



Medicine

STUDY OF INCIDENCE OF BLEEDING IN PATIENTS OF AMI AFTER THROMBOLYTIC THERAPY

Dr. Prabhakar S. Jirvankar*

(M.D. Medicine) Associate Professor Department Of Medicine Government Medical College, Aurangabad *Corresponding Author

Dr. Hemant Nanda Chimote

Senior Resident Department of Medicine Dr Punjabrabrao Deshmukh Medical College, Amarawati

ABSTRACT Due to a large increase in the number of patients with thrombotic diseases like atrial fibrillation, prosthetic heart valves, cardio embolic stroke, AMI, Pulmonary embolism and venous thrombosis worldwide, in recent years antithrombotic therapy is often chosen to treat such high risk patients. In AMI most patient need either PCI or IV thrombolysis to achieve reperfusion. Though the antithrombotic therapy has improved the outcome, the risk of bleeding remains the significant issue. The risk of bleeding has been evaluated in many clinical trials using various schemas like CHADS2 score, CHA2DS2-VAS score, HEMORR2HAGES score. The new bleeding risk score HASBLED(HTN, Abnormal renal / liver function, stroke history, bleeding history, Labile International normalized Ratio, Elderly, Drug/Alcohol, 1 point for each risk factor, max 9) has recently proposed as a practical tool to assess the individual bleeding risk. Patients with different risk factors receiving thrombolytic therapy are prone to bleeding, which has been proved in many clinical studies. The aim of this study was to monitor the incidence of bleeding in patients undergoing thrombolytic treatment for acute of myocardial infarction. We studied 100 patients of AMI for incidence of bleeding after thrombolysis in ICCU of Government Medical College Aurangabad from December 2013 to November 2015. 13% patients developed bleeding as a complication of thrombolysis. 53 % patients had deranged INR & 23% patients required blood transfusion. According to HASBLED scoring system, 67% patients were in low risk group, 27% patients were in intermediate risk group and 6 % were in high risk group. Though thrombolysis safe and highly effective treatment in AMI Patients are more likely to have risk of bleeding complications. Therefore patients should be evaluated for risk factors for bleeding such as advanced age, Male sex, DM, HTN, Alcohol consumption, prior to starting thrombolytic therapy. We did not found statistically significant association between HASBLED score and incidence of bleeding probably due to smaller sample size.

KEYWORDS : AMI, Thrombolysis, Bleeding, HASBLED

INTRODUCTION

Thrombolytic therapy has been a major advance in the management of patients of acute Myocardial infarction. It works by lysing infarct artery thrombi and achieving reperfusion. Bleeding requiring blood transfusion occurs in approx 5 % patients and haemorrhagic stroke in 1.8 % with these regimens. Fibrin specific agents like Alteplase, Reteplase and Tenactiplase and Non Fibrin specific agents like Streptokinase, Urokinase and prourokinase are available for clinical use. Although tPA is more popular thrombolytic agent in developed nations, Streptokinase continues to be widely used in developing nation like India. Haemorrhagic complications are most frequent and serious problems following the use of thrombolytic agents. They can be minimised by properly selecting patients for thrombolysis.

MATERIAL AND METHODS

After obtaining approval from Institutional Ethical Committee and informed consent, 100 patients of AMI admitted in ICCU of Government Medical College, Aurangabad were studied from December 2013 to November 2015. Patients already on anticoagulants, Liver disease and having systemic bleeding disorder were excluded from study. Detail clinical history including HTN, DM, Diagnosis of AMI was made using WHO criteria. Patients who were not planned for Primary PCI were administered IV thrombolysis (Inj streptokinase 1.5 million units IV in 100 ml NS over 1 hour) along with other standard treatment. Incidence and site of bleeding was observed. Bleeding was considered present when either of the following was present: Haematuria, Haematemesis, Gum Bleeding, Epistaxis, Patechia, Hemoptysis or Malena or PR bleed. ECG, CBC, KFT, LFT, RBS, LIPID PROFILE, PT, INR was done. HASBLED score was applied. Results of demographic and biochemical characters were expressed in mean, range and median. The statistical software SPSS 20 was used for analysis.

