

Ultra-Fast Track Cardiac Anaesthesia: Why Not – Not Why?

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The care of the cardiac surgical patient has undergone extensive changes in the past decade. Previously, postoperative ventilation was routine because of the relatively high incidence of pulmonary insufficiency and low cardiac output states, as well as the popularity of high-dose narcotic anesthetic techniques which is a culprit for respiratory depression. Recent advances in cardiac anesthesia and surgery have remarkably reduced the necessity for prolonged postoperative ventilation [1] but to what extent?

Early tracheal extubation after cardiac surgery has proven to be safe, cost-effective [2], and also improves resource utilization [3]. For example, after conventional coronary artery bypass grafting (CABG), early tracheal extubation has become feasible due to improvement in perioperative anesthetic management, advanced surgical techniques, myocardial protection and cardiopulmonary bypass techniques [4]. Many of these factors are even becoming less influential with minimally invasive surgeries and off-pump CABG's.

Fast track cardiac anesthesia (FTCA) aims at tracheal extubation within 1 to 6 hours after arrival in the cardiac surgery recovery/intensive care unit. It has not been found to increase postoperative cardiorespiratory morbidity, sympathoadrenal stress, or mortality. On the other hand, it significantly reduces costs and improves resource utilization [5]. Improvement in diastolic compliance and overall cardiac performance were also described as potential benefits of early extubation [6].

Ultra-fast track anesthesia (UFTA) aims at "immediate" extubation of cardiac surgical patients at the end of the operation. There are few contraindications to the adoption of early extubation protocols than indications to keep patients ventilated post cardiac surgery. Generally most cardiac surgical patients, presenting for either elective or emergent surgery, have adequate ventilatory function. If patients were not intubated and ventilated preoperatively, they are not likely to require prolonged mechanical ventilation afterwards [1].

Patients also do not like to remain intubated postoperatively. Before surgery, patients are very concerned and often frightened of the idea of remaining intubated after surgery, despite understanding its value. After surgery, many patients find intubation the worst experience of their hospital stay. As few as 4 more hours of postoperative ventilation results in patients with more mental depression measured on the third postoperative day. If immediate tracheal extubation is safe, at a minimum, patients will be saved the psychological trauma [7].

Feasibility of ultra-fast track anesthesia has been studied for different cardiac operations and with different anesthetic techniques. Nevertheless, questions remain regarding the significance of various perioperative anesthetic techniques on fast-track management of earlier tracheal extubation [8]. Any anaesthetic technique which is balanced and ensures decent pain relief while patients can breathe on their own is suitable for ultra-fast cardiac anaesthetic. Reasons deemed to be responsible for postoperative ventilation such as hypothermia or risk of bleeding can all be dealt with promptly in the operating room and any derangement corrected before reaching the phase of intensive care admission. Actually, if a percentage of patients are not felt to be suitable for immediate extubation it is those who should remain intubated rather than the all fearing complications to occur. Another factor in favor of immediate extubation might be the evolving culture of postoperative recovery units which is mainly lead by nursing staff rather medical staff. Even though the majority of them are

well experienced nurses yet still weaning mechanical ventilation and sedation could be a challenging task and calling for the on-call physician, who is not actually the primary physician, could occur later/earlier than optimum depending on the level of experience and element of suspicion the staff may have. In absence of an indication for mechanical ventilation it would be less stressful nursing task especially in those patients arriving to recovery units later in the day.

To Conclude, cardiac surgery as any other major surgery is not an indication for prolonged mechanical ventilation per se and the risks it has with less invasive surgeries became and better titrating of anaesthetic drugs and better monitoring may render postoperative ventilation a habit from the past.

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