

Chronic Pain: The Gift that Keeps on Giving

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“They Don’t Deserve to Hurt”

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For years chronic pain was tolerated in cats and dogs as a necessary evil, and was often cited as the reason for euthanasia in order to relieve suffering. It is more complex than once thought, and is best approached from a multi-modal perspective. We need to utilize pharma, nutrition, physical medicine, nutraceuticals - all the tools in our toolboxes.

Need to update our previous training about different “types” of pain - - acute vs. chronic, cancer pain, acute on chronic, etc. Pain is a spectrum - - transition/transformation from “adaptive” pain to “maladaptive” pain. If we deal with pain aggressively early on, we prevent the transformation to maladaptive pain. Maladaptive pain gives us more targets to treat. Nociceptive pain is transient pain in response to a noxious stimulus. Inflammatory pain is spontaneous pain and hypersensitivity to pain in response to tissue damage and inflammation (Clifford J Woolf, Annals Intern Med 2004). Maladaptive pain includes neuropathic pain, which is spontaneous pain and hypersensitivity to pain in association with damage to or a lesion of the nervous system, and functional pain, which is hypersensitivity to pain resulting from abnormal central processing of normal input. We are dealing with sensitization of nociceptors, and peripheral and central pain pathways, in response to a barrage of afferent nociceptive impulses resulting in expanded receptive fields and an increased rate of discharge.

Scoring pain directs your attention towards pain, allows you to identify trends and guide therapy. Cats are not small dogs.

Quality of life assessment, thanks to Dr. Alice Villalobos. "HHHHHMM" stands for: Hurt, Hunger, Hydration, Hygiene, Happiness, Mobility and More good days than bad. Score each category 1 – 10. A score above 5 on most, or a total score of 35+ is acceptable in maintaining an end-of-life program. Each pet's situation needs an individual, kind and supportive approach. Use this scale WITH the client. Trends may be more important than a single score.

Addressing chronic maladaptive pain means recognizing that the most common cause for chronic/maladaptive pain in our patients is OA. This encompasses @ 20% of canine and feline population over all ages and provides increased incidence with age. It results from a cascade of events that includes altered anatomy (conformation), injury, inflammation, repetitive injury, inadequate pain management early. A multi-modal approach works best. In order to be most successful with these patients, we must FIRST break the pain cycle. Pharmacology provides us the most effective options to achieve that disruption of the pain cycle quickly. Once the pain process is blunted, we can work through improving function with physical medicine. If we are dealing with an OA patient, there is an inflammatory component that must be addressed, thus NSAIDs remain an important component of managing chronic/maladaptive pain. BUT the majority of chronic OA patients we see WILL NOT have their pain relieved only through the use of NSAIDs. Adjunctive agents serve a critical role.

We need to approach these patients with specific targets in mind
Physiologic targets for the body

Receptor targets within the nervous system
Anatomic targets - - e.g. cartilage/joints

Be sure to look at the ENTIRE patient to ensure that you have all the appropriate targets of therapy in mind at the beginning of your pain management strategy. Treat the treatable - - and treat ALL the treatable. Be sure to have a complete metabolic profile before beginning and update it at regular intervals - - early disease detection trumps irreversible adverse side effects. Make your plan, write it down, adapt as needed.

Weight loss and management are the single most important adjunctive pain management tools for chronic/maladaptive pain. Overweight impacts joints with OA and increases symptoms. Weight loss alone has been demonstrated to decrease the risk of OA development, slow the progression of OA, and relieve pain from OA in humans. Clinically, this is born out in canine and feline patients. All other pain management interventions work better for the patient once weight is normalized. This remains the most important single step clients can take to help their pets. Make as specific a plan as possible, write it out for the client, and then create a regular and consistent follow-up schedule. Only by engaging the client can you achieve compliance. Follow the science to recommend the best nutrient profile for the job. Clients need to be educated that over-the-counter pet foods will NOT do the job. Leverage nutrigenomics - - so far only articulated in dogs - - because it allows us to understand it isn't JUST about decreasing calories. We have the opportunity to down-regulate "obesity" genes and up-regulate "lean" genes, thus changing physique and metabolism. In cats, we also have a "metabolic diet" that mimics the Atkins approach in people - - high protein, low carb - - allows the body to burn fat and build muscle. Prescribe a SPECIFIC nutrient profile - - e.g. Metabolic Advanced Weight Solution® canine & feline. Have your recommendation available in your practice for the client. Prescribe a SPECIFIC portion to be fed - - e.g. feed the estimated ideal body weight - - as an example, 1 level cup per day divided into 2 - 3 meals. Prescribe SPECIFIC meal frequency - - e.g. ½ cup AM & PM, or 1 cup total per day divided by 4 meals per day (work with the client to find the best fit). Prescribe a SPECIFIC snack list - - Clients WILL "snack" their pets - dogs in particular - - e.g. green beans, broccoli, cauliflower - fresh or frozen (NOT canned). These are point value "0" in the Weight Watchers® point system. Schedule no-charge weigh-in appointments at 3 - 4 week intervals. Make next weigh-in appointment at each scheduled weigh-in or other assessment. Pain patients will be presented for regular pain reassessments, so their weight should be recorded at each of these visits as well. Consider interactive food toys and dishes for kibble delivery to slow down eating. Have your long-term nutritional profile in mind when embarking on this weight-loss strategy to transition once weight is normalized.

