PAIN MANAGEMENT

Instituting a Multimodal Pain Management Protocol

***Mike Dutton**, DVM, MS, DABVP (Canine & Feline Practice, Avian Practice, Exotic Companion Mammal Practice, Reptile & Amphibian Practice), FFABVP-CAPM, CVPP, CertAqV*
New Hampshire Veterinary Center for Wildlife, Weare, New Hampshire

Multimodal pain management (MMPM) should be instituted in every veterinary practice. Although the exact protocols will depend on individual practice resources, the basic components of MMPM are[1-3]:

1. Pharmaceuticals
2. Nonpharmaceutical therapies
3. Staff and client education
4. Documentation

Initial Patient Assessment

For any patient with suspected pain, a thorough physical examination and history are essential parts of the workup. If a fracture, spinal compression, or other orthopedic issue is suspected, radiographs should be obtained as part of the initial screening process. If there is no improvement in the expected time frame for the suspected injury, additional imaging may be warranted.

Acute Versus Chronic Pain

It is important to distinguish between acute and chronic pain when developing a pain management protocol. Acute pain typically lasts from 2 to 12 weeks and resolves with appropriate treatment. Chronic pain can begin as soon as 2 weeks postinjury.

If pain persists longer than 12 weeks, it should be considered chronic, and long-term analgesia should be considered. This may include continued use of NSAIDs and adjuvant medications, regular monitoring, and periodic reassessment. Nonpharmaceutical therapies such as photobiomodulation (cold laser therapy) and ongoing range-of-motion (ROM) exercises can help maintain joint mobility and comfort in chronic cases.[3]

Components of Multimodal Pain Management

The following categories outline a starting point for practices instituting MMPM. Individual patient treatment plans should be based on SMART (specific, measurable, achievable, relevant, time-bound) goals for improvement. Ongoing management may require laboratory testing, tapering/rotation of medications, and regular reassessment every 4 to 12 weeks.

Pharmaceuticals

At minimum, initial pharmaceutical MMPM options should include a representative from each of the following classes. With increased team experience and comfort with MMPM, other pharmaceuticals can be added.

- **NSAIDs:** Have at least 2 options in case a patient experiences adverse effects (e.g., gastrointestinal upset) on 1. Popular options include grapiprant, carprofen, robenacoxib, and meloxicam. NSAIDs can be administered orally, intravenously, or subcutaneously; clarify the route based on patient needs.
- **Neuropathic pain medications,** such as a gabapentanoid or NMDA (*N*-methyl-D-aspartate) antagonist
- **Opioids**
- **Combinations:** NSAIDs and opioids can be used together for enhanced analgesia (e.g., carprofen and tramadol).
- **Local blocks:** Surgery and local blocks are effective for acute pain. For chronic pain, periodic local blocks may be considered if appropriate.

Nonpharmaceutical Therapies

This category covers what the clinic staff can perform and what clients can do at home. Over time, more advanced therapies such as photobiomodulation can be added based on practice interest.

- **ROM exercises:** These include both passive ROM movements and limited use of the affected limb. Provide clients with detailed instructions on frequency (e.g., 1 to 2 times daily), duration (5 to 10 minutes per session), and whether ROM therapy is short-term (up to 12 weeks for acute pain) or long-term (ongoing for chronic pain to maintain joint mobility).
- **Application of cold and heat:** Often overlooked, these therapies are beneficial.[4] Cold therapy is best for immediate postinjury use, while heat therapy is used for chronic inflammation. Both cold and heat can be applied at the site of the injury for 10 to 30 minutes 3 to 6 times daily. The time between applications should be at least as long as the application time period. Always monitor the skin for signs of thermal injury.
- **Weight management/nutritional therapy:** Pets should be at an optimal weight and be on a complete, balanced diet. For chronic concerns such as hip arthritis, having the body condition score be slightly thin can be helpful.
- **Environmental modification:** The use of aids such as ramps for stairs and minimizing slippery walking surfaces should be considered.

