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Congress report

New Orleans: American Society of Anesthesiologists (ASA) Annual Meeting, 17–21 October, 1992

At the American Society of Anesthesiologists (ASA) Annual Meeting on 17–21 October, 1992, several ambulatory anaesthesia scientific papers were presented in oral, poster or poster-discussion sessions. This review presents only some of the many outstanding papers.

Thomas A Joas, San Diego, California moderated the poster-discussion session, and the discussants Jeffrey L Apfelbaum, Northbrook, Illinois and Paul F White, Dallas, Texas, skilfully kept the audience interested. Steven Manley, Illinois Masonic Medical Center and the University of Illinois College of Medicine, Chicago, Illinois, discussed the question, 'Is Routine Preoperative Pregnancy Testing Necessary?'

Dr Manley and colleagues did pregnancy testing on women of childbearing age who were scheduled for outpatient surgery at the medical centre. They found that of the 2056 women tested, seven were pregnant, yielding an incidence of 0.34%. None of the seven patients was aware of their pregnancy status, and these surgeries were subsequently postponed. The authors suggest that routine preoperative pregnancy testing should be performed prior to elective same day surgery.

Comments: There was a feeling among the discussants that if the patient states there is no chance that she could possibly be pregnant, a pregnancy test would not be necessary and would only add to the costs of the ambulatory surgery. On the other hand, if the patient indicates there might be a chance of pregnancy, the test is indicated. Of course, the local policy of the facility should be followed.

Peter J Alderson, and Jerrold Lerman, of the Hospital for Sick Children, Toronto, Ontario, Canada, presented a poster on 'Comparison of Ketamine and Midazolam as Oral Premedicants for Ambulatory Anesthesia in Children.' They compared ketamine 5.0 mg kg (0.1 ml kg^{-1}) and midazolam 0.5 mg kg^{-1} (0.1 ml kg^{-1}) in 46 children under 6 years of age undergoing dental surgery.

Both premedicants effectively produced sedation within 20 min, but discharge home was delayed by the ketamine premedication (110 ± 28 min) when compared to midazolam (90 ± 22 min). The results suggest that midazolam may be preferable to ketamine in a busy ambulatory surgery unit.

Comments: In adults, anaesthetic dosages of ketamine have been shown to be associated with slower recovery compared to recovery after thiopental. This study confirms slow recovery after ketamine premedication in children as well.

In their poster presentation on 'Isoflurane Versus Propofol for Maintenance of Anesthesia for Ambulatory Surgery,' Beverly K Philip, and colleagues at the Brigham and Women's Hospital in Boston, Massachusetts, compared the costs of two anaesthetic techniques in ambulatory gynaecological procedures. They calculated that maintenance of anaesthesia with propofol was approximately $10 more expensive than comparative anaesthetic maintenance with isoflurane (5 l min^{-1} in semi-closed system) in patients anaesthetized for approximately 50 min.

Early recovery (i.e. awakening or sitting in chair) was more rapid after propofol, but time to home readiness was similar after both techniques. Of the patients who felt nauseated, 27% were in the propofol group and 29% in the isoflurane group.

Comments: There was uncertainty among the discussants about whether the faster, early recovery (first stage recovery) can be translated into actual cost savings. This will depend on resource management abilities of individual health care institutions. Similar comparisons are indicated for maintenance of anaesthesia with desflurane and later with sevoflurane. The costs of low-flow (or closed-system) inhalation techniques also should be included in comparisons.

Richard S Gahn, and colleagues at St Louis University, St Louis, Missouri, presented a poster on 'Discharge Criteria for Outpatients Following Axillary Brachial Plexus Blockade.' They retrospectively followed up charts of 153 patients who underwent outpatient upper extremity surgery using brachial plexus blockade with mepivacaine.

