

**Background & Aim:** Hypocoagulability after cardiac surgeries on cardiopulmonary bypass (CPB) is a major concern. Conventionally routine coagulation tests (RCT) were used for this but recently thromboelastography (TEG) is being used. We compared whether RCT and TEG had any correlation with blood loss.

**Methods:** This prospective study was done on patients undergoing cardiac surgery on CPB to determine the correlation between different RCT (PT/INR, aPTT, fibrinogen level, platelet count) and TEG parameters (r-time, k-time,  $\alpha$  angle and MA) before heparinisation and after reversal with protamine. Their correlation with chest-tube output at 24 hours after surgery was also determined.

**Results:** Most RCT parameters changed significantly after CPB. Prebypass platelet count and postbypass PT and fibrinogen level correlated significantly with the postoperative blood loss at 24h. Of the TEG parameters, only MA changed significantly after bypass. Alpha angle and K-time after bypass correlated significantly with postoperative blood loss. RCT and TEG parameters correlation was found in both prebypass and postbypass samples. In few pairs (prebypass: aPTT/ K-time, platelet count/ MA and postbypass; aPTT/ R-time, Fibrinogen/  $\alpha$  angle, fibrinogen/ MA) correlation was not significant.

**Conclusion:** In our study, RCT and TEG parameters correlated among themselves and PT, fibrinogen levels after bypass. Their corresponding part in TEG, K-time and alpha angle correlated significantly with amount of blood loss. TEG can be used to guide blood component therapy postoperatively in ICU rather than empirically.

#### References:

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**Comparison study of routine coagulation tests and thromboelastography for detection of hypocoagulable state in patients undergoing cardiac surgery on cardiopulmonary bypass**

**Pankaj Garg**

SMS Medical College, Jaipur.