HEPARIN AND PROTAMINE: SHOULD WE RE-ADJUST THEIR DOSAGES IN OPCAB?
Dr. M. Abdel Hamid (MD), Dr. A. Al-Agaty (MD), Dr. D. Soliman (MD), Dr. A. Fawzy (MD)

Background:
Many studies have verified that avoiding the use of cardiopulmonary bypass decreases to a great extent postoperative bleeding. The goal of this study is to verify that the use of both partial heparin and protamine dosages in off-pump surgery greatly reduces postoperative bleeding. Partial protamine dosage might not increase postoperative bleeding risk, but it may reduce dose-dependent protamine adverse effects.

Patients and methods:
Seventy-five consecutive patients undergoing off-pump coronary bypass surgery (OPCAB) were prospectively randomized in five groups: Group A received 300 IU/Kg heparin with 1 mg of protamine every 100 IU of heparin, Group B received 300 IU/kg heparin with 0.5 mg of protamine every 100 IU of heparin, Group C received 150 IU/kg heparin with 1 mg of protamine every 100 IU of heparin, Group D received 150 IU/kg heparin with 0.5 mg of protamine every 100 IU of heparin and Group E received 150 IU/kg heparin with no protamine.

Results:
As regards the preoperative cardiac function, pre and intraoperative coagulation profile, prothrombin time, activated partial thromboplastin time and platelet count early postoperatively, there was no statistically significant difference in the five study groups. In group D total postoperative bleeding, use of blood products and pericardial effusion prevalence at discharge were significantly lower when compared to groups A, B, C, and E.

Conclusion:
In OPCAB, both heparin and reversal with protamine dosages should be halved. No heparin reversal carries the risk of postoperative bleeding.