Cutting EDGE

Nursing Newsletter

May 2009 Edition 2

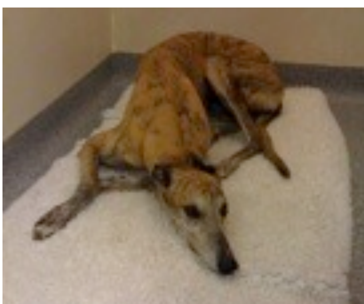
Welcome to the latest Torrington Orthopaedics Newsletter for Veterinary Nurses.

This is the second edition of our new quarterly nursing newsletter. In this edition we will be looking at assessment of pain, pain scoring and pain management.

Pain Management

The assessment and management of pain in hospitalised patients is an area where nurses can have a significant impact on the treatment and well-being of the patient. Consequently, all nurses should have a thorough understanding of the physiology of pain, be competent at assessing levels of pain in their patients, and have a comprehensive knowledge of the methods and techniques that can be employed to control and treat this pain.

The physiology and perception of pain is a complex process which would require more space than is available here to cover thoroughly! Within this newsletter we will focus on efficient and reliable methods of assessing pain levels, and look briefly at available analgesic options and protocols.



Patients are admitted to hospitals for a wide variety of reasons, ranging from elective surgery such as neutering to trauma e.g. RTA or an acute medical crisis such as pancreatitis. In some of these situations the patient will already be suffering from a severe level of pain which will need to be controlled as a matter of urgency. In other situations we will be able to predict the onset of pain, in which case prevention of pain is significantly better than cure!

Assessment of Pain

Regardless of the origin of the patient's pain, it is vital to be able to assess it efficiently in order to be able to determine its severity and evaluate the efficacy of the analgesic protocol. This can then be adapted as and when necessary. Observation of physiological parameters such as temperature, heart and respiratory rates has traditionally been used to detect the presence of pain. Whilst these observations can be useful, when used in isolation they are an unreliable measurement of the presence or degree of pain as they can be affected by numerous other factors. A useful technique is pain scoring, which looks at a wider range of physiological and behavioural parameters. There is no standard pain scoring method that is used within the veterinary profession, but several different variations are available and can be adapted to the needs of the individual practice. These are all based upon scoring systems used in human medicine and it is really a matter of preference which method is employed, but whichever this may be, the important factor is that all members of staff are using the same technique!

Pain Scoring

The most straightforward method of pain scoring is to use a Simple Descriptive Scale (SDS). These have several grades of pain (usually up to 5) which are each defined by a description of the animal's demeanour and behaviour. The patient's grade is determined by observing the patient and selecting the appropriate grade. For example, grade 0 would be a normal animal showing no sign of distress or discomfort and grade 5 would be a patient that is depressed and reluctant to move voluntarily and is resentful or becomes aggressive on handling. Obviously, the specific behavioural descriptions in each grade can be adapted and extended to cover more parameters to provide a more accurate score. This system of pain scoring is clearly extremely subjective and so can result in variations between scores given by different people. It can be useful therefore to have a single person responsible for scoring the animal each time, to give a more reliable indication of the patient's progress and response to analgesia.

In a practice situation there are generally numerous members of staff involved in a patient's care and consequently it can be more appropriate to use a modified version of an SDS known as a Multifactorial Pain Scale (MFPS). A wider variety of different behaviours are observed and graded. These grades are then added together to give an overall score. The parameters used can be adapted for the specific patient caseload of a practice. For example, within our practice where we see purely orthopaedic patients, the pain scoring system has been adapted to focus on gait and neurological function. Other parameters that should be assessed include general demeanour, response to handling or palpation of an affected area, vocalisation, appetite, urinary and bowel function and willingness or ability to move. Each behaviour is scored using a point system e.g. normal use of a limb would be 0, mild lameness would be 1 point, severe lameness 2 points and non weight bearing would be 3 points (see table below). All of these scores are then added together to produce the patient's final pain score. Whilst this is a slightly more complicated system, if all personnel are fully aware of the observations required and how grades are to be applied, there is less risk of individual variations in scores being given.

Parameter	Observation/Behaviour	Score
Demeanour	Quiet and settled Depressed Restless Agitated or whining Distressed or howling	0 1 2 3 4
Mobilisation	Normal use of limb Mild lameness (1-4/10) Severe lameness (5-8/10) Toe-touching Non weight bearing	0 1 2 3 4
Appetite	Normal appetite Picky but eating voluntarily Will eat with encouragement Inappetent	0 1 2 3

Examples of behaviours and grades for scoring

An alternative system of scoring a patient's pain is to use a Visual Analogue Scale (VAS). This, as the name suggests, is a more visual representation of the patient's level of pain. It consists of a line 10cm long, with the left limit of the line marked as "No Pain" and the right limit as "Worst Possible Pain". The observer places a cross on the line at the point where they think the patient's pain is best represented. The distance in mm from the left "no pain" end of the scale is the pain score. Again, this is obviously very subjective, and so should be used carefully and only by personnel who have received appropriate training.