Patients had been discharged home using the customary discharge criteria, but with an intact and working axillary plexus block. Patients were advised at the time of discharge that the sensory and motor functions in their extremity were not normal, and the hand was placed in a sling. None of the patients noted any injury occurring during the period of the blockade, and the authors felt that such a discharge practice is safe.

Comments: The discussants felt that problems related to the retrospective nature of this study prevented the results from being conclusive. Although a number of outpatient programmes feel that the practice is safe, others are uncomfortable about sending patients home with working blocks because of possible liability if accidents do occur after discharge. It appears that it is important to follow previously set discharge policies for each institution.

Carolyn P Greenberg, New York, moderated the scientific oral paper session where several interesting papers were presented. Jeffrey L Apfelbaum, University of Chicago Hospitals, Chicago, Illinois, presented the results of a large multicentre trial on 'Characteristics Associated with Prolonged Time to Awakening after Propofol Maintenance Anesthesia—Initial Experiences of 1819 Physicians.' In this unique study many physicians administered propofol for the first time in their practice, either as repeated bolus injection (8161 administrations) or continuous infusion (7325 administrations).

The authors attempted to identify factors related to prolonged awakening, defined as > 15 min. Prolonged awakening tended to be associated with increasing age, poor physical status, increasing propofol dose (> 8 mg kg^{-1}) and concomitant use of benzodiazepines.

Comments: The speaker stressed the importance of continuing the study to find out if the prolonged awakening time experienced by 7.5% of patients is a property of the drug or is a reflection of the physicians' learning curve. This reviewer would like to see

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other endpoints measured as well (e.g. time to ambulation or to home readiness).

A total of 21 papers were presented on ketorolac, the relatively new nonopioid analgesic (nonsteroidal anti-inflammatory drug, NSAID). Depending on the conditions of the study, ketorolac was reported to provide analgesia similar or inferior to narcotic analgesics such as morphine or fentanyl. Hak-Yui Wong, and colleagues from Northwestern University Medical School, Chicago, Illinois and Virginia Mason Medical Center, Seattle, Washington, presented 'Evaluation of Ketorolac as Sole Analgesic after Outpatient Surgery.' They studied 231 patients undergoing a variety of procedures. After surgery, patients received ketorolac 30 mg IV twice at 15-min intervals followed by 10 mg IV, p.r.n. up to six doses followed by 10 mg orally every 4 to 6 hours at home. In a similar fashion, control groups received fentanyl (either 10 or 50 μg IV) in the recovery room and codeine (60 mg) plus acetaminophen 600 mg every 4 to 6 hours after discharge.

The results suggest that except for the initial lag of analgesic action (i.e. approximately 30 min), the ketorolac IV followed by oral ketorolac provided analgesia similar to that found in the fentanyl groups. In this study, ketorolac was associated with lower incidence of the side effects of nausea, somnolence and impaired bowel function, which would be an advantage in the outpatient setting.

Yifeng Ding, and Paul F White, both of the University of Texas at Dallas, Texas, reported on a well-performed study on 'Use of Ketorolac and Fentanyl during Ambulatory Surgery.' Patients undergoing minor gynaecological surgery were given a blinded intravenous injection of either fentanyl 100 μg, ketorolac 60 mg, or the combination of these two prior to induction of anaesthesia.

In the ketorolac group, 68% of patients needed supplementary fentanyl for pain as a rescue medication, compared to only 13% of patients in the fentanyl group, and 14% in the combination group. No differences were noted in side effects or any of the recovery parameters measured (e.g. awakening, ambulation, discharge).

In an excellent presentation entitled 'No Fentanyl Sparing Effect of Intraoperative IV Ketorolac After Laparoscopic Tubal Ligation,' Carmen R Green, from the University of Michigan Medical Center, Ann Arbor, Michigan, concluded there was no significant narcotic sparing effect in prevention of pain after laparoscopic tubal ligation with a ring method using IV ketorolac 30 or 60 mg.

