

The following pain management protocol is tiered to ensure a global relevance, recognizing that not all analgesic modalities are available to veterinary practitioners and vary from region to region around the world. Its implementation will be guided by the various analgesic modalities available along with the needs of the individual patient requiring treatment. This protocol is reproduced from the WSAVA Global Pain Treatise, a succinct yet comprehensive review of pain assessment, various pain modalities, and the treatment of various clinically painful scenarios in both dogs and cats. The WSAVA GPC Pain Treatise published in the *Journal of Small Animal Practice* and is available for open access at the GPC pages of [www.wsava.org](http://www.wsava.org).

## Medical pain

Medical pain discussed here is a 'catch-all' for conditions not primarily associated with surgery or trauma (examples below); however, they may occur secondarily. Treating the underlying problem alleviates discomfort; however, analgesics are required during the healing process.

Abdominal, pelvic and thoracic visceral pain occurs in conditions associated with distension and/or inflammation of hollow organs, ischaemia, pulmonary thrombosis, acute enlargement of solid organs resulting in stretching of the capsule and inflammation of any organ (e.g. pancreatitis, acute kidney injury, pneumonia/pleuritis). Visceral pain tends to be diffuse in nature; however, pain can be localized to an area within the cavity when pressure is applied externally. Thoracic visceral pain may be elicited on abdominal palpation; visceral pain may also be exhibited as referred pain at a distant cutaneous site.

Dermatologic diseases cause inflammation resulting in mild to excruciating pain (e.g. necrotizing fasciitis). Specific therapy to treat the underlying problem should alleviate the discomfort but analgesics may be required to manage pain effectively.

Further examples of medical pain and their severity can be found in Section 9 of the full Guidelines.

### Suggested analgesic regimens

Opioids are the first choice drugs in many emergency and critically ill patients.

#### Severe pain (Refer to Section 32 of the full Guidelines)

1. mu agonist opioid (Refer to the Emergency and Critical Care Protocol or to Table 4 of the full Guidelines) commencing at the mid- higher dosage and titrate to effect.
2. NSAIDs, when haemodynamically stable and no contraindications, in combination with any of the opioids above
3. Locoregional anaesthetic techniques
4. Ketamine and/or lidocaine (dogs only) CRI
5. Intrapleural and intraperitoneal blocks for visceral pain ([www.wsava.org](http://www.wsava.org))

#### Moderate pain

1. Low-medium dose mu agonist opioid, IV followed by CRI: fentanyl, hydromorphone, methadone or morphine. (Refer to Table 4 of the full Guidelines for dosing). If only pethidine (meperidine) opioid available: 5–10 mg/kg IM or SC; Frequent IM or SC injections are painful and stressful and should be avoided where possible. OR
2. NSAID when haemodynamically stable and no contraindications, either alone or in combination with an opioid OR
3. Buprenorphine 0.02–0.04 mg/kg IV or OTM q4–8 h for 3–5 days cats, 0.01–0.02 mg/kg IV q4–8 h dogs, 0.02–0.04 mg/kg OTM small dogs (<10 kg) for 3–5 days OR
4. Butorphanol 0.2–0.4 mg/kg IV q1–2 h cats and dogs or CRI at 0.2 mg/kg/h after the loading dose

#### Mild to moderate pain (non-hospitalized or hospitalized patients)

1. NSAID of choice where not contraindicated AND/OR
2. Buprenorphine 0.02–0.04 mg/kg OTM q6–8 h for 3–5 days cats, 0.02–0.04 mg/kg OTM q6–8 h small dogs (<10 kg) for 3–5 days OR
3. Tramadol 5 mg/kg PO q8–12 h for dogs, 2 mg/kg PO cats q12h may be of benefit, although there is little published evidence to support this
4. Lidocaine 2% viscous<sup>a</sup> 1:1 to aluminium hydroxide 64 mg/mL, (max dose 0.4 mL/kg q8h) is effective in treating oral & esophageal lesions<sup>b</sup> (personal communication, KM)<sup>a</sup>

<sup>a</sup> Lidodan 2%, Montreal, Canada (or similar product based on individual country).

<sup>b</sup> Abrams-Ogg A. Oncologic emergencies. In: Mathews KA, ed. Emergency & Critical Care Manual 2<sup>nd</sup> ed. Lifelearn, Guelph, Canada: 2006: 448.

### Adjunctive therapies (to be used with all levels of pain where indicated)

- Anti-emetics are indicated where nausea and vomiting are present
- Acupuncture may be very useful for gastrointestinal and urinary cases in particular. Acupuncture may also be of benefit as an anti-emetic technique
- Medical massage and warm compress are recommended where indicated
- Environmental enhancement to reduce stress and anxiety. Pheromonotherapy may be helpful in cats and dogs.

**For additional pharmaceutical dosing information, see the dosing tables in the WSAVA GPC Treatise at [www.wsava.org](http://www.wsava.org)**