

Prof.Dr. Cemşid Demiroğlu | Comparison of intracoronary versus intravenous administration of tirofiban in primary percutaneous coronary intervention

Anadolu Kardiyol Derg. 2010 Aug;10(4):340-5. doi: 10.5152/akd.2010.093.

[Erdim R](#), [Erciyes D](#), [Görmez S](#), [Karabay KO](#), [Catakoğlu AB](#), [Aytekin V](#), [Demiroğlu C](#), [Gülbaran M](#).
Department of Cardiology, Florence Nightingale Hospital, Istanbul Bilim University, Istanbul, Turkey

OBJECTIVE:

The purpose of this study was to compare the intravenous bolus dose of tirofiban with intracoronary bolus dose in primary percutaneous coronary intervention (PCI) with regard to in hospital and six months clinical outcomes and peak cardiac enzyme levels.

METHODS:

We retrospectively examined 84 ST elevation myocardial infarction (STEMI) patients who underwent primary PCI from March 2006 to February 2007. All patients received the systemic bolus dose of tirofiban 10 mcg/kg either via intracoronary (IC) or intravenous (IV) route, followed by a 36 hours of IV infusion at 0.15 mcg/kg/min. Thirty six patients in IC group were compared with 48 patients in IV group in terms of peak cardiac enzyme levels, in-hospital and six months major adverse cardiac events (MACE) rates (death, myocardial infarction and repeat revascularization). Fisher's exact test, Yates Chi-square, unpaired Student's t-test and Mann-Whitney U test were used for statistical analysis.

RESULTS:

There was no difference in cardiovascular risk profile or cardiac history between two groups. At six months the incidence of MACE was 6.25% in IV group and 11.1% in IC group ($p=0.45$). Peak cardiac phosphokinase (CPK) levels between IV and IC groups were also statistically non significant (2657 ± 2181 U/L in IV group and 2529 ± 1929 U/L in IC group) ($p=0.92$).

CONCLUSION:

Intracoronary bolus application of tirofiban was not associated with reduction in MACE rates compared to intravenous administration in patients with STEMI who underwent primary PCI. Future prospective trials with higher bolus doses of IC tirofiban should addressed to clarify this issue.