Exotic small mammal pain management

Stephen Cital

Pain management in these species is similar to that in the cat and dog with the exception of handling and restraint as well as dosing. Dosing ranges vary from text to text with ever-changing research into efficacy of drugs and dosages thus far described. It is imperative for the reader to be constantly researching the newest most supported methods in pain management for whatever species one is working with. Sites for analgesia delivery vary from species to species and feasibility depending on muscle mass for intramuscular injections, vascular access for intravenous injections and availability of subcutaneous space. The recent publications of the mouse, rabbit and rat facial pain-scoring charts are a crucial addition to any exotic practitioner's library.

As mentioned, the principal standards associated to cat and dog pain management apply to small exotic mammals in regard to first-line agents. Opioids are still a first-line option for acute or very painful animals. Non-steroidal anti-inflammatory drugs are also good for acute and chronic pain states, while local anaesthetics are useful whenever practical and feasible. For exotics we can also consider alternative approaches, such as laser, herbal supplements, exercise and even acupuncture.

KEY LEARNING OBJECTIVES

- Current literature review of species dosing strategy
- Understand practical approaches to multimodal pain management in exotics
- Understand best practices for exotic mammals and species-specific concerns with pain management

MULTIPLE CHOICE QUESTIONS

1. What is considered one of the more versatile and effective opioid drugs for exotic mammals?
(A) Morphine (C) Butorphanol
(B) Buprenorphine (D) Nalbuphine
2. Local anaesthetics can be used safely in what species?
(A) Rabbits (C) Rats
(B) Hedgehogs (D) All of the above
3. Which of the following statements about the nociceptive system in exotic mammals is true?
(A) Just as robust and complex as in cats and dogs
(B) Almost as robust and complex as in cats and dogs
(C) Not as robust and complex as in cats and dogs
(D) Present but they do not perceive pain the same way

Local and regional nerve blocks

Stephen Cital

Local and regional anaesthesia (L&RA) is the technique of applying or infiltrating tissues with a sodium-channel blocking agent (most common in veterinary medicine: lidocaine, bupivacaine, ropivacaine) to completely numb a specific area. We can literally take an animal in severe pain, such as broken ribs, and make them comfortable again within minutes. There are several adverse effects of continued pain, many of which delay healing and impact the patient psychologically. Local and regional blocking techniques are one of the few techniques we have to completely stop pain signaling to the spinal cord, further reducing sensitization, which in the worst-case scenario could lead to neuropathic pain. Local and regional blocking used for the anaesthetized patient also shows a decrease in morbidity and mortality and decreases complication in the postoperative period. There are multiple terms used for differing techniques of L&RA.

Topical or surface anaesthesia is using sodium-channel blocking agents in creams or solutions on the skin or mucous membrane providing some relief. Unfortunately, many of the agents we use are not readily

absorbed through the skin surface unless left on for quite some time. The use of lidocaine patches over wounds or incisions has also been described but has not been found to alleviate the need for other analgesic medications.

Local infiltration is a less precise means of infiltrating tissue with a blocking agent to achieve pain sensation loss. Basically, the local blocking agent should be used where the surgeon plans to incise or where tissues will be manipulated in a way that causes discomfort. There are many studies on the efficacy of using this technique for any stable surgical patient. The efficacy of this technique has even found its way into the Pain Management Guidelines published by the American Animal Hospital Association (AAHA).

Regional or nerve blocking techniques are a bit more precise using anatomical landmarks, palpation or devices to infiltrate the blocking solution within millimetres of a nerve. A good knowledge of the nervous system anatomy is desirable before implementing such techniques. It is important we are not piercing the actual nerve or infiltrating the nerve, like commonly done during leg amputations. More recent research has shown that infiltration of the nerve, stretching the fibres, can sensitize the remaining nerve component adversely.

Neuraxial anaesthesia is the technique of infiltrating blocking agents in the epidural space. This is a very effective technique for essentially anything on the caudal half of the animal and can be useful for such conditions as

pancreatitis or thoracotomies when using opioids instead of a blocking agent.

KEY LEARNING OBJECTIVES

- Learn which drug combinations prolong the blocks effects and practical blocks for any clinic to use
- Develop a safety strategy when performing local blocks
- Dispelling myths surrounding local anaesthetics

MULTIPLE CHOICE QUESTIONS

1. Lidocaine acts specifically at what cellular anatomical site to block pain?
 - (A) Opioid receptor
 - (B) Sodium channel
 - (C) NMDA receptor
 - (D) Potassium channel

2. Which combination of drugs will not prolong the typical length of lidocaine's effects?
 - (A) Lidocaine and saline
 - (B) Lidocaine and an opioid
 - (C) Lidocaine and dexmedetomidine
 - (D) Lidocaine and a steroid
3. Utilizing local anaesthetics will aid in patient safety by which of the following?
 - (A) Decreasing the amount of gas anaesthesia necessary to keep the patient at a surgical plane of anaesthesia
 - (B) Decreasing the overall amount of system analgesics needed for patients
 - (C) Minimize stress related to pain while in hospital
 - (D) All of the above

Feline: what's new in pain recognition and scoring?

Elizabeth Leece

Individual cats respond differently to the same noxious stimulus. Pain is a multidimensional experience and involves a sensory aspect, which describes how it feels for the patient, as well as a psychological component, describing how it makes the patient feel. Cats have a unique way of expressing their pain which can differ between individuals and it is vital that we can assess each individual for identifying signs.

Assessing pain in cats prior to surgery can be extremely helpful for us so that we can learn what their normal behaviour is within the stressful kennel environment. More importantly writing this information down will also help people who are looking after the cat later in the day. Does the cat groom? Does it move around their kennel? Does it interact with people and what kind of interaction is seen? A friendly cat can become very withdrawn or even aggressive when painful in an attempt to protect itself from further pain.

In cats, facial expressions and postures are often used as a guide of pain. Low ear carriage, squeezing of the eyes and a furrowed brow can be an extremely useful tool when assessing pain in cats, whilst a hunched posture or being restless can also indicate pain. Lying in an abnormal position and guarding themselves can demonstrate severe pain so it is imperative to watch the cats before they have surgery. Other signs of pain can involve licking, and this may not necessarily be the surgical area.

Normal behaviours, such as grooming, eating or using the litter tray, may not occur. Observation from a distance may pick up signs of pain but interaction is the best way to establish whether a patient is painful, gently stroking the area, or palpating alongside the wound. If a reaction is seen then you don't need to continue!

Dysphoria can also be seen in cats and it is important to differentiate this from pain. Dysphoria may even be a result of the analgesic drugs used and it is important to realize these side effects exist to highlight the introduction of a more multimodal technique to the analgesia provided.

A number of methods for assessing pain in cats have been developed and these should be incorporated by your practice and potentially adapted. The most recent ones encompass several areas of assessment but are quick and easy to perform and can allow information to be passed between caregivers and for the response to analgesia to be assessed. However, they do not replace writing notes about what is found on examination and interaction with the cats since each patient is an individual and this information is vital to ensure continuity in care.

Documenting pain scoring will allow for the training of colleagues in your team and also promote discussion within the practice regarding analgesia provision. It may highlight specific cases where improvement on pain management is needed and also allows the pain management to be assessed for efficacy.

KEY LEARNING OBJECTIVES

- An interactive review of pain assessment in cats
- Discover the use of different pain scoring systems and learn how to introduce their use successfully to your practice
- Learn how to assess pain in difficult cases, including dysphoric cats

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