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OPTIMIZING SEDATION IN FELINE BLOOD DONATION: THE ROLE OF ORAL GABAPENTIN PREMEDICATION

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INTRODUCTION

Sedation is often necessary to ensure the well-being of the animals and the safety of the blood donation. Oral gabapentin is increasingly used as premedication due to its anxiolytic and mild sedative effects, and also low incidence of adverse effects. However, evidence regarding its impact on IV sedation requirements in feline blood donor programs is limited.

This study aimed to evaluate the relation between gabapentin premedication and the required dose of IV sedation.

METHODOLOGY

Donation events were divided into two groups: cats receiving gabapentin premedication (100 mg/cat, administered 90 minutes before donation; n = 272) and cats not premedicated (n = 1,828). The recorded IV sedative dose in each donation event corresponded to the total administered dose, including any additional boluses when required. Intravenous doses (mg/kg) of ketamine, butorphanol, and diazepam (always used in combination) were compared between the two groups using independent-samples t-tests with Welch's correction. All tests were two-tailed.

DATA *Feb 2025 - Jan 2026*

Retrospective study **2,100 donations** **1,357 sedated cats**

STUDY POPULATION

52% Female

64% Domestic Shorthair

Mean age 4 years

Mean weight 4,9 Kg

PREMEDICATION

With Gabapentin Premedication (n=272, 100mg PO, 90 min before)

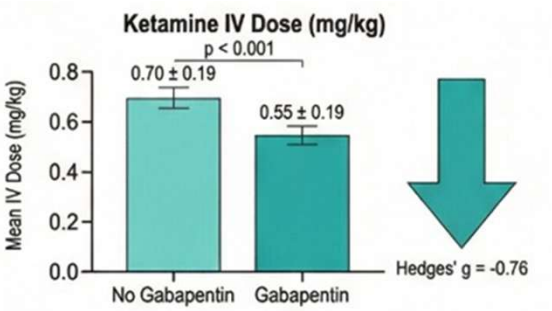
No Gabapentin (n=1,828)

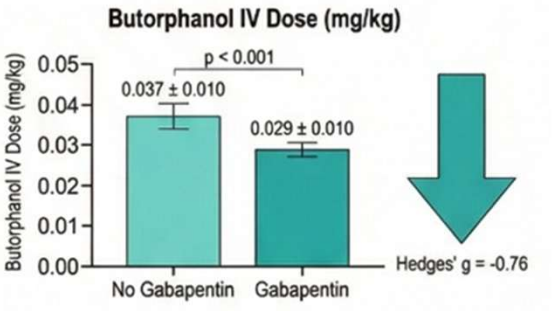
OUTCOME

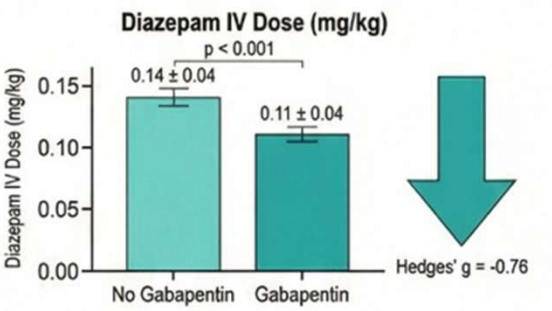
IV Sedative dose (Ketamine, Butorphanol, Diazepam)

compared using t-tests (Welch's correction)

RESULTS







CONCLUSION

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Oral gabapentin premedication was associated with a significant reduction in the required IV doses of all evaluated sedative agents.

CONTEXT & LIMITATIONS

Overall sedation need depends on donor reactivity. The potencial bias of clinician-driven dose adjustments in the gabapentin group is considered unlikely.

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Introduction:
Sedation is often necessary to ensure the well-being of the animals and the safety of the blood donation procedure.
Oral gabapentin is increasingly used as premedication due to its anxiolytic and mild sedative effects, and also low incidence of adverse effects. However, evidence regarding its impact on IV sedation requirements in feline blood donor programs is limited. This study aimed to evaluate the relationship between gabapentin premedication and the required dose of IV sedation.

Methods:
A retrospective analysis was performed on 2,100 blood donations from 1,357 indoor, privately owned cats between February 2025 and January 2026. The study population consisted predominantly of female (52%) and domestic shorthair (64%) cats, with a mean age of 4 years (range between 1 and 8 years) and a mean body weight of 4.9 kg (range between 3 and 9 kg). Donation events were divided into two groups: cats receiving gabapentin premedication (100 mg/cat, administered 90 minutes before donation; n = 272) and cats not receiving gabapentin (n = 1,828). The recorded IV sedative dose in each donation event corresponded to the total administered dose, including any additional boluses when required. Intravenous doses (mg/kg) of ketamine, butorphanol, and diazepam were compared between the two groups using independent-samples t-tests with Welch's correction. All tests were two-tailed.

Results:
Oral gabapentin premedication was associated with a significant reduction in the required IV doses of all evaluated sedative agents. The mean (±SD) ketamine dose was significantly lower in the gabapentin group (0.55 ± 0.19 mg/kg) than in the non-gabapentin group (0.70 ± 0.19 mg/kg; $p < 0.001$). Similarly, the mean butorphanol dose decreased (from 0.029 ± 0.010 to 0.037 ± 0.010 mg/kg; $p < 0.001$), as did the mean diazepam dose (from 0.11 ± 0.04 to 0.14 ± 0.04 mg/kg; $p < 0.001$). Effect sizes were large for all comparisons (Hedges' $g = -0.76$; 95% CI, −0.89 to −0.63).

Conclusion:
Oral gabapentin premedication was associated with lower IV doses of sedatives during feline blood donation. Overall sedation need depends on donor reactivity during the donation, meaning the bias of potential clinician-driven IV sedatives dose adjustments in gabapentin group is unlikely.