



WARFARIN VS ASPIRIN; THE PATIENT COMPLIANCE WITH THE USE OF BLOOD THINNERS

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ABSTRACT... Objectives: to determine the patient compliance with the use of blood thinners. **Design:** Randomized controlled trial comparing the use of warfarin and aspirin. **Setting:** Farooq teaching hospital Lahore, Fatima Memorial Teaching Hospital, Lahore and Allied teaching hospital Faisalabad. **Period:** October 2012 to March 2013. **Results:** Warfarin is a better drug in terms of patient compliance as compared to aspirin. **Conclusion:** Warfarin is actively used in cardiovascular problems and is well tolerated by the patients as compared to aspirin which is also widely used but the incidence of adverse affects limits its use.

Key words: INR (International normalized ratio), dyspepsia, thrombocytopenia, bronchospasm, GI and retinal bleed.

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INTRODUCTION

Cardiovascular diseases involve the heart and the vascular system. These problems are one of leading causes of misery in the whole world¹. Fortunately, the progressing medicine has found ways to cope with such emergency and stable cases, but we are disappointed that the use of these drugs becomes limited due to intense sufferings in terms of adverse effects⁶. The patient compliance becomes a big question as the life style is adversely affected due to physical and psychological limitations. The need of time is to set the clear vision about the selection of drugs with respect of age, sex etc in this life saving phenomenon.

MATERIALS AND METHODS

The study was prospective interventional therapeutically comparing the use of warfarin and aspirin in patients with cardiovascular diseases. The patients were monitored by blood testing for the international normalized ratio (INR) to ensure intake of an adequate yet safe dose. Farooq teaching hospital Lahore, Fatima Memorial Hospital Lahore and Allied hospital Faisalabad

have fully established Intensive Care Units (ICU) and well equipped Coronary Care Units (CCU) installed with facilities like cardiac monitors, prima 1000, ECG, Echocardiography and Exercise Tolerance Test (ETT) etc. The patients included in the study were allocated in the following two groups randomly:

Group A

This includes patients who were given aspirin as a blood thinner in the dose of 75- 300 mg/day.

Group B

This includes patients who were given warfarin as a blood thinner in the dose of 2-10 mg/day orally.

The patients were monitored on the basis of merits and demerits of the above mentioned blood thinners.

INCLUSION CRITERIA

Patients were eligible for study if they met the following criteria;

- Sex. Both male and female.
- Age. 40 to 50 years in males and 49 to 59

- years in females.
- Any history of heart attack, stroke or deep vein thrombosis (DVT).

EXCLUSION CRITERIA

Patients with any of the following conditions were excluded from the study;

- Pregnancy.
- Patients with previous bleeding disorders.
- Patients with recent GI or genito-urinary bleeding.
- Patients with thrombocytopenia.
- Patients with unexplained anemia.

RESULTS

Following laboratory findings were evident:

Group A:

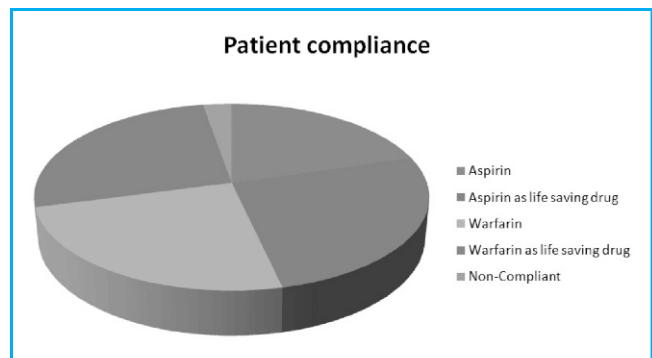
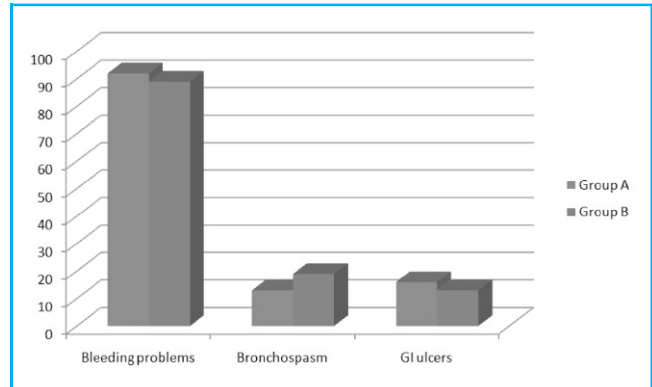
Problems	No. of patients	%age	P-value
Bleeding	23/25	92%	0.92
Bronchospasm	3/25	13%	0.12
Dyspepsia, GI ulcers, Occult blood in stool	4/25	16%	0.18

