PAIN MANAGEMENT AT HOME

Abstract

This lecture looks at the reasons for treating patients at home and the advantages and disadvantages of choosing pain management at home. It takes a detailed look at pain, the effects of pain, and pain management strategies, such as pharmacological options, monitoring & home nursing.

Learning Outcomes

- An understanding of pain and its effects
- An understanding of the advantages and disadvantages of managing pain in the home
- A detailed knowledge of pain management strategies that can be implemented in the home
- Confidence in advising clients in the best ways of managing their pets pain at home

Notes

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Introduction:
Nursing management of the painful patient may vary – from the trauma or post-surgical patient in hospital, to long-term care of chronic pain conditions. In all circumstances, pain must be recognised and treated appropriately, through constant re-evaluation and tailoring of analgesia to address changing needs of individual patients. Advances in veterinary medicine mean that pets are living longer. Many pets are living with “diseases of old age”, e.g. osteoarthritis but, despite this, there are a number of treatments and lifestyle modifications available which are aimed at maintaining optimal quality of life. It is vital to consider the patient as a whole – not just from a medical or surgical point of view, but also thinking about how dogs and cats must function and take part in family life. The veterinary team should be prepared to provide advice and current information concerning pain management, to enable owners to make informed decisions about their pets’ well-being.

Reasons to treat pain:
Pain is the awareness of suffering, distress, an unpleasant physical or emotional experience associated with potential or actual tissue damage. It is sensed and transmitted by nociceptive free nerve endings, which are abundant in superficial layers of the skin, and in deeper tissues such as the periosteum and the surfaces of joints. There are many complications associated with pain (see below) and compassionate care requires that patients are kept as free from these adverse effects as possible.
Potential Complications Associated with Uncontrolled Pain:

- Anorexia
- Deleterious biological and psychological effects, inducing a stress response:
  - Increased release in hormones, such as cortisol and catecholamines, resulting in catabolism
  - Adverse effects on the cardiac and respiratory systems
  - Delayed healing
- Behavioural changes:
  - Depression
  - Aggression
  - Restlessness or insomnia
  - Withdrawal from normal interactions
  - Licking or guarding the painful area
  - Self trauma
- Altered nociception
  - Hyperalgesia – increased sensitivity to pain, often caused by damage to nociceptors
  - Allodynia – pain response caused by a stimulus which normally would not provoke pain
  - Phantom pain – pain associated with an amputated limb or appendage, due to persistent information being sent to the brain from damaged or transected nerves

Types of Pain:

Pain may be classified as:

- Somatic (originating in the superficial or deep layers of skin and muscle tissue);
- Visceral (arising from stimulation of nociceptors in organs, e.g. lungs, liver, bladder and gastrointestinal tract);
- Neuropathic (resulting from central or peripheral nervous system damage or altered nervous system processing).

Acute Pain:

Acute pain is abrupt in onset, often severe, but may be relatively short in duration. It is generally associated with inflammation induced by surgery, trauma or infection.

Chronic Pain:

Chronic pain persists beyond an acute trauma or expected injury healing time. It may be more difficult to diagnose and may be masked by adaptive behavioural changes. It is characterised by non-specific signs, e.g. reduced level of activity, depression, anorexia, character change and/or anxiety. It is debilitating, and may cause cachexia.

Monitoring Pain:

In order to maintain effective analgesia, monitoring pain is paramount. A system of pain scoring may be employed both within the hospital environment (Table 1) and in conjunction with owners at home (Table 2). When monitoring for pain, other than obvious signs (e.g. lameness/loss function), the following could be considered to be pain related:

- Vocalisation
- Tachypnoea
- Tachycardia
- Pyrexia
- Aggression/resentment of handling – especially the injured area (Figure 1)
- Anorexia
- Restlessness, inability to settle, sitting hunched or in unnatural positions
- Unresponsiveness to handling

These signs should be recorded and brought to the attention of the veterinary surgeon promptly, in order to immediately address analgesia. If there is any doubt, the patient should be analgesed.

**Pharmacological Analgesia:**

**Anti-inflammatory Drugs:**
Non-steroidal anti-inflammatory drugs (NSAIDs) produce analgesic, antipyretic, and anti-inflammatory effects, mainly through inhibition of the enzyme cyclo-oxygenase. Their main action is on peripheral sites in the body, but there are some central effects. Many NSAIDs are licensed for use in veterinary patients and they are often a good choice for controlling minor pain and inflammation.

**Opioids:**
Opioid (narcotic) analgesics produce their effects by binding to specific receptors in the central nervous system. Their efficacy is generally dose related. Although their effect is mainly central, there is some peripheral effect. These are the potent and highly effective analgesics, of which pethidine is currently the only licensed schedule 2 opioid drug in the UK for use in cats and dogs.

