



Meeting report

**Society for Ambulatory Anesthesia, 14th Annual Meeting,
April 29–May 2, 1999**

At the 14th annual meeting of SAMBA held in Seattle, WA, USA, the April 29th, Friday morning session 'New Innovations' was moderated by Richard A. Kemp, M.D., SAMBA President-elect.

John B. Leslie, M.D. (Mayo Clinic Hospital, Scottsdale, AZ) presented an overview of 'Postoperative Nausea and Vomiting: Patient Satisfaction and Outcomes.' He opened his remarks by saying, "PONV issues include the overall incidence, high-risk subgroup identification, anesthetic technique comparisons, potential adverse events from vomiting, and the big debates over the higher costs of the new agents." There appears to be no simple answer to the problem. The issue is whether we should try to prevent PONV in high-risk patients, or offer treatment if PONV occurs.

Data were presented confirming the significant impact PONV has on prolonging outpatient stay. The incidence of PONV in multiple studies over the past four decades varies between 20 and 30%, depending upon numerous surgical and patient factors. For there to be any consistency, practitioners must understand the definition of PONV extends to 24 h postoperatively and not just into the post anesthesia care unit (PACU) where following discharge the patient leaves sight of the anesthesia team. Leslie documented that much of PONV occurs after discharge and not in the PACU or ambulatory facility.

Certain factors place patients into a high-risk group for PONV: age (adolescent or teen); body habitus (obesity); gender (hormonal cycles); anxiety; history of PONV or motion sickness; gastroparesis or other gastrointestinal disease; recent food or alcohol. Additionally, there are surgical and anesthetic factors triggering PONV: surgical site; duration of procedure; movement; pain; hydration; anesthetic drugs. General anesthetic procedures have been listed as producing more PONV than regional or MAC (sedation) techniques.

Opioids, ketamine and etomidate are usually associated with increased PONV.

Whether to treat prophylactically or wait until the patient experiences PONV remains a difficult decision. The economic issues raised also complicate the challenge to justify administering a medication to a patient who may not have needed the agent to begin with! As to the issue of timing of the antiemetic, studies with multiple classes of antiemetics now suggest the drug should be administered at the end of the procedure to provide higher efficacy.

He concluded his remarks by stating, "Aggressive antiemetic prophylaxis will not prevent all PONV; routine prophylaxis may be expensive or have undesirable side effects if some of the older but lower acquisition cost antiemetics are used inappropriately." If any cost effective strategy existed, a facility would first have to identify (by outcome studies) the high-risk PONV patients and ensure they received an appropriate dose of the currently recommended antiemetic by the best route and at the optimal time to facilitate patient care, minimize resource utilization, and speed the patient's release to home.

Mark A. Warner, M.D. (Mayo Clinic, Rochester, MN) discussed 'Fasting Guidelines: Optimal Timing.' Dr. Warner chaired the American Society of Anesthesiologists (ASA) taskforce on preoperative fasting and the use of pharmacological agents to reduce the risk of pulmonary aspiration. The purposes of the ASA guidelines are to enhance the quality and efficiency of anesthesia care, stimulate evaluation of individual practices, and reduce the severity of complications related to pulmonary aspiration of gastric contents, should it occur.

Perioperative pulmonary aspiration that results in morbidity or mortality is a rare event; serious morbidity and considerable costs however, are associated with pulmonary aspiration that does not result in death.

Although aspiration may occur at any time (including immediately before the induction of anesthesia), the majority of aspirations appear to occur during tracheal intubation and extubation. The traditional rule (obtained in animal models and it is unclear if it applies to our patients) is that the chance of lung damage is most likely if the aspirated material has a pH less than 2.5 or a volume greater than 25 ml. He then went on to list general and specific factors that make certain patients at greater risk for aspiration. The ASA guidelines do not recommend preoperative use of medications that block gastric acid secretions or administering antacids in patients who have no apparent increased risk for pulmonary aspiration.

Dr Warner summarized fasting recommendations to reduce the risk of pulmonary aspiration. For procedures requiring general anesthesia, regional anesthesia, or sedation/analgesia it is appropriate to fast from intake of clear liquids for two or more hours before the procedure; fast from intake of breast milk for four or more hours; fast from intake of infant formula for six or more hours; fast from intake of a light meal or non human milk for six or more hours. Approximately 90% of clear liquids empty within 60 min; warm liquids faster than cold. The taskforce noted that intake of fried or fatty foods or meat may prolong gastric emptying time. Both the amount and type of foods ingested must be considered when determining an appropriate fasting period. The fasting guideline recommendations do not apply to women in labor. Dr Warner made it quite clear that following the ASA guidelines does not guarantee complete gastric emptying.

