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## **Prevalence and intensity of hyperglycemia in non-diabetic patients undergoing coronary artery bypass graft surgery with and without cardiopulmonary bypass.**

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### **Abstract**

**OBJECTIVE:** To study the prevalence and severity of hyperglycemia in nondiabetic patients undergoing cardiac operation.

**METHODS:** In an observational prospective study, 282 non-diabetic patients underwent elective off-pump (n=101) or on-pump (n=181) coronary artery bypass grafting (CABG) surgery from March 2006 to July 2007 in Madani Heart Hospital, Tabriz, Iran. Blood glucose (BG) levels were measured during and 24 hours after operation. Frequencies of hyperglycemia (BG $\geq$ 126 mg/dl) and severe hyperglycemia (BG $\geq$ 180 mg/dl) and postoperative complications were compared in the 2 study groups.

**RESULTS:** Prevalence of at least one episode of severe hyperglycemia was 54.6% (154/282) in our patients during, and 24 hours after operation. Intra-operative hyperglycemia was slightly higher in on-pump group. Frequency of post-operative hyperglycemia was higher, although not significantly different between the 2 groups. The 2 study groups were not significantly different in frequency of severe hyperglycemia during operation, although were different within 24 hours postoperative period.

**CONCLUSION:** Prevalence of hyperglycemia especially severe hyperglycemia was high during, and after operation in both off-pump and on-pump CABG in non-diabetic patients. There was a borderline difference in blood glucose level between on-pump and off-pump CABG patients. It may be prudent to consider glycemic control protocols in these patients especially in early post-operative period.

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**MeSH Terms, Substances**

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