Rapid Recovery and Discharge of Ambulatory Pediatric Patients from the PACU

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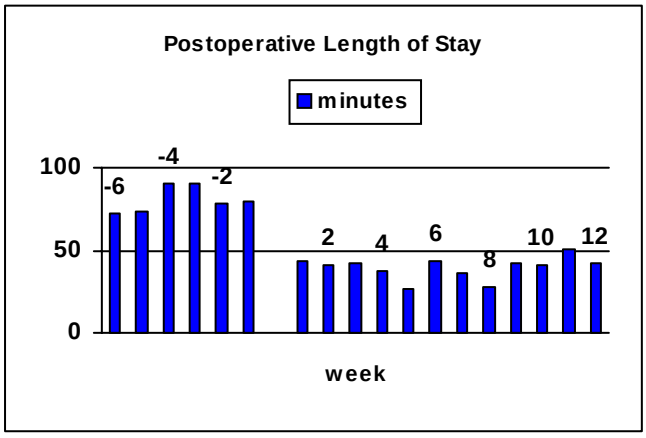
Introduction: In recent years, discharge criteria have been revisited and concepts such as **fast-tracking**, bypassing the traditional phase I recovery (post-anesthesia care unit or PACU) with patients being transferred directly from the OR to phase II recovery (ambulatory surgery unit or ASU), have been introduced (1, 2). Patient selection and tailoring the anesthetic techniques for rapid recovery have been critical to the success of this concept. At St. Louis Children's Hospital (SLCH), we developed a **discharge from PACU protocol** whereby prescreened patients were admitted following myringotomy tube (MT) insertion postoperatively for a combined phase I and II recovery and discharged directly from the PACU. We wished to investigate the potential for reducing the length of stay compared to our conventional segregated recovery process.

Methods: As part of the quality improvement program at SLCH, quality indicators such as the time to discharge, incidence of complications, and parent satisfaction surveys were reviewed for same day surgery patients following MT insertion for a 6 week period prior to the initiation of the protocol on September 12, 2003 and for the 12 week period that followed. Pediatric patients entered into the protocol were of ASA I or II classification and were free of significant cardiopulmonary disease or history/exam predicting difficult airway management. Patients with significant respiratory symptoms were also excluded from the protocol as were patients that experienced significant intraoperative events such as laryngospasm, bronchospasm, or oxygen desaturation. Most patients were premedicated with oral acetaminophen 10-15 mg/kg and oxycodone 0.1-0.15 mg/kg. Patients were discharged following attainment of a satisfactory Modified Aldrete Score as well as comfort and nausea scores. These criteria were identical to those customarily used for traditional ambulatory surgery patients. If a patient failed to meet discharge criteria in 60 minutes, they were entered into the traditional recovery pathway.

Results: The total length of stay for pediatric patients following MT insertion was decreased from a mean of 82 minutes to a mean of 39.9 minutes by consolidating phase I and phase II recovery with subsequent discharge from the PACU. The incidence of complications was low and similar in the two groups. Satisfaction surveys revealed that most parents were extremely pleased with their experience.



Discussion: Many ambulatory surgery centers are successful with minimal FTEs by minimizing duplication of personnel and utilizing the single recovery unit concept for phase I and II recovery. In this study, we were able to significantly decrease the average length of stay for pediatric patients following MT insertion while maintaining patient safety and acceptable parent satisfaction. The availability of nurses trained in all aspects of phase I and phase II recovery including the debriefing and education of parents prior to discharge was a critical factor contributing to the success of this program. In addition, prescreening of patients to enroll those at minimum risk for airway or cardiopulmonary complications was essential. And finally, the routine administration of oral analgesics (acetaminophen and oxycodone) preoperatively minimized the probability that postoperative narcotics would be required with their associated somnolence, respiratory depression, and nausea. Since completion of this study, many other patient groups at SLCH have been included in the **discharge from PACU protocol** with similar positive results. We conclude that discharging ambulatory patients directly from the PACU is a viable alternative and may give adept perioperative managers added flexibility (3).

References: 1. Patel RI, et al. Anesth Analg 2001
2. ASA Practice Guidelines for Postanesthesia Care. Anesthesiology 2002
3. Dexter F, at al. Anesth Analg 1999