OFF PUMP CORONARY ARTERY BYPASS SURGERY

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Off-pump coronary artery bypass grafting is a newly resurgent technique because of the constant Endeavour to make surgery safer for the patients. This method eliminates the use of cardiopulmonary bypass thus avoiding an unphysiological state and reducing the cost involved in the use of this circulatory support system. The rationale appears sound. The history, rationale, technique, systemic changes and comparative results, indications, limitations and contraindications of OPCAB will be based on available evidence, it is clear that OPCAB is safe and practical with comparable midterm outcomes. The results are reproducible by any average surgeon. The claim that this technique completely eliminates all the problem areas of CABG is unfounded. There is a definite trend towards lesser morbidity especially in high-risk groups even if not statistically proven uniformly. The myocardial necrosis is significantly less with OPCAB. The neurological complications may not differ unless OPCAB is done with a “no-aortic manipulation” technique. This method is definitely contraindicated in acutely unstable patients, in irritable hearts with frequent arrhythmias, heavily calcified arteries, very deeply placed intramyocardial vessels, grossly dilated hearts and in diffusely diseased small vessels. The rate of application of this technique will vary according to the experience, judgement, adventurousness and bias of the surgeon. It is important to realize that if the patient's interest will be better served by resorting to on-pump method, the conversion to CPB must be done electively without waiting for acute deterioration of hemodynamics to precipitate an emergent conversion.

Even though enough randomized trials are not yet available to prove any superiority of this technique, it should be practiced in all patients where its benefit is likely. Till we get the results of large studies done scientifically, we will not know whether off-pump bypass surgery is a step forward, backwards. This paper will describe the advantages, difficulties and anaesthetic management of this subject, and also what special requirements are needed from surgery and anaesthesia.