Weight loss starts right away and so does breaking the pain cycle pharmacologically. Create a rational therapy plan by targeting specific receptors. Educate clients about the need for poly-pharmacy. Initiate pain management plan, schedule regular reassessments for revisions of the plan, titrate to lowest effective doses (which may be "zero").

Gabapentin:

Affects the α -2- δ ligand of the calcium channel in the dorsal horn of the spinal cord. "Unwinds" windup and central sensitization (Anesthesiology, V 101, No 6, Dec 2004). Demonstrated to assist in dogs with presumed neuropathic pain (a form of maladaptive pain) (Aust Vet J 2009; 87:45-50). Begin the dosing regimen with BID dose given once in the PM for 3 - 4 days, then increase the dose to BID. Sedation is dose-limiting side effect - - simply reduce the dose - - if that resolves issue, reassess and you may be able to increase the dose. There is non-linear pharmacokinetics, so the dose escalation will be much different from what we generally are able to do. You can increase doses every 2 - 3 weeks. Clinically, in "big pain" cases and chronic/maladaptive pain cases, gabapentin improves outcomes in pain scores and function - both short and mid-term. Dosing = 5 - 20 mg/kg PO BID - TID. You will see effects within 24 hours, and consistent effects within 3 - 5 days. Do NOT stop abruptly - can induce rebound pain. We

have had patients on 200 mg/kg/day divided in order to function. Human maladaptive pain patients rarely come off gabapentin once they start. Remember that we are “re-educating” the dorsal horn of the spinal cord and the changes may not be reversible.

Amantadine:

Acts on the NMDA receptor in the CNS & may be used long-term. Useful for chronic/maladaptive pain in canine and feline patients (ACVIM Journal – Amantadine & canine OA – Lascelles, et al), and dosing is 3 – 5 mg/kg PO SID. It is compoundable for very small patients.

Tramadol:

THIS DRUG IS NOT ANALGESIC IN DOGS AND SHOULD NOT BE USED AS SUCH!!!

What we know now:

M1 metabolite that affects mu receptors is *not* present in dogs for a relevant period of time. It inhibits norepinephrine & serotonin reuptake which may cause sedation but will NOT affect pain. It is now controlled, so there is abuse potential. We have NO safety data in either dogs or cats.

PSGAGs:

Provide the body with the building blocks of cartilage. This assists the body in the repair of cartilage damaged by the consequences by OA. There are indirect anti-inflammatory effects, and it work best when the body is still in motion and the joints are still in use. In cats and dogs, use 2 mg/# SQ 2 X per week for 4 weeks, weekly for 4 weeks, the twice per month indefinitely.

Nutraceuticals:

- Appropriate nutrient profile (follow the data)
- Micro lactin
- Omega-3 fatty acids
- Glucosamine/chondroitin
- Avocado unsaponifiables

Physical medicine augments pharmaceutical options. This includes general nursing care, physical rehabilitation techniques, chiropractic techniques, acupuncture, and medical massage. Don't forget environmental management and ecosystem management - - surface management, living indoors vs. outdoors, stairs, etc.

Resources:

Veterinary Anaesthesia Support Group

www.vasg.org

American Academy of Pain Management

www.aapainmanage.org

American Society of Pain Educators

www.paineducators.org

Resources

Pain Summary - -

LOOK for pain and you will find it.

Remember the risk factors (age, breed, size, history of injury, etc.).

Learn how to “ask” your patients if they hurt.

Learn how to respond when they say “yes”.