All patients received fentanyl 2 μg kg^{-1} at the time of induction of anaesthesia. In addition, approximately 30 min before the end of the procedure, the anaesthesiologist gave a 2 ml solution IV containing either saline, ketorolac 30 or 60 mg. There were no significant differences in requirement of fentanyl or later oral analgesics for pain in the recovery room or at home. Likewise, there were no major differences in emergence or recovery from anaesthesia (i.e. in time to ambulate or discharge home) or in the incidence of postoperative nausea and vomiting.

Comments: In this study, a ring method was used to tie the tubes. Pain is less severe after using a clip method for tubal ligation (Filschie clips). Ketorolac is the first injectable NSAID available in the United States. Several other NSAIDs (e.g. dicolfenac sodium, ketoprofen) have been used in Europe for years. Earlier studies with these other NSAIDs and new studies presented at the ASA Annual Meeting on ketorolac appears to indicate that NSAIDs, including ketorolac, may be sufficient to prevent or treat mild to moderate postoperative pain, but they would not be good enough to replace narcotic analgesics in the prevention or treatment of severe postoperative pain.

S Goegler, and colleagues at the Technical University, Munich, Germany, carried out a study on 'Pulmonary Function Following Laparoscopic Cholecystectomy Versus Laparotomic Cholecystectomy.' Although there was some evidence that pulmonary function was less impaired after the laparoscopic method, the authors demonstrated a distinct decrease of several parameters of pulmonary function and oxygenation when compared to values obtained before operation.

Comments: It appears one should not have a false sense of security that pulmonary function is not impaired after laparoscopic cholecystectomy.

Six papers dealt with ondansetron, a new 5-HT_3 receptor antagonist, in the prevention or treatment of postoperative nausea and vomiting (PONV). Charles B Hantler, Texas Health Sciences Center, San Antonio, Texas, presented a multicentre study entitled 'Ondansetron Treats Nausea and Vomiting Following Surgery.' This study, which was carried out in 25 different centres, compared placebo to ondansetron 1, 4 and 8 mg in 500 patients who developed PONV after different types of ambulatory surgical procedures.

The main endpoint in the study was the number of patients whose PONV did not reappear after a study drug. The complete response (i.e. the patients who did not develop PONV after the first episode of PONV and after the study drug) was 26% in the placebo group and 40, 44 and 41% in ondansetron 1, 4 and 8 mg groups, respectively.

Eli Alon, and S Himmelseher, University Hospital, Zurich, Switzerland, presented a paper, 'Evaluation of Ondansetron, Metoclopramide and Droperidol for the Prophylaxis of Emetic Symptoms after Minor Gynaecological Surgery.' They gave a prophylactic dose of either ondansetron 8 mg, metoclopramide 10 mg or droperidol 1.25 mg to 66 patients undergoing minor gynaecological surgery with thiopental-enflurance-nitrous oxide-oxygen-alfentanil anaesthesia. Approximately 13% of patients vomited after ondansetron, 44% after droperidol and 53% following metoclopramide administration.

Comments: Ondansetron is an expensive new drug. Further studies are needed to compare the efficacy and side effects of ondansetron with other active drugs.

Frances F Chung, University of Toronto, Ontario, Canada, and Surinder K Kallar, Medical College of Virginia, Richmond, Virginia, presented their experiences with the use of a new and interesting recovery scoring system. In their paper, 'Practical Applications of Postanesthetic Discharge Scoring System — PADS,' they compared the customary clinical criteria for discharge from PACU with discharge guided by PADS in 300 patients.

The authors found that an average total duration of postanaesthesia care unit stay was shorter using the PADS (83 ± 29 min) versus discharge by the clinical criteria (98 ± 29 min). When compared with clinical criteria, however, 40 patients were considered to be ready for discharge at a later time (9 ± 10 min later) using the PADS scoring system. The authors intend to delete voiding as one criteria for discharge in the PADS score and to carry out more studies to determine how applicable the PADS scoring is as a guideline for discharge in current outpatient anaesthesia practice.

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