patients with ischemic heart disease, kidney disease and stroke were excluded. We followed the recommendations of American Diabetes Association 2014.[5] Similarly; we followed the

American Diabetes Association, working definition for aspirin therapy. Data entry was made in SPSS version 21. For the qualitative variable, the frequency and percentage are calculated.

RESULTS

This study included 150 patients aged 50 to 65 years (mean 58.5 ± 10.8 years). Patients aged above 50 years were composed of approximately 4/5th of the samples. Women accounted for about 70 %of the samples. (93%) were overwhelmingly married. About 75% completed their high school education or above. Table. 1

Table No.1: Demographic characteristics of the patients (n=150).

Variables	Frequency	Percentages
Age Group		
<39 years	6	4
40-49 years	19	12
50-59 years	53	35
60-69 years	41	27
70-79 years	24	16
>80 years	7	4
Gender		
Male	43	29
Female	107	71
Marital Status		
Single	7	5
Married	141	94
Divorced/Widowed	2	1
Educational Status		
Primary	30	20
Intermediate	45	30
High School	41	27
Graduate	31	21
Post graduate and above	3	2

Table No.2: Statin and Aspirin prescription among indicated and **non-indicated cases**

Variables	Indicated n(%)	Not-Indicated n (%)	Frequency
Aspirin Therapy			
Prescribed	55 37	21 14	76
Not Prescribed	29 19	39 26	68
Total	84	60	144*
Statin Therapy			
Prescribed	93 62	3 2	96
Not Prescribed	42 28	5 3	47
Total	145	8	143*

*The total is < 150 due to missing values

Of the 150 participants, the indication of aspirin was for 19%, but not prescribed in these patients. Treatment with Statins was indicated in 28% of patients, but it does not prescribe, although in 62% of cases it is expressed and prescribed. Table. 2

DISCUSSION

Based on the recommendations of American Diabetes Association (ADA), the American Heart Association (AHA), and the American College of Cardiology Foundation (ACCF) mostly patients in this study were at great risk of cardiovascular changes and disease: about 4/5th was above 50 years of age and 63% had minimum 2 other diseases. However, 19% and 28% of patients were at chances of cardiovascular changes and diseases without using aspirin or statin. This shows the gap in the management of cardiovascular risks of the patients. Other studies have also reported the similar gap in the management of cardiovascular events in diabetics. Aspirin is widely used especially for primary prevention of cardiovascular disease worldwide in the patients many patients with cardiovascular disease, do not use aspirin.[6]

In other study, statin therapy was not specified in 40% diabetics with risk of cardiovascular disease.[7]Recent studies have shown; it is very limited in the primary prevention of cardiovascular disease. However, most of the physicians prescribe aspirin for the purpose of primary prevention of cardiovascular disease without determine the cardiovascular disease risk factors and it may take a time for doctors to change their practice according to recent recommendations and guidelines.[8] It is advisable to prescribe aspirin for diabetic patients requiring more emphasis, notification and explanation to the physician. Doctors should understand the wide range of management of diabetes and risk reducing plans in diabetics the gap between BP & lipid management is higher as compared with control of glucose.[9]

Studies show that care of diabetes is not optimal. In a study conducted in Italy, only 46% of patients with risk of cardiovascular disease, they used aspirin as for prevention, [10] while in other study shows that 35.5% patients were using for primary prevention.[11] Another scrutiny shows that this proportion is small who were prescribed aspirin.[12]

In contrast, other scrutiny explained that overuse of aspirin usage in patients where aspirin is not recommended[13]aspirin should be prescribed appropriately, [14] as there is a risk of GIT bleed, Physicians should take advantage of shared decisions.[15] aspirin and statin used can be improved through the use of a score system.[16] In addition; a heart this scoring system can improve appropriately targeting high-risk groups. We found that 62% of patients were properly prescribed statins. In another study, the statin prescribing model was assessed according to the

American diabetic association guidelines, and only 35% of patients were prescribed a new American coronary care foundation / American heart association guideline recommending primary prevention with moderate statin statins.[17] This will certainly increase the number of patients eligible for statin therapy.

CONCLUSION

The frequency of patients achieving proper treatment goals in our institute is far greater as compared to other studies.

Conflict of Interest: The study has no conflict of interest to declare by any author.

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