

## 26208 - THE TIMING OF EXTUBATION IN SECUNDUM-TYPE ASD REPAIRS IN CHILDREN

**Nigel Barker MB ChB, J Mark Ansermino, MB BCh; Andrew Campbell, MD; Richard Lee; British Columbia Children's Hospital, Vancouver, BRITISH COLUMBIA, Canada**

**Introduction:** Secundum-type atrial septal defect repair (ASD II) in children is suitable for early post operative extubation (within 2 hours), which is the suggested management in standard texts (1). The patients are generally over 1 year of age, the cardio-pulmonary bypass (CPB) time is shorter, there is minimal co-morbidity and the anaesthetic technique can be tailored towards early extubation. Early extubation may reduce costs and hospital stay and may become standard in the current era of fast-tracking (2,3). The purpose of this review was to determine when children are extubated after ASD II repairs, and investigate possible reasons for late extubation.

**Method:** After ethical approval, a retrospective chart review between January 2002 and November 2005 was carried out for all ASD II repairs at British Columbia's Children's Hospital. A total of 36 children (age < 18 years) were identified during this period. Patient, perfusion, anaesthetic and intensive care data was obtained for each child.

**Results:** The mean time to extubation was 3 hours and 25 minutes (range 0 to 28 hours). Patients were split into 2 groups according to the time of extubation (see table). There was no significant difference between the 2 groups with respect to age, weight, ASA grade, CPB and cross-clamp time, pre-medication, intra-operative narcotic dose, post-operative temperature and blood gases. Three of the 13 patients in the early extubation group were extubated in the operating room. One of these was reintubated after 20 minutes due to respiratory failure. In the 4 patients extubated greater than 12 hours post-operatively, 1 had a respiratory tract infection, 1 had ongoing bleeding, and the other 2 had reduced respiratory drive, possibly secondary to intra-operative opiates or medical co-morbidities.

**Discussion:** The percentage of patients extubated early, was lower than the published data, where 53% of patients for ASD II repair were extubated in the operating room (4). Reasons for this low percentage may be a different patient population, an anaesthetic not geared towards early extubation, or that these patients remain intubated post-operatively due to institutional practice. Well planned early extubation requires cooperation of the anaesthetist, surgeon and intensive care staff.

**References:**

1. Pediatric Cardiac Anesthesia. 4th Edition Chapter 18.
2. J Thorac Cardiovasc Surg 1997 114: 413-418.
3. Anesth Analg 1996 82: 988-993.
4. Can J Anaesth 1992 39:1041-1044.

Timing of extubation / hrs post-operative	Number of patients n (%)	
0 - 2	13 (36)	Group 1 - Early extubation
2 - 12	19 (53)	Group 2 - Late extubation
> 12	4 (11)	