Abstract:

In this study, the investigation of the intraoperative effects of dipyrone (metamizol) on heart rate (HR), mean arterial pressure (MAP) and analgesic efficacy in rabbits is described for the first time. This was carried out to evaluate the cardiovascular stability achieved using dipyrone compared with fentanyl. In this prospective study, 17 female New Zealand White rabbits were randomly allocated to either one of two groups: dipyrone/propofol (DP) or fentanyl/propofol (FP). Anaesthesia was induced in both groups using propofol to effect (4.0-8.0 mg/kg intravenously) until the swallowing reflex was lost for intubation. After induction, anaesthesia was maintained with continuous infusion of propofol 1.5-1.7 mg/kg/min intravenously. Analgesics were then injected in defined boluses of either dipyrone 65 mg/kg or fentanyl 0.0053 mg/kg. After surgical tolerance, defined as loss of the ear pinch reflex and loss of the anterior and posterior pedal withdrawal reflex, was achieved, two surgical procedures were performed. The surgical procedures (implantation of either a pacemaker or an electrocardiogram transmitter), both require a comparable level of analgesic depth. During and after surgery, clinical variables, such as MAP, HR, peripheral arterial oxygen saturation (SpO2) and end-tidal CO2 (P(E)CO2) were recorded simultaneously every 2 min. Eight time points were chosen for comparison: baseline, surgical tolerance (ST),
values at 10, 20 and 30 min after reaching ST, values at the end of propofol infusion (EI) and data at
10 and 20 min after EI. Both FP and DP combinations provided effective anaesthesia and analgesia
in rabbits. In both groups a significant decrease of HR and MAP was measured. The results of this
study indicate that the non-opioid drug dipyrone produces similar analgesic and even better
cardiovascular effects by trend in rabbits. Therefore we conclude that dipyrone in combination with
propofol can be used as an alternative to FP for intraoperative analgesia.

Zeitschriftentitel / Abkürzung:
Lab Anim

Jahr:
2011

Band:
45

Heft / Issue:
1

Seiten:
38-44

Sprache:
eng

Pubmed:

Print-ISSN:
0023-6772

TUM Einrichtung:
Medizinische Statistik und Epidemiologie

Occurences:
- Einrichtungen > Fakultäten > Fakultät für Medizin > Kliniken und Institute > Institut für Medizinische
  Statistik und Epidemiologie > 2011

entries: