



ISFAHAN UNIVERSITY OF MEDICAL SCIENCES

SCHOOL OF MEDICINE

ANESTHESIOLOGY DEPARTMENT

Thesis for obtaining the M.D. Degree

Title :

**The Evaluations of frequency distribution heparin  
resistance during coronary artery bypass graft (CABG) at  
the Medical Center of Chamran, 2009-2011.**

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## **Abstract**

**Background:** Heparin is one of the most important medication that is used in coronary artery bypass graft (CABG) operations, but some patients demonstrate heparin resistance (HR) during CABG. Heparin resistance was defined as at least one activated clotting time  $< 400$  seconds after heparinization and / or the need for purified antithrombin III (AT-III) administration. The goal of this study was investigation of HR prevalence in our country and relation between HR and post operative CABG complications.

**Methods:** 100 patients that candidate for CABG were selected and surveyed for HR and complications. The data entered to computer and analyzed by SPSS soft ware. The chi-square and t student tests were used for data analysis.

**Results:** The prevalence of heparin resistance in our study was 3%. There was no relation among bleeding, cardiac arrest and HR. Bleeding happened in 13 patients that 1 person was in HR group (33.3%) and 12 in non HR group (12.4%) ( $P = 0.34$ ). Cardiac arrest happened in 8 patients, 1 person was in HR group (33.3%) and 7 in non HR group (7.2%) ( $P = 0.22$ ). According our data there were no relation among HR and gender and ventilator dependency time.

**Conclusions:** HR is a nearly prevalent complication among patients that undergone CABG that may be led to some complications such as bleeding and cardiac arrest. In our study we did not find significant relation among them, but in frequency these complications were higher in HR group.

**Key words:** Heparin, heparin resistance, CABG, heparin complication, bleeding





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