OUTPATIENT ANAESTHESIA

Standardised anaesthesia was performed: premedication with dipipamol-lobeline, induction with etomidate, alfentanil, and mivacurum, maintenance with desflurane in \( \text{N}_2\text{O} / \text{O}_2 \), Patients were stratified according to gender and then randomly allocated to receive saline \(( n = 35)\), Dro 10 \( \mu \text{g} / \text{kg} \) \(( n = 35)\), Dro 12.5 mg \(( n = 36)\) or a combination of Dro 10 \( \mu \text{g} / \text{kg} \) and Dro 12.5 mg \(( n = 35)\) i.v. ten minutes before the end of surgery. In the recovery room and 2, 5, and 24 hours postoperatively, the patients were visited and asked for the occurrence and severity of nausea, retching, and vomiting. PONV was rated as none, mild, moderate, and severe using a standardised scoring algorithm. A test for contingency tables with ordered categories was used for analysis and a \( p \)-value of 5% was considered as statistically significant.

Results: All groups were comparable for biometric data, duration of surgery, and anaesthesia and risk factors for PONV. More patients stayed complete free from nausea and vomiting in all three treatment groups compared to placebo \(( p < 0.05)\). However, there was no difference between Dro and D, or between the combination group (see table).

<table>
<thead>
<tr>
<th>PONV</th>
<th>Placebo</th>
<th>Dro</th>
<th>D</th>
<th>DM</th>
</tr>
</thead>
<tbody>
<tr>
<td>none</td>
<td>64.5%</td>
<td>88.6%</td>
<td>91.7%</td>
<td>94.6%</td>
</tr>
<tr>
<td>mild</td>
<td>11.4%</td>
<td>5.7%</td>
<td>0%</td>
<td>2.9%</td>
</tr>
<tr>
<td>moderate</td>
<td>20.0%</td>
<td>3.7%</td>
<td>3.3%</td>
<td>5.7%</td>
</tr>
<tr>
<td>severe</td>
<td>2.9%</td>
<td>0%</td>
<td>0%</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

Conclusion: Droperidol and dolasetron are effective antiemetic drugs and both reduce the incidence of PONV to a satisfying level after extra-corporal cardiac extraction. Combining the drugs does not improve efficacy of the treatment.

Reference


A.36 Dimenhydrinate, metoclopramide, and a combination of dimenhydrinate and metoclopramide in the prevention of PONV after septorhinoplasty in males

L.H.J. Ebberhart, B. Urich, W. Seeling, A.M. Morin, M. Georgief. Department of Anaesthesiology, University of Ulm, Germany

Background: Dimenhydrinate (D) and metoclopramide (M) are frequently used antiemetics. However, the combination of both drugs has yet not been studied in the prevention of postoperative nausea and vomiting (PONV).

Methods: 137 male inpatients ASA I-II undergoing rhinonasal surgery under general anaesthesia were included in this randomised double-blind study that was approved by the local ethics committee. Standardised anaesthesia was performed: premedication with dipipamol-lobeline, induction with propofol, and mivacurum, maintenance with desflurane in \( \text{N}_2\text{O} / \text{O}_2 \), and continuous infusion of remifentanil. Patients were randomly allocated to receive saline \( ( n = 31)\), D 1 mg \( \text{kg}^{-1} \) \(( n = 34)\), M 0.3 mg \( \text{kg}^{-1} \) \(( n = 37)\) or a combination of D 1 mg \( \text{kg}^{-1} \) and M 0.3 mg \( \text{kg}^{-1} \) \(( n = 35)\) iv. ten minutes after induction of anaesthesia. Five hours after the first drug administration a second dose of the same drug/combination was given. In the recovery room and 2, 5, and 24 hours postoperatively, the patients were visited and asked for the occurrence and severity of nausea, retching, and vomiting. PONV was rated as none, mild, moderate, and severe using a standardised scoring algorithm. Droperidol was given as a rescue medication postoperatively. A test for contingency tables with ordered categories was used for analysis and a \( p \)-value of 5% was considered as statistically significant.

Results: All groups were comparable for biometric data, duration of surgery and anaesthesia and risk factors for PONV. All three treatment groups reduced the incidence and the severity of PONV compared to placebo. M is the least effective drug. However, a clinically satisfying effect was only achieved by combining D and M (see table).

