

THE PREVALENCE OF USING ASPIRIN BY DIABETIC PATIENTS VISITING PRINCE RASHID HOSPITAL

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Abstract:

Introduction: Diabetes has various health impacts including inflammatory processes. Aspirin is used as anti-inflammatory treatment.

Study objectives: to study the prevalence of aspirin use among diabetic patients.

Methods and subjects: a retrospective study design was employed to collect data from study participants who attended internal medicine clinics at Rashid Prince Hospital. A total of 447 files of diabetic patients were reviewed. Study variables included age, gender, body mass index, aspirin intake, cardiac diseases, family history of cardiac diseases, and family history of diabetes. Data were analyzed using SPSS version 20.

Study findings: the mean age of participants was 55.58 ± 10.46 years, 47% of participants were males, and the mean of BMI was 39.18 which implied that participants in general were obese. Aspirin intake was reported by 43% of participants, about 76% of participants had cardiac disease, about 63% of patients had a family history of cardiac disease, and 31% had a family history of diabetes. Aspirin intake was associated significantly with gender ($P=0.001$) and females were more likely to intake aspirin. No other significant association was observed between aspirin intake and other study variables.

Conclusion: the study findings showed that 43% of diabetic patients received aspirin as a treatment, while diabetic patients who had cardiac problems were 76% which implies that the prescription policy of aspirin needs to be revised.

Keywords: Diabetes, aspirin, cardiovascular disease

Introduction

The most common risk factors causing mortality and morbidity among diabetics are myocardial infarction and stroke (Moss et al., 1991; Koskinen et al., 1998). Diabetics are 2-4 times more likely to develop CVD than non-diabetics (Haffner et al., 1998).

Aspirin treatment is characterized by being easy, safe and cheap preventive medical consideration as an effective therapeutic for both primary and secondary prevention of cardiovascular events and cardiac mortality (Hansson et al., 1998; Collaborative Group of the Primary Prevention Project, 2001).

Rolka, Fagot-Campagna, and Narayan (2001) conducted a study to explore the prevalence of using aspirin among diabetics and found that about 27% of diabetics had cardiovascular disease (CVD), and it was also found that 71% of diabetics had at least one risk factor for CVD. The study findings showed that the rate of aspirin use was 37% among diabetics who had CVD in addition to 13% among those with risk factors.

Sarah et al (2002) conducted a study to investigate both physician practices and the use of aspirin therapy by diabetics. Study findings indicated that 71% of participants were counselled regarding the prescription of aspirin, and 66% reported aspirin daily taking. It was interesting to find aspirin therapy counselling as the most significant factor associated with aspirin use.

Fu et al (2005) conducted a study to investigate the prevalence of aspirin use among diabetics in Taiwan. Study findings showed that the prevalence of aspirin prescription was about 12%, a higher rate of aspirin prescription (17%) was observed among diabetics within the age group 70 years and over. On the other hand, the prescription rate of aspirin was 6%, and less observed among diabetics within the age group 50 years or under. The results also indicated that patients, who had stroke or coronary heart disease, had higher rates of aspirin prescription (49.6% and 49.2% respectively).

Ghadiri-Anari et al (2013) conducted a study to investigate the prevalence of aspirin intake among diabetics and associated CVD risk factors. Study findings showed that aspirin was used by 58% of diabetics. As a conclusion, diabetics should use more aspirin if its benefits exceed its potential harms.

Habizal et al (2015) conducted a study to evaluate the prevalence of aspirin resistance and its associated factors. Study findings showed that about 17% of diabetics had aspirin resistance. Study findings also indicated

that markers of Glycaemic control (HbA1c) and inflammatory markers (CRP) had no significant association with aspirin resistance.

Methods and subjects:

A retrospective study design was employed to collect data from study participants who attended internal medicine clinics at Rashid Prince Hospital. A total of 447 files of diabetic patients were reviewed. Study variables included age, gender, body mass index, aspirin intake, cardiac diseases, family history of cardiac diseases, and family history of diabetes. Data were analyzed using SPSS version 20.

Study results

The main characteristics of participants

As shown in table 1, the mean age of study participants was 55.58±10.46 years. Males were 47% of participants. The prevalence of aspirin prescription was 43%. Cardiac diseases were reported in about 76% of diabetics, family history of cardiac diseases was shown in about 63% of participants, and family history of diabetes was reported in about 31% of cases.

Table 1: The main characteristics of participants

Variable	Description
Age (M+SD) years	55.58 + 10.46
Gender (N, %)	
- Male	210 (47)
- Female	237 (53)
Aspirin prescription (N, %)	
- Yes	192 (43)
- No	255 (57)
Cardiac disease (N, %)	
- Yes	339 (75.8)
- No	108 (24.2)
Family history of cardiac disease (N, %)	
- Yes	280 (62.6)
- No	167 (37.4)
Family history of diabetes (N, %)	
- Yes	137 (30.6)
- No	310 (69.4)

The association between aspirin use and study variables

We investigated the association of aspirin prescription with other study variables. Gender was the only variable to associate significantly with aspirin prescription with an obvious female preference ($p=0.001$). The other variables did not show a significant association with aspirin prescription ($p>0.05$), these variables included cardiac disease, family history of cardiac disease, and family history of diabetes (table 2).

Table 2: The association between aspirin use and study variables

Variable	Aspirin				P value
	Yes		No		
	N	%	N	%	
Gender					
- Male	73	38	137	53.7	0.001
- Female	119	62	118	46.3	
Cardiac disease					
- Yes	152	79.2	187	73.3	0.154
- No	40	20.8	68	26.7	
Family history of cardiac disease					
- Yes	123	64.1	157	61.6	0.590
- No	69	35.9	98	38.4	
Family history of diabetes					
- Yes	55	28.6	82	32.2	0.425
- No	137	71.4	173	67.8	

Discussion

The current study was conducted to explore the prevalence of aspirin use and associated risk factors. The prevalence of aspirin prescription was 43%. Studies showed variations in the prevalence of aspirin use. The study of Rolka, Fagot-Campagna, and Narayan (2001) reported that the rate of aspirin use was 37% among diabetics who had CVD. The prevalence of aspirin prescription was 66% in the study of Sarah et al (2002). In Taiwan, Fu et al (2005) reported a 12% prevalence of aspirin use. In Iran, Ghadiri-Anari et al (2013) reported that the prevalence of aspirin prescription was 58% among diabetics. Although aspirin has various benefits, Habizal et al (2015) indicated to aspirin resistance by 17% of diabetics.

The data of our study indicated that aspirin prescription was associated significantly with gender ($p=0.001$), with a clear preference by females. This trend was obvious in other studies such as the study of Rolka, Fagot-Campagna, and Narayan (2001).

Our data did not show a significant association between aspirin prescription and each of cardiac disease, family history of cardiac disease and family history of diabetes ($p>0.05$). Actually, our findings do not agree with other reported studies in which aspirin treatment is shown more among diabetics with risk factors such as CVD (Moss et al., 1991; Hansson et al., 1998; Koskinen et al., 1998; Collaborative Group of the Primary Prevention Project, 2001; Sarah et al., 2002).

Conclusion

Although the prevalence of aspirin prescription in this study (43%) is considered good compared with other studies, more attention should be given to prescribe more aspirin for diabetics because of its protective effects.

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