

# **The investigation of the effects of streptokinase injection method on its efficiency in patients with acute MI admitted to the cardiac intensive care section of Ardabil Imam Khomeini hospital in 2010-2011**

## **Abstract**

### **Introduction:**

MI is one of the most common cardiac diseases in all countries. The mortality death from this disease is almost 30%. The re-establishment of the blocked **kronri** blood flow plays an important role in decreasing mortality rate and patients' life quality after myocardial acute MI. at present; there are different ways to establish **kronri** blood flow including use of Thrombolytic drugs.

**Method:** This study is clinical test which aims the comparison between the efficiency of venous streptokinase in slow and accelerated manner and includes two groups namely control group (common streptokinase injection, one-hour or slow venous injection) and case group (30-min streptokinase injection, venous accelerated injection). 100 people, 50 in each group, participated in this study and the sampling was carried out randomly. Data collection instrument was a questionnaire including information on individual characteristics (age, gender, address, job, marital status, cigarette smoking history), diabetes history, hypertension, hyperlipidemia, **iskimi**, type of MI, ECG changes, pre- and post-injection echocardiography, and the side effects of SK injection (cardiovascular, blood, allergic) which were collected using the patient's file and ECG and echo pre- and post-injection review. In addition, the both pre-injection and post-injection (after 6 hrs) ECGs related to all patients were compared. All qualified patients were explained about the goal of the study and were taken the written consent. 1.5 million Unit SK was injected into vein by the researcher and the side effects during and after injection was observed and recorded. Also, the researcher investigated ECG, Echo, experiment results available in patient's file after being discharged. The collected data were recorded into SPSS software and were analyzed using mean, standard deviation and **qui** test.

**Results:** The most patients suffering MI in both groups were 51-60 years old (32% and 38%), married (92% and 90%), and male (76% and 62%). The suffered part was the bottom of heart (26% and 26%). The endangering factors (56% and 54%) in control group were diabetes (16%), hypertension (14%), hyperlipidemia (8%), cigarette smoking (8%), combination of several diseases (6) history of MI (1%). In case group, the hypertension (14%), diabetes (10%), history of MI (8%), cigarette smoking (8%), hyperlipidemia (6%), were the risk factors accompanying MI. the result of study about re-establishment of **kronri** blood flow indicated that the height of ST part has been decreased in ECG of people receiving SK in both control and case groups (84% and 6%), respectively. There is a statistically significant difference between two groups and EF has been above 50 in both groups (57.3% and 52%). Regarding side effects of SK injection, patients in both groups suffered the side effects (56% and 46%) the cardiac side effects were 30% and 38% respectively. The allergic effects were 32% and 22% and blood side effects were 32% and 22%. There was no significant difference, however.

**Conclusion:** Considering the results of this study, it is possible to improve **kronri** blood flow of MI patients through accelerated SK injection (30 min).

**Key words:** heart failure, venous streptokinase, injection method