Pre-veterinary visit pharmaceuticals

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Introduction

Veterinary visits can induce significant stress in companion animals, leading to fear, anxiety, and stress (FAS). Clients are increasingly seeking medications to alleviate these issues, and veterinarians are responding by prescribing pre-visit pharmaceuticals (PVPs). This paper explores the strategic use of PVPs, focusing on indications, commonly used medications in New Zealand, their side effects, appropriate dosages, and integration with behaviour modification techniques.

Why use PVPs?

Veterinary visits can be stressful for our companion animals, and this can result in behavioural and physiological changes at appointments in in hospital. In one study 78.5% of dogs were classed as fearful *(*Döring *et al*. 2009) and stress can persist after the visit, particularly in cats, with 58.5% exhibiting ongoing distress following their return home (Mariti *et al.* 2016). Strategic use of PVPs can help reduce fear before, during, and after visits, and may prevent escalation of behaviour at future appointments (Erickson *et al.* 2021; Lloyd 2017).

Considerations for planning a PVP protocol

When selecting a PVP protocol, we need to consider the patient's arousal and FAS level, underlying medical conditions (e.g. pain, nausea), behavioural history, and environmental stressors such as travel or the clinic setting. All the medications discussed are used off-label, and only Sileo (dexmedetomidine) is registered for use in canines in New Zealand. Sileo has recently been shown to reduce fear and anxiety in dogs during veterinary visits (Korpivaara *et al.* 2021).

Common PVP options in New Zealand

Gabapentinoids

Dogs: Gabapentin 20–40mg/kg PO, Pregabalin 3.3–6.6mg/kg PO.
Cats: Gabapentin 10–30mg/kg PO. Onset: 1–2 hours
Duration: 8 hours (gabapentin), 12 hours (pregabalin)
Side effects: sedation, ataxia, occasionally paradoxical excitement
Contraindications: Use cautiously in renal disease.

Alpha-2 agonists

Dogs: Dexmedetomidine 125–250µg/m² buccally, Clonidine 0.02–0.05mg/kg PO
Onset: 30 minutes (Dexmedetomidine) 90 mins (clonidine)
Duration: 2 hours (Dexmedetomidine), 6 hours (clonidine)
Side effects: bradycardia, hypotension
Contraindications: Avoid in cardiac/hepatic disease.

Benzodiazepines

Dogs: Lorazepam 0.02–0.1mg/kg PO, Diazepam 0.2–0.5mg/kg PO
Cats: lorazepam 0.05–0.25mg/kg
Onset: 30–60 minutes
Duration: 4–6 hours
Side effects: Ataxia, paradoxical excitation, behavioural disinhibition
Contraindications: Liver disease. No diazepam in felines (hepatic toxicity).

Serotonin antagonist and reuptake inhibitors

Dogs: Trazodone 4–10mg/kg PO
Cats: 50mg per cat
Onset: 1–2 hours
Duration: 8–24 hours
Side effects: Gastrointestinal upset, sedation, agitation or paradoxical excitement (rare).
Contraindications: Use cautiously with serotonergic drugs, hepatic or renal impairment.

Acepromazine

Once common, now less favoured due to lack of anxiolytic properties and risk of increasing noise sensitivity. Should not be used as sole agent in fearful animals. Can be helpful in combination with an anxiolytic medication for decreased arousal.

Dogs: 0.025–0.05mg/kg transmucosally
Onset: 30–60 mins; duration: up to 12 hours
Side effects: hypotension, prolonged sedation, lowered seizure threshold
Contraindications: Fear-based aggression, noise sensitivity, hypotension, seizures, hepatic dysfunction, brachycephalic breeds (due to increased sensitivity and risk of collapse).

Common combinations

Frequently used combinations include: gabapentinoid with trazodone, gabapentinoid with alpha-2 agonist, and gabapentinoid with benzodiazepine.

Other support medications

- Antiemetics (e.g. maropitant): Especially useful in car travel or nauseous patients.
- Analgesics: Unmanaged pain can significantly worsen fear and distress responses.

What if PVPs don’t work?

Reassess timing, dose, and route. If car travel causes distress, medications may need to be given earlier. Fear free handling. Consider behavioural referral for muzzle training and cooperative care. Complex cases may benefit from veterinary behaviourist involvement.

Conclusion

PVPs can significantly reduce FAS in veterinary patients, improve client compliance, and support safer and more efficient clinic operations. Medication plans must be tailored to individual patients, considering behavioural history, health status, and anticipated stressors. When combined with low-stress handling and proactive behaviour modification strategies, PVPs become a powerful tool in fostering more compassionate and effective veterinary care (Lloyd 2017).

References

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