Analgesic Options

There are numerous methods of administering analgesic drugs, ranging from local anaesthesia and nerve blocks, to transdermal skin patches and continuous rate infusions. Analgesic drugs fall into one of five categories, opioids e.g. methadone, Non-Steroidal Anti-Inflammatory drugs (NSAIDs) such as meloxicam or carprofen, alpha-2 adrenoceptor agonists including medetomidine and xylazine, local anaesthetics, and other miscellaneous drugs such as ketamine. Each of these types of drug acts in a different way on the pain pathways. As pain results from sensitisation of central and peripheral pain pathways, analgesia is most effective if a combination of drugs is used to act upon these various parts of the pain system. This is described as "multimodal" analgesia. The specific choice of drug will depend upon the patient's condition, the severity of pain, and the potential side effects of the drugs. For example, NSAIDs should be used with care in animals suffering from renal disease. One benefit of multimodal analgesia is that when drugs are given in combination a lower dose of each agent can be given to achieve a greater level of pain relief than if one agent were given in isolation. Consequently, the patient experiences an increased level of analgesia with a reduced risk of side effects. It is important to be aware of the duration of action of each agent that has been administered, so that the patient can be monitored for signs of increased pain as the effects of the drug wear off. If this is observed to be a problem and the patient's pain is not being adequately controlled, an alternative option is to use a constant rate infusion (CRI). An opioid e.g. morphine, in combination with ketamine or an alpha-2 agonist, with or without lidocaine, are added to an IV bag and this can then be given at a continuous rate to prevent tailing off of analgesic effects between doses and pain breakthrough. To provide analgesia in this way it is essential that an infusion pump or syringe driver is used to ensure constant delivery at a regular rate to prevent over or under dosing.

Regardless of the pain scoring method or analgesic protocol in use, the key to its effectiveness is consistency in application, and regular monitoring. Ideally, the patient should be scored every 2 hours, although this obviously depends upon the patient's needs and can be done more regularly if required. This allows progress and response to analgesia to be monitored easily and tailored to the animal's ongoing needs.

Upcoming Nursing CPD

Nursing the Spinal Patient

Wednesday 15th July

7.30pm

£10 per person.

Please contact us for further details

MEGAHIKE Charity Walk

27th and 28th June 2009

To help raise funds for MedEquip4Kids, Torrington Orthopaedics have entered a team to take part in the 50 mile Megahike.

The challenge is to complete the 50 mile route, trekking through the Pennines, in 24 hours! Training for the Megahike is underway at the moment.

MedEquip4Kids exists to improve the healthcare of children, from babies to teenagers, in hospitals throughout the North-West. Working with the nursing staff, play therapists and community groups MedEquip4Kids provides life saving equipment and services and have financed a wide variety of projects over the years.

As part of our fundraising efforts we would really appreciate your support. If you would like to sponsor our team please visit www.justgiving.com/torringtonmegahike

Thank You from The Team!

Hydrotherapy and Chronic Pain

Patients with chronic pain attending hydrotherapy are most often presented with osteoarthritis or degenerative joint disease. Even mild osteoarthritis may cause intermittent lameness and subtle changes to the patient's gait. As the osteoarthritis progresses, they tend to become less active, slow and stiff on rising and may have an increased occurrence of lameness. Muscle wastage may also be observed, as well as an overall depressive state due to the chronic nature of the problem.

Benefits for chronic pain patients
✳ Improves joint function
✳ Improves muscle mass
✳ Aids weight management
✳ Can aid anti-inflammatory processes
✳ Reduced weight bearing exercise
✳ Controlled form of exercise

In humans, hydrotherapy is widely used for the management of osteoarthritis. It has been shown to improve function, strength and range of motion whilst reducing pain.

The water temperature in our treadmill is maintained at 28°C, as this increases the blood flow and temperature to muscles allowing improved flexibility and mobility. The warmth also improves neuromuscular function and helps ease painful joints. If the temperature is below 25°C, this causes thermal stress on the body as it tries to compensate to maintain core temperature, in turn this increases work load and fatigues the muscles.

The water levels are high in these cases to increase buoyancy and reduce drag through the water. When the patient is immersed to the level of the greater trochanter, weight bearing in standing, as a percentage of body weight on dry land is 38%. This provides support and reduces the loading stress/impact on the arthritic joints allowing the patient to move more freely with reduced pain. Hydrostatic pressure is increased at these water depths and this opposes the tendency of blood to pool and oedema to form in the lower extremities. It also provides phasic stimuli to the skin, causing a decrease in nociceptor hypersensitivity and therefore reduces pain.

Twice weekly sessions are optimal for these patients. We also work with our ACPAT Physiotherapist to provide a full rehabilitation programme.

The benefits of using a treadmill, over pool swimming, are that we have full control over the speed, depth and time of the swim. The glass sides allow full visualisation and continuous gait assessment. The treadmill permits the patient to recruit the muscles used for walking and this is then carried over onto dry land. Many dogs have reduced exercise tolerance and fitness levels and are often unwilling or reluctant to exercise on dry land. Treadmill hydrotherapy provides a safe and comfortable exercise modality, improves tolerance and fitness levels leading to an improved quality of life. Many dogs move better and appear to feel a sense of well being immediately after the session due to the natural release of endorphins during exercise.

Meet the Staff at Torrington Orthopaedics

Lisa Thompson DipAVN (Surgical) RVN - Head Nurse

Lisa qualified in 2000 and joined Torringon Orthopaedics in 2003. She gained her Advanced Nursing Diploma (Surgical) in 2006. After joining Torrington Orthopaedics she was promoted to Head of Surgical Nursing, and then 2 years ago became Head Nurse. Lisa believes that a high standard of nursing care is very important and that nurses can play a very significant role in the recovery of our patients.

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