DOES OBESITY AFFECT TIME TO EXTUBATION IN “FAST TRACK” CABG SURGERY?

Richard Ahn, Joel L. Parlow MD, FRCPC, Brian Milne MD FRCPC

Department of Anesthesiology, Queen’s University, Kingston, Ontario, K7L 2V7

INTRODUCTION: Obesity is a risk factor for the development of coronary artery disease, and is a common comorbid condition among patients undergoing coronary bypass surgery.¹ Previous studies have shown inconsistent results as to whether obese patients require prolonged ventilation after cardiac surgery.² Fast track recovery strategies have become common to reduce the duration of ventilation and intensive care, however it is not known whether obese patients are suitable for fast track extubation.

METHODS: We performed a retrospective, continuous quality improvement audit of 200 randomly selected records of patients undergoing coronary artery bypass surgery over a 2 year period. The objective was to determine whether, in our practice, obesity affects postoperative intubation time using a fast track recovery strategy. Patients were divided into Obese and Non-obese groups using a definition for obesity of body mass index >30.0.

RESULTS: Eighty-four (42.4%) of the patients audited met criteria for obesity. Concurrent diabetes mellitus was significantly more common in the Obese group. Although most patients successfully underwent fast track recovery, time to extubation was prolonged, and failure of fast track extubation was more common in obese patients (63% Non-obese vs 46% Obese extubated in less than 2 hours, 98% Non-obese and 85% Obese patients extubated in less than 6 hours). Mean extubation time was 141±183 min in the Non-obese group, and 338±726 min in the Obese group ($P=0.006$). While the rate of re-intubation was similar, 1 Non-obese and 10 Obese patients required prolonged intubation for over 12 hours ($P=0.002$). Hospital length of stay was similar. Postoperative blood loss through chest drains was lower in Obese patients ($P=0.006$ in the first 6 hours).

DISCUSSION: We conclude that while most obese patients can undergo a fast track recovery strategy, the rate of failure of early extubation is significantly higher than in non-obese patients. The results of this study suggest that modification of intensive care resources may be anticipated when recovering obese patients after cardiac surgery.

REFERENCES:

1. Circulation 2004; 110:e476-e483.
2. Eur J Cardio-Thorac Surg 2001; 19:662-6.

Time to Extubation