Drug	Bleeding time	Prothrombin time	Platelet count
Aspirin	Prolonged	Unaffected	Unaffected

Group B:

Problems	No. of patients	%age	P-value
Bleeding	22/25	89%	0.89
Bronchospasm	5/25	19%	0.20
GI complaints	3/25	13%	0.12

Drug	Bleeding time	Prothrombin time	Platelet count
Warfarin	Normal	Prolonged	Normal



DISCUSSION

Cardiovascular diseases is the leading cause of death worldwide, despite recent advancements in the management of disease, it still remains a dilemma. This may be due to the arrival of automation that our life has become less strenuous. The use of modern conveniences has made physical activity unnecessary. Before 19th century, very few people used to die of cardiovascular disease but the scenario has worsened over the year. The rate of heart disease increased so rapidly between 1940 and 1967 that the World Health Organization (WHO) called it the world's most serious epidemic⁷. In 1948, a long-term study began in Framingham⁶, Massachusetts with 5209 adult individuals from Framingham were included in the study. This study proved very fruitful in the management of cardiovascular diseases. Prior to the Framingham study, nothing much was known about the causes and epidemiology of hypertension and cardiovascular diseases. All the present knowledge regarding use of different diet plans, exercise and tackling cardiovascular diseases with medications such as aspirin is based on the findings of this study. This research included the study of factors like plasma

LDL/HDL levels, plasma cholesterol concentration, obesity and smoking habits associated with CVS problems. Since long, medical science has been trying to decrease the mortality rate⁷. Although medications such as blood thinners have provided good retaliation yet patient compliance is still a major issue, mainly due to bleeding issues¹², as far as long term usage is concerned. Patients with arrhythmias, heart attacks⁹, stroke or deep vein thrombosis (DVT) are managed with blood thinning therapy, but due to immense number of intolerable adverse effects¹¹, many of the patients refuse to continue the regimen. Even small bruises of shaving bleed for hours if INR is not maintained in a narrow range i.e. 1.5 to 2.0. INR greater than 2.5 results in increased bleeding problems². Bronchospasm and GIT disturbances are also troublesome⁴. Patients under warfarin therapy have proved to be more compliant as compared to use of aspirin as a management of cardiovascular disease due to less adverse effects.

A similar study was conducted by James Gallagher in BBC news health concluding that warfarin is better drug than aspirin, though the bleeding is still the main problem so therapeutical advancement is still required in the management of cardiovascular diseases¹⁰. Dr Andrew Clark, member of british society for heart failure, has the same opinion that warfarin reduces the risk of stroke as compared to aspirin⁸.

CONCLUSIONS

Following conclusions can be drawn from the above study:

- 60% (p=0.60) patients showed good compliance to aspirin while 72% (p= 0.72) patients were compliant to warfarin.
- The compliance was increased to 77% (p=0.76) with aspirin after counseling and education of patient and the compliance was increased to 84% (p=0.84) people in case of warfarin after counseling and education.
- 8% (p=0.08) patients were non-compliant to both the drugs in any case.
- Further study are needed to probe in to the issue and to have further evaluation.

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