

SCA 50
INFLUENCE OF COLLOID INFUSION ON COAGULATION
DURING OFF-PUMP CABG

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Introduction: It is a common practice to infuse colloids for maintaining the intra – vascular volume during off-pump coronary artery bypass grafting (CABG) However colloids may adversely affect coagulation and primary haemostasis. The aim of this study was to examine the influence of different colloids on coagulation during off – pump CABG.

Materials & Methods: 30 patients scheduled for off – pump CABG were included in this prospective randomized study. These patients were randomly allocated to three groups. Group I received 6% medium molecular weight – hydroxyethylstarch (200/.5), Group II received 6% low molecular weight – hydroxyethylstarch (130/.4) and Group III received 4% succinylated gelatin during the surgery .After anaesthetic induction colloid was infused in a dose of 7 – 8 ml / kg to maintain CVP 8 – 10mmHg before the administration of heparin. Hemoglobin, activated coagulation time, prothrombin time,

APTT, Fibrinogen, von Willebrand factor, platelet count were measured / assessed at specified intervals. Post – operative chest-tube drainage and total volume of colloid infused up to 24 hours were monitored. Parameters were statistically analysed.

Results: Von Willebrand factor decreased after the colloid infusion significantly to 67% from baseline in Group I as compared to 85% & 79 % in Group II & Group III respectively. Von Willebrand factor levels remained lower than the baseline value in the first 24 hours in Group I whereas this factor level increased above the baseline values in the other two Groups 6 hours post operatively. There were no differences in other coagulation tests in between the Groups. Postoperative chest tube drainage in 24 hours was significantly higher in Group I (856±131ml) as compared to Group II (550±124ml) and Group III (582±159ml).

Conclusion: Based on our results, 6% low molecular weight – hydroxyethylstarch (130/.4) is a good choice for maintenance of intravascular volume during off pump CABG because of good volume expansion effect & relative lack of impairment of coagulation.