Evaluating the effect of maropitant, a neurokinin-1 (NK-1) receptor antagonist, on intra-operative anaesthetic requirements and post-operative nausea and vomiting in dogs undergoing routine ovariohysterectomy

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OBJECTIVES

To establish if pre-operative maropitant significantly reduced intra-operative isoflurane requirement and reduced clinical signs associated with post-operative nausea and vomiting (PONV) in dogs.

METHODS

24 client-owned dogs presenting for ovariohysterectomy were enrolled into this prospective, double-blinded, randomised clinical trial. Eligible dogs were 0.4–8 years old, ASA grade 1–2 and not pregnant/ displaying signs of pseudocyesis or oestrus. Pre-medication consisted of acepromazine (0.03 mg/kg) combined with methadone (0.3 mg/kg) intra-muscularly 45 minutes before anaesthetic induction

with intravenous propofol, dosed to effect. Meloxicam (0.2 mg/kg) was given intravenously following cephalic vein catheterization. Additionally, at premedication, dogs were randomly assigned to receive saline (group S) (0.1 ml/kg subcutaneously, n=12) or maropitant (group M) (1 mg/kg subcutaneously, n=12). Methadone (0.1 mg/kg intravenously) was repeated four hours later. Anaesthesia was maintained with isoflurane in oxygen, dosed to effect (same blinded observer). Monitored patient parameters included heart rate, non-invasive blood pressure, pulse oximetry, temperature, capnography and end-tidal isoflurane concentration (etlso). Post-operatively, dogs were assessed hourly using the short form of the Glasgow Composite Pain Score (GCPS) and examined for clinical signs attributable to PONV [scored from 0 (none) to 3 (severe)]. A t-test was used to assess mean etlso. Remaining variables were analyzed using Mann-Whitney U tests. Significance was set at $P < 0.05$.

RESULTS

Mean $\pm$ SD etlso was lower in group M ($1.19 \pm 0.26\%$) than group S ($1.44 \pm 0.23\%$) ($P = 0.022$). Group M had lower median [range] ETlso first incision o pre-operatively (1.02% [0.77–1.8%]) and at 1st ovarian pedicle ligation (1.13% [0.50–1.84%]) than group S (1.45% [0.81–1.9%] and 1.45% [0.69–3.2%]; $P = 0.033$ and $P = 0.02$ respectively). No other cardiorespiratory variables or post-operative GCPS differed significantly between groups. Overall, 50% of dogs displayed signs attributable to PONV, with no significant difference in PONV scores between groups ($P = 0.198$).

CONCLUSION

Maropitant reduced intra-operative isoflurane requirements, although not consistently and did not significantly affect the incidence of PONV.

A retrospective study of feline trauma patients admitted to a referral centre

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INTRODUCTION AND OBJECTIVES

Trauma cases are one of the most common cases presented to veterinary practitioners, with an incidence of 12–13%. In cats it is most commonly young males, with common causes being road traffic accidents (RTA), animal altercations and trauma of unknown origin.

A number of studies have looked into different severity scoring systems looking for prognostic value. However, none have been validated using a feline trauma population.

The aim of the study was to identify factors that were associated with an increased risk of mortality in feline trauma patients.

MATERIALS AND METHODS

Case records for 185 cats, presented to a referral hospital as an emergency after a traumatic event were examined retrospectively from February 2009 to December 2013. Each case was assigned a severity score from 1 to 6, ranging from very minor injuries to a moribund, dying animal. Data was analysed using Mann-Whitney U and Spearman's Rank correlation tests. Logistic regression used to calculate odds ratios.

RESULTS

Of 185 cats presented, 112/185 (60%) were male. Eleven percent (22/185) did not survive to discharge. Those presenting with a higher severity score were at increased risk of mortality ($p < 0.0005$) and had a greater length of hospital stay ($p < 0.0001$). RTAs were the most common cause of trauma (104/185), with the highest mortality and complication rates when compared to other causes. Shock and poly-traumatic injuries were identified as negative prognostic indicators, with these cases being 2.7 (95% CI 1.5 to 4.7, $p = 0.001$) and 7.0 (95% CI 1.6 to 30.9, $p = 0.01$), times more

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