OBSERVATIONS AND RESULTS

Fig No:1 Age Distribution Of Patients

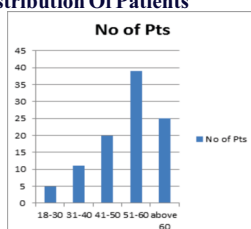


FIG NO:2-SEX DISTRIBUTION

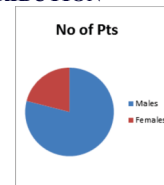
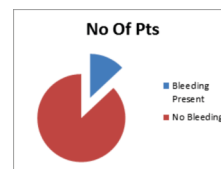


FIG NO:3- INCIDENCE OF BLEEDING



Bleeding	No of patients
Yes	13
NO	87

FIG NO:4- SITE OF BLEEDING

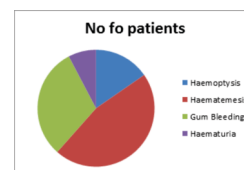


Fig No:5-showing Risk Factors

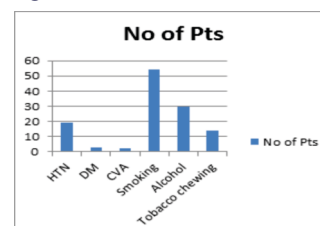


Table No:6- Inr And Transfusion Required

	Deranged INR	Transfusion Required
Yes	7	3
No	6	10
Total	13	13

Table No:7- HASBLED risk scoring in patients with bleeding and non-bleeding patients

SCORE	Bleeding cases	Non bleeding cases	total
0-1 (Low Risk)	6	61	67
2(Intermediate score)	6	21	27
>3 (High Risk)	1	5	6
Total	13	87	100

CONCLUSION

In this cross sectional observational study consisting of 100 patients of AMI admitted in ICCU of GMCH Aurangabad during December 2013 to November 2015 incidence of bleeding after thrombolysis was studied and was compared with HASBLED score. The following results were obtained:

- Of 100 patients 79 were male and 21 were female with M:F ratio of 3.7:1. Mean age was 54.08 years, majority of the patients were between 51-60 group.
- 67% patients had IWMI and 33% had AWMI.
- HTN was present in 22% patients and 16% were Diabetic.
- 2 % patients had past h/o CVA , 6 % patients had dyslipidemia, 54 % were smokers and 38% were alcoholic.
- 13% patients had bleeding after thrombolysis of which 53 % had deranged INR. 23% patients required blood transfusion.
- According HASBLED score, 67% patients were in low risk group, 27% were in moderate risk group and 6% were in high risk group. There was no statistically significant correlation between HASBLED score and incidence of bleeding. This was probably due to smaller sample size.
- Though Thrombolysis is safe and highly effective in AMI, patients are more likely to have bleeding complications if they are having risk factors like advanced age, male sex, HTN, DM, and alcohol. Hence they should be evaluated for above risk factors prior to starting thrombolytic therapy.

REFERENCES

1. Rikke Sorensen, Morten L Hansen, Steen Z Abildstrom et al. Risk of bleeding in patients with acute myocardial infarction treated with different combinations of aspirin, clopidogrel, and vitamin K antagonist in Denmark: a retrospective analysis of nationwide registry data. *Lancet* 2009; 374:1967-74.
2. Venessa Roldan, Fransisco Marin, Begona Muina et al. Plasma von willebrand factor levels are an independent risk factor for adverse events including mortality and major bleeding in anticoagulated atrial fibrillation patients. *JACC* 2011;57:2496-2504
3. Sushma Pandey, Suresh Pandey, Purushottam Jhavar, Anshul Jhavar et al. A prospective study of myocardial infarction patients admitted in a tertiary care hospital of south eastern Rajasthan. *Int J Biol Med Res.* 2012;3(2): 1694-1696.