<table>
<thead>
<tr>
<th>PONV</th>
<th>Placebo</th>
<th>D</th>
<th>M</th>
<th>DM</th>
</tr>
</thead>
<tbody>
<tr>
<td>none</td>
<td>64.5%</td>
<td>76.5%</td>
<td>73.0%</td>
<td>85.7%</td>
</tr>
<tr>
<td>mild</td>
<td>3.2%</td>
<td>8.8%</td>
<td>10.8%</td>
<td>5.7%</td>
</tr>
<tr>
<td>moderate</td>
<td>9.7%</td>
<td>1.9%</td>
<td>2.9%</td>
<td>5.4%</td>
</tr>
<tr>
<td>severe</td>
<td>22.6%</td>
<td>2.9%</td>
<td>10.8%</td>
<td>5.4%</td>
</tr>
</tbody>
</table>

Conclusion: Dimenhydrinate and metoclopramide can be combined effectively to reduce the incidence of PONV to a satisfying level after rhinoseptal surgery in male inpatients.

A.37 Telephone follow-up after ambulatory surgery: a pilot study

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Objective: Nurses working at the postanaesthesia care unit want to provide continued care after discharge of day surgery patients by means of telephone follow-up. In a pilot study patients' experiences with postoperative care at the recovery room and the effects of a telephone follow-up service were evaluated.

Patients and Methods: Over a 3 month period, 128 patients of different types of surgery were randomly selected for a telephone interview. After oral consent they were telephoned by a recovery room nurse within 24 hours after discharge from day surgery. A standardized questionnaire was used, consisting of 21 items inquiring about satisfaction with postoperative care at the recovery room, discharge preparation, the presence of postoperative symptoms that occurred at home, received and needed information about self care and recovery at home.

Results: Of the selected group 6 patients refused and 19 patients could not be contacted by telephone; 103 patients were interviewed. Most of the patients (96%) were satisfied with the postoperative care and support, 97% of the patients mentioned to appreciate the telephone follow-up. The day after surgery the main symptoms experienced by the patients were wound pain (49%), sore throat (19%) and headache (14%). A number of patients (19%) still had a feeling of drowsiness and fogginess, an unforeseen symptom. Most of the patients (84%) were satisfied with the adequacy and clearness of the information provided by the nurses, as opposed to the information provided by the surgeon and anesthesiologist. Written information would have been appreciated by 35% of the patients. A number of patients (14%) needed information how to manage specific symptoms, in those cases advice or instruction was given over the telephone by the nurse. Most common concern of the patients was postoperative pain treatment.

Conclusion: Patients responded very positively to questions indicating satisfaction with postoperative care. During the first 24 hours after discharge most patients were feeling well with only little discomfort or complaints. Telephone follow-up provides continuity of care by offering the opportunity to the patient to ask questions about health care problems after day surgery. Following the pilot study results, the use of telephone follow-up will be considered for everyday practice after ambulatory surgery.

A.38 Psychomotor recovery performance and postoperative attention scores in pediatric outpatient anesthesia: Alfentanil-Propofol versus Halothane-Nitrous Oxide

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Background and Goal of Study: Anaesthesiologists have become aware of testing psychomotor performances for evaluation of recovery. The aim of this study is to assess the psychomotor recovery by using attention performance tests as well as the quality of recovery after two different anaesthetic techniques for pediatric outpatient.

Material and Methods: Following ethic committee approval and informed consent from the parents 48 children between 9–11 years of age undergoing minor surgical procedures were studied. Children were standardised about the sociocultural status and intelligence by WISC-R[1] which was adapted to children in this age group. Every child was anaesthesied with either alfentanil-propofol infusion or halothane-nitrous oxide anesthesia.

The children were tested with a three stepped computerised experiment to evaluate different components of attention by a child psychologist the day before the operation. The children were offered to press the enter button when they saw the target letters among the numbers, aware of testing psychomotor performances for evaluation of recovery. The children were tested with a three stepped computerised experiment to evaluate different components of attention by a child psychologist the day before the operation. The children were offered to press the enter button when they saw the target letters among the numbers, aware of testing psychomotor performances for evaluation of recovery. The children were tested with a three stepped computerised experiment to evaluate different components of attention by a child psychologist the day before the operation. The children were offered to press the enter button when they saw the target letters among the numbers, aware of testing psychomotor performances for evaluation of recovery.
A.39 Treatment of postoperative nausea and vomiting (PONV). How to administer ondansetron to patients with motion sickness in order to achieve the best results

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Background and Goal of Study: This study compares the effectiveness of ondansetron vs. ondansetron plus dexamethasone, and vs. ondansetron plus droperidol plus metoclopramide and dexamethasone in the prevention and treatment of patients in motion sickness scheduled for gynecological laparoscopic procedures.

Materials and Methods: With approval of the local ethics committee 150 ASA I and II patients with known motion sickness in anamnesis and incidents of PONV after previous anesthetic procedures were scheduled for gynecological laparoscopic procedures.