The use, purchase and storage of opioids is controlled under the Misuse of Drugs Act 1971. Schedule 2 drugs must be stored in a locked cabinet and their use recorded in a Controlled Drug Register. Although this may be prohibitive for their use in some practices, effectively managing severe pain without opioids is often difficult or impossible.

**Adjunctive Therapy:**
Acupuncture may be used to complement conventional pain management. It is used predominantly in the treatment of musculoskeletal disorders and chronic pain states in animals. Acupuncture stimulates the release of pain-relieving chemicals in the brain and spinal cord (e.g. endorphins, serotonin and noradrenalin) which produce generalised analgesia.

Hydrotherapy can help by encouraging a full range of joint motion in non-weight-bearing conditions. It may be beneficial for recovering spinal or orthopaedic patients, as well as for many other chronic conditions. It can help to build muscle tone and thus support around an injured / weakened area without placing it under excessive strain. Hydrotherapy may help to improve general fitness and wellbeing and allow an exercise outlet for otherwise immobile pets. Hydrotherapy should only be carried out under controlled conditions by qualified staff.

**Pain Management Strategies:**
Strategies for managing pain are based on the concept of interfering with nociception – the conscious perception of pain. Providing analgesia before painful stimuli initiate nociception is termed pre-emptive analgesia, and should be employed whenever possible. Untreated pain causes central-sensitisation (“wind up”). This often occurs in neuropathic or chronic pain
syndromes. Anxiety and fear can become a significant part of the pain experience – therefore sedation, combined with pre-emptive analgesic drugs, may relieve stress in certain patients.

For moderate to severe pain, full agonist opioids are the drugs of choice. Regional nerve blocks may be incorporated into anaesthetic protocols for surgical patients (Figure 2). Intra-operative analgesia could include of constant rate infusions (Figure 3) and nitrous oxide help control emergent pain. Patients with mild to moderate postoperative pain may be managed with drug boluses, but it is imperative to anticipate the need for further analgesic before the effect of the previous dose has worn off. Multimodal analgesia targets multiple points along the pain pathways, allowing reduction of doses and achieves balanced analgesia. For longer term pain management, the use of NSAIDs, often in combination with a partial or full opioid is a good option.

**Nursing Management:**
Both in the hospital setting and at home, simple things may have a real impact on patient comfort. In conjunction with drug therapy, patient comfort may be optimised by provision of excellent nursing, e.g.:

- Ensuring a warm, comfortable environment
- Minimise stress – provide boxes for cats to hide in; separate cat/dog wards, etc.
- Provide of appropriate nutrition
- Allow regular opportunities for urination/defecation, express the bladder or catheterise if indicated
- Keep the patient clean and dry – patients are often unable to groom/clean themselves, which may be a source of stress
- Care should be used when handling/restraining patients, e.g. allow them to find a comfortable position, then work around them
- Continuously observe for signs of discomfort
- Fit Elizabethan collars when necessary to prevent self trauma, which will exacerbate pain.

Veterinary nurses are often involved in management in the long-term care of arthritis patients. It is important that there is a close communication between owners and the nursing team (Figure 4). Owners know their pets and will be aware of normal behaviour in the pet’s own environment – careful questioning/listening will elicit maximum information on the patient’s comfort. Many patients, particularly cats, adapt their movement and behaviour to cope with pain – signs may be missed, meaning pain goes untreated.

Nurse clinics may be established to regularly re-assess pain and quality of life – advice can be given on environmental changes which can be made at home, e.g. steps into the car for dogs; or ladders up to window sills for cats; exchanging high-sided litter trays for more easily accessible ones; raising food and water bowls, etc.

Maintenance of optimal body weight is paramount to the comfort of chronic arthritis patients. Patients should have their body condition regularly scored and ideally should not go above 2½ or 3 out of 5. Nutraceuticals may have a place in dietary management of arthritis patients. Clients can be educated in encouraging mobility, e.g. by taking short regular walks, doing training or instigating play. Exercise not only helps with manage weight and build muscle tone, but creates interest, mental stimulation and strengthens the pet-owner bond, which helps to prevent some of the anxiety and isolation encountered in chronically painful patients.
Conclusion:
Veterinary nurses can help implement a more pro-active and humane method of treating veterinary patients. By understanding and recognising pain, we can help identify the level of analgesia required for individual patients. Providing compassionate care and managing the long-term comfort of these patients can be a rewarding nursing experience that we should readily embrace.

References/Further Reading: