LOW CARDIAC OUTPUT SYNDROME: ROLE OF INODILATORS

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Patients with low cardiac output syndrome (LOS), presented with cardiac index < 2 liters / min/m. associated with systolic arterial pressure < 60 mmHg and evidence of poor tissue perfusion during and after weaning from cardiopulmonary bypass. Those patients need aggressive pharmacological support, usually B-sympathomimetic agents e.g. dobutamine. Efficacy of catecholamines might be reduced due to B-adrenoreceptor down-regulation phenomenon.

Selected inhibition of phosphodiesterase (PDE) III seems to be alternative concept in treating patients with impaired myocardial function.

Enoximone is the one of the latest "noncatecholamine, non-glycoside" inotropic agent which exert its effects by competitive inhibition of (PDE) III, the isoenzyme responsible for degradation of cyclic AMP with positive inotropic and vasodilating properties. This study was designed to compare the hemodynamic effect of enoximone and dobutamine in patients with impaired left ventricular function during emergence from CPB. Forty patients undergoing cardiac valvular replacement surgeries (NYHA class III, IV) randomly classified into two equal groups, group (I) [enoximone group] and group (II) [dobutamine group].

Induction of anesthesia was done with sleeping dose of thiopentone 2.5%, fentanyl 10ug/kg and pancuronium bromide 0.08mg/kg for muscle relaxation. Then balloon-tipped triple lumen floatation (Swan-Ganz) catheter was inserted.

Weaning from CPB was attempted and full hemodynamic data was recorded at that time for assessment of the weaning trial. If LOS was diagnosed we return to CPB and either enoximone 0.5mg/kg IV (group I) or dobutamine 10ug/kg/min (group II). another weaning trial was repeated 5 minutes.

In group I enoximone produced significant increase in CI and greater reduction in PCWP, PVR, MPAP, SVR compared with group II.