Factors that affect postoperative nausea and vomiting (PONV) in the pediatric population have been described, however there are very few studies on factors that affect post-discharge nausea and vomiting (PDNV). PDNV is defined as nausea and vomiting after 24 hours postoperatively. Eberhart et al. (1) identified risk factors for PONV in pediatric population: age greater than 3 years, strabismus surgery, surgery >30 minutes, and previous patient/family history of PONV. Do these same factors affect PDNV in the pediatric population?

This is an ongoing, IRB-approved prospective study, which studies children ages 5–10 years (ASA I-II) receiving general anesthesia for elective surgery in an ambulatory setting. The child rates his or her pain and nausea pre-operatively, postoperatively at discharge from PACU, and post discharge for three days (POD 1-3). A follow-up phone call on POD2 provides additional information on the child’s pain, nausea and emesis. Children were trained pre-operatively to self-rate pain using the FPS-R Scale (2) and nausea using the BARF Scale (3). Both scales range from 0 to 10. Nausea and pain were dichotomized as absent (0) or present (>= 2). Data were analyzed with 2x2 crosstabs and Fisher’s exact test.

A total of 77 patients (58 M, 19 F, age 5-10.7 yrs ) have been enrolled to date. PONV occurred in 51% of patients and PDNV occurred in 28% of patients on POD1. Emesis occurred in 9.1% of patients on day of surgery and 1 patient on POD1 (1.3%). Patient/first degree relative with history of motion sickness or N/V, exposure to smoke in the home, or airway management technique, did not significantly predict PDNV. Patients who received post-operative opioids in PACU had a decreased likelihood of nausea on POD1 (P=.06) (Figure 2 and 3). Duration of anesthesia >30 minutes increased the incidence of both PONV and PDNV. The incidence of nausea on POD1 was somewhat increased in patients who experienced nausea in PACU (43.5% vs. 21.4%, P<.09) (Figure 1).

To date in this ongoing study, factors that have been found to predict PONV such as history of motion sickness and prior history of PONV (1) do not seem to predict PDNV in children. In this age range many children have no prior exposure to anesthesia therefore prior history of PONV is often not applicable. Increased duration of anesthesia may predict the likelihood of PONV as well as PDNV. PONV in itself may predict that the patient will have PDNV. This is an ongoing study, and with higher enrollment, further factors maybe elucidated.

**References**