ORIGINAL ARTICLE

Thrombolytic therapy use in peripheries of KPK

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ABSTRACT

Aim: To find the frequency of thrombolytic therapy administration in acute ST elevation myocardial infarction in peripheral hospital of KPK
Study Design: Descriptive cross sectional study
Place & Duration: DHQ Hospital Timergara District Dir Lower from 1st January 2017 to 31st December 2017.
Methods: Two hundred and sixty one patients with acute ST elevation myocardial infarction were included. Acute STEMI was defined as typical chest pain and ≥1 mm ST elevation in two consecutive leads.
Results: Mean age was 60±8 years (28-90 years). Anterior MI was more common accounting for 56% of total study population. Male patients were 156 (59.7%). 66.4% were thrombolysed and remaining were deprived of the therapy.
Conclusion: Though in the developed countries primary PCI is used for STEMI but in our peripheral hospitals even most patients are still not thrombolysed properly.
Keyword: Thrombolysis, STEMI, Myocardial infarction

INTRODUCTION

James Herrick in 1912 did autopsy studies and found that thrombus in coronaries was the cause behind myocardial infarction[1]. Till for next 68 years still it was not sure and it was a disputed issue for long. In 1980 DeWood was the person who confirmed that thrombus is the main reason behind myocardial infarction causing obstruction to blood flow in coronaries and leads to myocardial infarction and the ultimate management is to remove or lyse the clot to restore myocardial blood supply[2].

Treatment of myocardial infarction is to lyse the clot through use of thrombolytic therapy which was the sole treatment for so long and still used in most of the cardiology centers where facility for primary PCI is not available. Fletcher in 1958 first time use thrombolytic therapy.[3] Initially most of cardiology trials were performed on streptokinase.[4] In 1969, first time intracoronary streptokinase was use by Chazov who was a Russian cardiologist[5] Rentrop et al[6] further studied and proved the effectiveness of streptokinase which further increased interest in thrombolytic therapy.

The aim behind use of thrombolytic use is to lyse clot and maintain blood supply to myocardium. Different studies showed mortality and morbidity benefits with thrombolytics like GUSTO-I.[7] TIMI grade at 90 minutes is having strong association with 30 days mortality, for example it has been shown that mortality with 0 or 1 flow[8] is 8.9% and grade 3 flow is having 4.0% mortality.GISSI-1[9] also found 51% mortality reduction whereas ISIS-3[10] showed 48% reduction in mortality. Shortly the early thrombolytic administration more is mortality.[11] This study will highlight the use of streptokinase and will give idea about hesitancy of its use and late presentation of patients to hospitals and delay or no use of thrombolytics.

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MATERIALS AND METHODS

This was a descriptive cross sectional study performed at District Head Quarter Hospital Timergara, lower Dir KPK Pakistan. Data collection was done from 1.1.2017 to 31.12.2017. Patients admitted to cardiology unit of this hospital with Acute ST elevation myocardial infarction (STEMI) were included in the. Acute STEMI was defined per standard definition as typical chest pain and ≥1 mm ST elevation in two consecutive leads. After taking history and doing proper examination, detail interview was taken about risk factors. SPSS 20 was used for analysis of Data.

RESULTS

Mean age was 60±8 years (28-90 years). Anterior MI was more common accounting for 56% of total study population, Inferior MI was found in 41%, Lateral MI in 3% patients (Fig. 1). Out of total, 59.7% patients were male and remaining were female. Out of total patients, 66.4% were thrombolysed and remaining was deprived of the therapy (Table 2).

Fig. 1: myocardial infarction (MI)

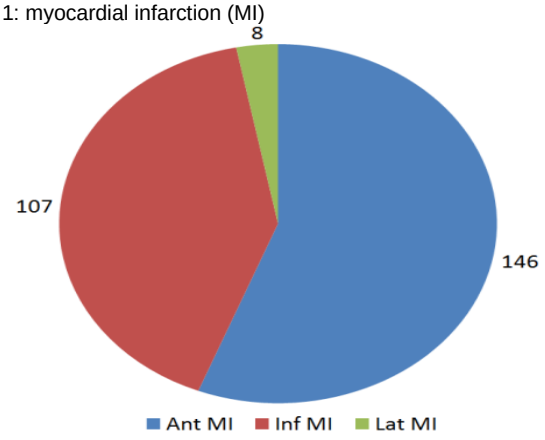

Table 1: Risk factors for myocardial infarction

Risk factors	No.	%
Mean Age (years)	60±8	
Gender (female)	105	44.3
Hypertension	156	59.7
Diabetes mellitus	78	29.8
Hyperlipedemia	104	39.8
Obese	78	29.88
Smokers	41	15.7
Family history	91	34.8

Table 2: Use of streptokinase in acute STEMI (n=261)

	No.	%age
Thrombolytic given	176	66.4
No thrombolytics	85	32.6

DISCUSSION

This study was conducted in District Head Quarter Hospital Timergara. This hospital is the only hospital of the three districts where streptokinase is administered. Most of the patients either not reach here or come very late. This study shows that as compared to female myocardial infarction is more common in male gender than female (40.3% vs 50.9%) which is supported by multiple studies, for example study done by Iqbal et al[12] found similar 59% male patients.

We found that 66% of admitted patients receive streptokinase, similar reports were published by a study conducted in 2013 by Samieinasab et al[13] which showed that 59% patient with acute STEMI received thrombolytic therapy, where as remaining did not received this therapy. This shows that still in developing countries people are even not receiving thrombolytic therapy properly where as in developed countries most of patients are receiving primary PCI. Unfortunately we are not even using reteplase and alteplase in our hospitals though the world has gone beyond to the level of primary PCI in all cases of acute myocardial infarction. We are still relying on streptokinase which is almost obsolete in developed world and even in our peripheral hospitals it is not administered properly. .

CONCLUSION

Though in the developed countries primary PCI is used for STEMI but in our peripheral hospitals even most patients are still not thrombolysed properly.

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