

Assessment of correlation between preoperative fibrinogen levels on blood loss after cardiac surgery

Abstract:

Background: *Open-heart surgery in order to bypass the occluded coronary artery is one of the most common in elderly adults. Bleeding after cardiac surgery is very common and is one of the potential complications of this surgery. Predicting the occurrence of such bleeding can provide helpful data for surgeons in providing solutions to help prevent these complications and choosing right patients. Fibrinogen is one of the factors affecting the coagulation system. Fibrinogen is a Probable bleeding factor after open heart surgeries. This study aimed to determine the relationship between preoperative fibrinogen as a predictor of bleeding after surgery.*

Materials and Methods: *a total of 115 patients (mean age $64/7 \pm 8/96$) undergoing isolated CABG were included in across sectional study. In order to determine levels of fibrinogen, ptt, Hb, prothrombin time, and platelet counts, a blood sample gathered and analyzed before the surgery. Similar samples gathered immediately after surgery & 18 hours after that. Amount of bleeding were recorded at 12, 18 and 36 hours after surgery. The data was analyzed to determine the relationship between variables such as fibrinogen levels and blood loss were analyzed.*

Results: *The average age of patients was $64/7 \pm 8/96$, minimum age was 47 and maximum age was 75 years. 59 patients (51%) were male and the rest were female. In the present study, bleeding after surgery was significantly more in men. A significant relationship was found between fibrinogen levels (both pre and postoperative) and blood loss. Also a significant relationship was found between postoperative PT and PTT (18h after surgery) and blood loss. Another significant relationship was found between preoperative Hb, Hct and blood loss. patients who had received more than 5 units of packed cell, had lost more blood than the other patients. No significant relationship was found between platelet and blood loss.*

Conclusions: *Finally, the results indicated that pre and post operative fibrinogen levels is directly associated with the amount of bleeding after CABG.*

Keywords: *cronary artery bypass graft, fibrinogen, hemoglobin, hematocrit, platelet count, prothrombin time, partial thromboplastin time, transfusion of blood products*