Tramadol

(Tralieve (d), Tramvetol (d), Tramadol ER*, Ultracet*, Ultram*, Zamadol*) POM-V, POM CD SCHEDULE 3

- **Client Information Leaflet: [Tramadol]**

- **Formulations**

Oral: 50 mg tablets; 100 mg, 200 mg, 300 mg immediate-release tablets; 20 mg, 80 mg chewable tablets for dogs; sustained-release tablets are also available in various tablet sizes; smaller tablet sizes (10 mg, 25 mg) are available from some veterinary wholesalers; 5 mg/ml oral liquid. Injectable: 50 mg/ml solution.

- **Action**

Some metabolites of tramadol are agonists at all opioid receptors, particularly mu receptors. The parent compound also inhibits the reuptake of noradrenaline and 5-HT and stimulates pre-synaptic 5-HT release, which provides an alternative pathway for analgesia involving the descending inhibitory pathways within the spinal cord. In humans, good and poor metabolizers of tramadol are described, with good metabolizers developing more opioid-like effects following drug administration and improved analgesia. Whether similar individual differences in metabolism of tramadol occur in cats and dogs is currently unknown.

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- **Use**
    - Tablets are authorized for use in dogs for the management of mild acute and chronic soft tissue and musculoskeletal pain.
    - Perioperatively, injectable tramadol is used instead of opioids to provide analgesia for acute pain.
    - Injectable tramadol has also been administered epidurally in dogs but does not appear to confer advantages over systemic administration.

The recommended dose range is currently largely empirical due to a lack of combined pharmacokinetic and pharmacodynamic studies. Plasma concentrations of tramadol and metabolites were low after administration, suggesting that once a day dosing of sustained-release tramadol tablets is unsuitable to provide analgesia in dogs. A recent systematic review and meta-analysis of studies investigating tramadol for postoperative pain management in dogs found a low or very low certainty of evidence for efficacy of analgesia. The main reasons for downgrading the certainty of evidence were risk of bias and imprecision. Tramadol is attractive as an adjunct to manage chronic pain because it can be given orally; however, a larger body of evidence to support dose recommendations is needed and recent studies also show poor efficacy of tramadol to manage osteoarthritic pain. Cats seem to be more susceptible to the dysphoric effects of tramadol, although both dogs and cats can develop nausea and behavioural changes or sedation following repeated dosing. The oral preparations are unpalatable to cats and therefore difficult to administer, even when reformulated in gelatin capsules.

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- **DOSES**
  - **Dogs** 2–5 mg/kg p.o. q8h, 2 mg/kg i.v.
  - **Cats** 2–4 mg/kg p.o. q8h, 1–2 mg/kg i.v., s.c.