

DOES THORACIC EPIDURAL ANESTHESIA IMPROVE THE GRAFT FLOW IN CABG?

Vivek Gupta¹, VK Sharma, Sarju Ralhan², Rajiv Gupta², Vikram Pal Singh², Munish Aggarwal², Rajesh Arya¹, Dinesh Garg¹, Suvir Grower¹, GS Wander³

*Department of Cardiac anesthesia & intensive care¹, cardiac surgery² & cardiology³
Hero DMC Heart Institute Tagore Nagar Ludhiana Punjab India*

Introduction: Thoracic epidural anesthesia administration is known to improve the regional coronary blood flow by sympathetic blockade. This study was conducted to know the effect of thoracic epidural anesthesia on the graft blood flow in OPCAB.

Method: 80 patients posted for OPCAB were randomly divided in two groups of 40 each (Group A & B). Similar anesthetic technique was used in both the groups except high thoracic epidural catheter was placed in Group A patients before anesthetic induction. Group B did not receive thoracic epidural anesthesia. A combination of lignocain 2%, bupivacain 0.5% & Morphine was administered through epidural catheter immediately after the induction in Group A patients. Top up doses were given at regular interval. Patient with sequential grafting or Y grafting were excluded from study. After completion of the grafting, blood flow in the graft (ml/min) & pulsatility index (PI) was measured in the individual grafts using transit time flow meter (TTFM) along with the hemodynamics (HR, ABP & PAP). Demographic data, preoperative condition (LV function, comorbid conditions etc), number & type of conduit used for anastomosis (LIMA, radial or saphenous veins), and duration of surgery were also noted. Statistical analysis was done and $p < 0.5$ was considered significant.

Result: Demographic data, LV function, number of grafts were comparable between the two groups. Haemodynamic parameters (HR, MAP & MPAP) were not significantly different in both the groups. Blood flow in LIMA was significantly higher & PI was significantly lower in Group A patients. Though there was no difference in blood flow or PI in radial or saphenous vein graft.

Conclusion: Thoracic epidural anesthesia administration improves blood flow & PI in LIMA graft, but does not have any effect on blood flow & PI of radial or saphenous vein graft.

COMPARISON OF PREDICTIVE VALUE OF THROMBOELASTOGRAPHY AND SONOCLOT ANALYSIS FOR POSTOPERATIVE BLOOD LOSS AND TRANSFUSION REQUIREMENT IN CHILDREN UNDERGOING CARDIAC SURGERY FOR CYANOTIC CONGENITAL HEART DISEASE

Dr. Vishal, Dr Poonam Malhotra Kapoor, Deptt of CA, CNC, AIIMS

Objective – Bleeding abnormalities of various etiologies are often present in children with cyanotic congenital heart diseases undergoing corrective surgery. There are abnormalities pertaining to clotting factors levels, platelet dysfunction and fibrinogen levels besides thrombocytosis contributing to the

abnormalities already present. A comparison of two point of care modalities of coagulation monitoring Thromboelastography and Sonoclot is made in predicting postoperative blood loss and blood product requirement in patients with cyanotic congenital heart disease undergoing heart surgery on cardiopulmonary bypass.

Design - Prospective randomized controlled study

Setting – Tertiary care teaching hospital

Participants – the study was conducted on 52 children scheduled for corrective surgery for Tetralogy of Fallot.

Interventions – coagulation profile including platelet function were assessed preoperatively, after CPB and at 24 hours after surgery using thromboelastography and sonoclot analyzer. Patients were transfused blood and blood products as per the institutional protocols. Postoperative blood loss and requirements of blood transfusion were documented until 24 hours postoperatively. Postoperative inotrope requirement, ventilation hours were measured as secondary outcome.

Measurements and results - 28 patients received postoperative blood and blood product transfusion. There was no significant difference between the baseline values using either of the methods and both predicted preoperative altered coagulation profile with equal accuracy. Sonoclot analysis was found to be a better predictor of postoperative blood loss and blood product transfusion. 09 patients out of 28 patients who received allogenic blood transfusion had normal Thromboelastogram values where as only 03 patients had normal sonoclot values (p value < 0.01). The secondary parameters, time to extubation and postoperative inotropic requirement could not be significantly correlated with abnormal coagulation profile by either method.

Conclusion – The accuracy of Thromboelastography and sonoclot analysis was found to be comparable for detection of coagulation abnormalities preoperatively. Sonoclot analysis however was found to be a better predictor of postoperative bleeding and transfusion requirements.

COMPARISON OF INFLUENCE OF PROPOFOL-FENTANYL vs. DEXMEDETOMIDINE-FENTANYL ANAESTHESIA ON INTRAOPERATIVE STRESS RESPONSE IN PATIENTS UNDERGOING OFF PUMP CORONARY ARTERY BYPASS GRAFTING

Dr Chaitali Sen Dasgupta, Dr Shanta Ganguly I.P.G.M.E & R, Kolkata

Introduction:- In coronary artery bypass grafting, anaesthesia is designed with a view to prevent and treat intraoperative ischaemia, to maintain adequate haemodynamic stability so as not to increase myocardial oxygen demand and hamper proper perfusion in any way. Though stress response is an evolutionary tool of survival, it is certainly an impediment to achieve haemodynamic goals in a patient undergoing CABG, as it causes increase in catecholamine level thereby increase in heart rate and mean