The third panelist was Frances Chung, M.D. (Toronto Hospital, Toronto, Ontario, Canada) who provided an extensive review of 'New Drugs and Techniques for Postoperative Pain Management.' She opened her remarks by stating, "Postoperative pain is one of the main barriers to increasing the range of ambulatory procedures. Persistent pain has been shown to lead to postoperative nausea and vomiting, delayed discharge, contact with medical facility after discharge, and unanticipated admissions." Although it is now recognized that under-treatment of pain is common in outpatients, more than 80% of patients are satisfied with their pain control even though overall medication use was low.

She went on to say, "Optimal postoperative pain control for ambulatory surgery should be effective, safe, with minimal side effects, facilitate recovery and be easily managed by the patients after discharge." She broadly classified postoperative analgesia into pharmacological and non-pharmacological techniques. The mainstay of the pharmacological technique is the use of opioids; however, opioid analgesia has to be balanced against the side effects engendered, mainly nausea and vomiting. Non-opioid techniques included peripheral

nerve blocks and wound infiltration/installation and non-steroidal anti-inflammatory drugs (NSAID). Non-pharmacological techniques including cryoanalgesia, hypnosis and relaxation, transcutaneous electrical nerve stimulation and acupuncture-like transcutaneous stimulation have found limited use. Multi-modal analgesia, using a combination of opioid, NSAID and local anesthetic appears to be superior to any single modality, and this technique is highly recommended.

Evidence so far cannot support a major benefit of preemptive analgesia in postoperative pain management. Though evidence is lacking for preemptive analgesia, preoperative administration of a non-opioid analgesic can be an important factor in providing intraoperative analgesia, thereby reducing the intraoperative opioids and anesthetic requirement, and facilitating a smooth rapid recovery. There is no scientific documentation of the superiority of any individual NSAID for perioperative use. The choice of preparation, therefore, depends upon availability, desired route of administration, duration of effect and cost. The combined use of opioid and NSAID is ideal for treatment of severe pain.

Dr Chung feels optimizing postoperative pain control is the key to further advancement in the field of ambulatory anesthesia, and that, new portable analgesic delivery systems which are under investigation may prove to be the future for post-operative pain management in ambulatory surgery.

The final panelist was Rebecca S. Twersky, M.D. (Long Island College Hospital, Brooklyn, NY), SAMBA President who spoke on 'Recovery Concepts: 23-Hour Admits Versus Recovery Inns.' She opened her remarks by stating, "Driven by efforts at cost containment, technological advances in surgery and anesthesia, over 70% of all surgeries in the United States are being performed in the outpatient setting. Predictions are that this number will increase to over 78% by the year 2006. Ambulatory procedures are being applied to longer and more complex surgeries, and on sicker patients. Consequently, more innovative and intensive postoperative management will be required. Aftercare then must bridge the gap between traditional inpatient length of stay and extended post-surgical recovery care in the outpatient settings. Options for aftercare include: 23-h recovery facility, free-standing recovery centers, home health care and hospital hotels."

The increasing demand for post-surgical recovery care, where patients can stay between 23 and 72 h has propelled the growth of free-standing surgery recovery centers. A recent Federated Ambulatory Surgery Association survey reveals that approximately 10% of the Association's 2500 free-standing surgery centers have the capability of providing 24-h recovery aftercare. These facilities have an average of 3.8 beds; utilization

is approximately a 19-h average length of stay. Less than 1% of free-standing centers can provide 72 h of aftercare; these facilities have four beds per facility with an average length of stay of 34 h. The three largest utilizers of aftercare facilities are orthopedic, plastic and gynecological surgery. She did say that problems exist with reimbursement for aftercare.

Another option for aftercare, the hospital hotel, offers low overhead, improved ambiance and comfort for patients. Some facilities offer medical/nursing services, while others do not. Based upon current patterns, the total number of outpatient surgery centers

that offer extended post-surgical recovery care will continue to grow. However, a degree of caution is prudent until more outcome studies are conducted to assess different modes of aftercare to determine which are most beneficial for outpatients.

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