1. Ondansetron 8 mg (Group 1), or ondansetron 8 mg plus dexamethasone 8 mg (Group 2), or ondansetron 8 mg plus droperidol 1.25 mg, metoclopramide 10 mg and dexamethasone 8 mg (Group 3). The patients were followed up for emetic symptoms for 12 hrs. Data were analyzed using chi-square test and the Kaplan-Meier method of estimating probability of remaining PONV-free for 48 hrs was applied.

Results: Weight, height, age and duration of anesthesia were similar between the groups.

Conclusions: The quite satisfactory effect of treatment of PONV can be observed after i.v. administration of ondansetron or ondansetron plus dexamethasone. However, ondansetron 8 mg i.v. in combination with droperidol, metoclopramide and dexamethasone actually eliminates PONV (p < 0.001).

References

A.40 Tramadol: Effects on depth of Anaesthesia as measured by the Auditory Evoked Response

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Background: Tramadol (Zydol™) is a centrally acting opioid agonist which, it has been suggested, increases the risk of awareness when used during anesthesia. Indeed, the British National Formulary states that it is not recommended during light anesthesia for this reason, and an editorial in the British Journal of Anaesthesia [1] described the perceived risk of tramadol related awareness as a 'major drawback'. Studies by Coetzee et al [2] and Lehmann et al [3] have reported evidence that tramadol caused significant dose dependent electroencephalogram (EEG) activation and increased incidence of awareness respectively.

Goal of Study: To investigate whether tramadol causes a lightening of anaesthetic depth as measured by the Auditory Evoked Response (AER) of the EEG.

Materials and Methods: Informed consent was obtained from 29 ASA I-II patients (ages 18-63) attending our hospital for routine surgery. After induction with propofol 2 mg kg⁻¹ and vecuronium 0.1 mg kg⁻¹, the subjects were ventilated to normocapnoea via a laryngeal mask. Anaesthesia was maintained with 50% nitrous oxide in oxygen and 0.6 MAC isoflurane (age adjusted). After 20 minutes (mins) of stable anaesthesia, the subjects were randomised to one of three groups - group T1 (100 mg Tramadol i.v., n = 10), group T2 (200 mg Tramadol i.v., n = 10) and group S (saline i.v., n = 9).

The electro cortical AER in response to a 6 Hz click stimulus was recorded from forehead and mastoid electrodes throughout the study period. The average of 1024 sweep of AER data were printed out and analysed for 1 pre injection period as a baseline, and 3 post injection periods (+5, 10 and 15 mins).

Results and Discussion: An analysis of variance was performed on all the log transformed AER and haemodynamic data. Significant, dose graduated changes were seen in systolic blood pressure (p < 0.001) and heart rate (p < 0.001) with tramadol, indicating a clinically effective dose. No significant changes in Pa (p = 0.961), Pa latency (p = 0.612), Nb amplitude (p = 0.634), or Nb latency (p = 0.506) were seen after tramadol injection.

Conclusion: In unconscious, anaesthetised patients, no change was seen in anaesthetic depth after a clinically significant dose of ramadol.

References

A.41 Optimization of target-controlled infusion of propofol for sedation

Casaletti E., Cassetta A, Colagghi E., Cedrati V., Passaretta R., Magistris L., and Torri G. University of Milan – Dept of Anaesthesiology IRCCS H. San Raffaele, via Olgiatica 60, 20132 Milan

Goal of the Study: The purpose of this prospective investigation was to provide more information on the plasma concentration of propofol required to produce different levels of sedation.

Materials and Methods: With Ethical Committee approval and patient's informed consent, 60 ASA physical status I–II, 25–65-year-old patients, without premedication received a continuous intravenous infusion of propofol using a target-controlled infusion system (Diprifusor®, Fresenius, Italy), displaying also the calculated effect-site propofol concentration (Cp E). The Cp of propofol was progressively increased by 0.2 μg ml⁻¹ steps two minutes after the equilibrium between the plasma and effect-site calculated concentrations had been achieved according to the calculated values displayed by the pump. Assessments of sedation level were performed immediately before increasing the target concentration of propofol by a trained independent observer using the Observer's Assessment of Alertness/Sedation (OAA/S) scale until no reactions were observed after squeezing the trapezius. The Cp of propofol required to produce each of the considered levels of sedation was recorded.

Results: The 5th, 50th and 95th percentiles of the Cp of propofol required to obtain each level of sedation are shown in the figure. Five patients (8.3%) required a Guedel's airway due to obstruction, but in no cases ventilatory support was required.