

Efficacy and Complications of Thrombolytic Therapy in different age groups of Acute Myocardial Infarction Patients

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Background:

Heparin and streptokinase are widely used as a routine thrombolytic therapy in hyper acute stage of myocardial infarction acute myocardial infarction (AMI).

Studies such as ISIS-1 and ISIS-2 have reported a decrease in mortality.

Thrombolysis carries some complications too. We studied the efficacy, complications and mortality rate of thrombolytic therapy in different age groups of 98 AMI cases.

Method:

98 consecutive cases of hyper acute myocardial infarction admitted between 1999 up to 2001 were included. We compared the immediate clinical effects complications and mortality rate through this retrospective study. Data of variables were extracted from hospital case record and analyzed by standard research methodology. Chi 2 test was used for comparison.

Result:

98 cases in five stratified age groups included 63 cases (6.4 %) young AMI patients of age below 40 years, 179 cases (18.2 %) AMI patients of age 40-49 years, 208 cases (21.3 %) AMI patients of age 50-59 years, 299 cases (30.2 %) AMI patients of age below 60-69 years, and 182 cases (18.6 %) AMI patients of age 70 years and older, Gender, demography and major risk factors were matched in both groups.

Overall in hospital mortality in young cases was 0.4% in comparison to 17.7% in old patients cases. Immediate effect as angina relief with in 90 minutes was found in 78.4% of young cases vs. 68.2% in old patients ($P=0.000$).

Normalization of ST segment in electrocardiogram was found in 20.0% of young cases vs. 20.9% in old patients. Drug allergy was found 3.3% in young vs 2.7% in old. Intracranial hemorrhage did not occur in young cases vs. 1.4% in old patients.

Internal bleeding occurred in 2.7% of young cases vs. 0.0% in old patients (P=0.000).

was found in 24.6% of young cases vs. 32.6% old patients suffered Arterial hypotension (P=0.008).

Congestive heart failure was found in 2.6% of young cases vs 14.9% in old patients (P=0.000). Cardiogenic shock was found in 3.3% of young cases vs. 11.2% in old patients (0.001).

Sudden death was witnessed in 4.2% of young cases vs. 12.9% in old patients. CPR was successful in 100% in young cases vs. nil in patients of 40 years and older (P<0.001).

Conclusion:

This study revealed the significant difference in the effects and complications of thrombolytic therapy between young cases and old patients, and suggests that young patients of acute myocardial infarction got more benefits than old patients.

Angina relief within 90 minutes was achieved more frequently in young patients.

Except the allergic reaction, all the side effects and complications were more in elderly than young patients. Incidence of witnessed cardiac arrest and CPR applied was higher in old cases than young AMI patients leading to a higher mortality rate among old patients receiving streptokinase in our center. Thrombolytic therapy was highly successful with least complications in young patients.