Staff and Client Education

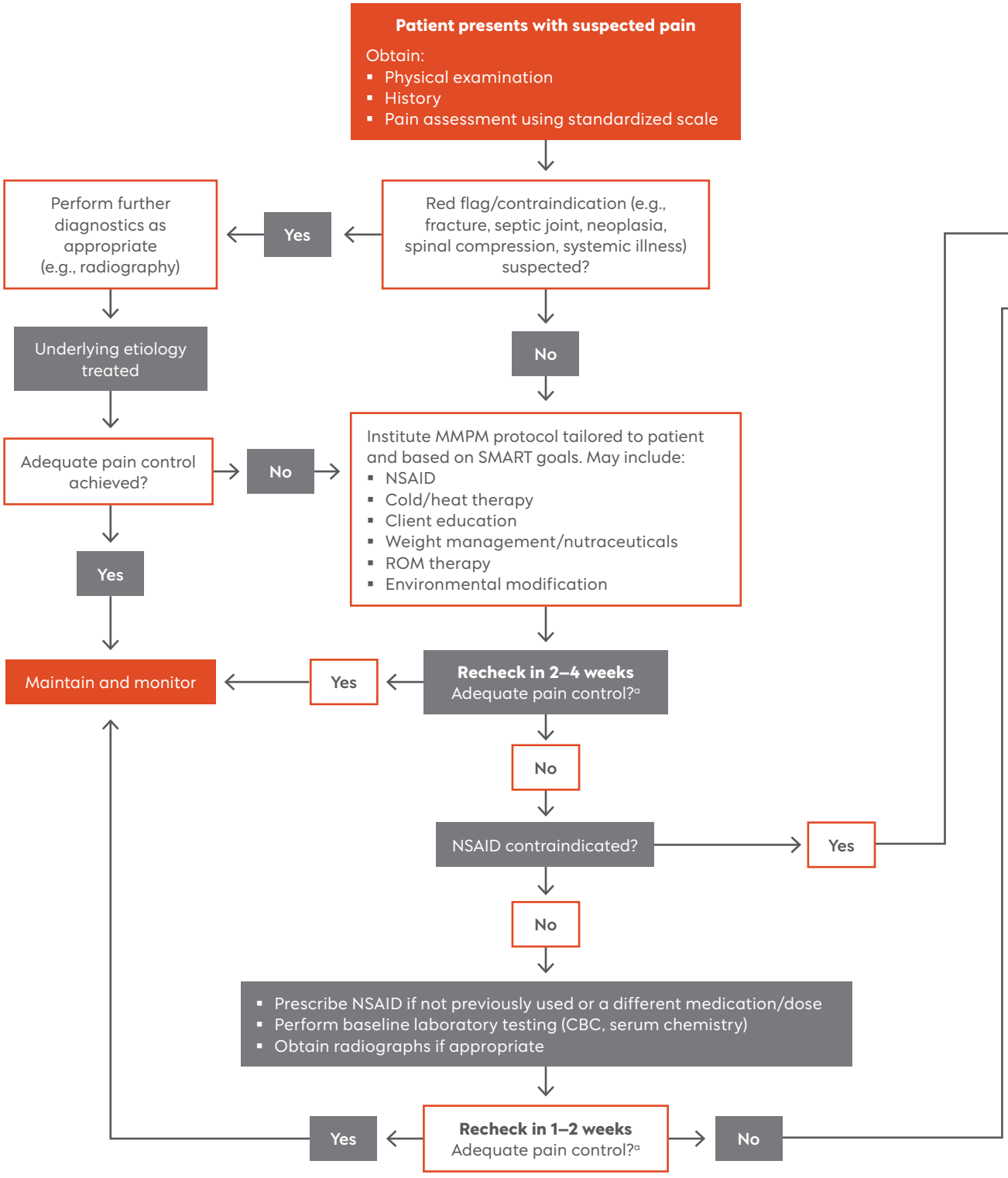
Education is paramount. For clients, many of the educational concepts can be printed and provided along with links to approved online videos demonstrating at-home techniques. For staff, training in how to use a standardized pain scale to assess the patient and document the score is one of the most important steps. All staff members must use consistent criteria to reduce interobserver error (i.e., a score of 1 must be consistent among all staff).

Documentation

Documentation of all therapeutic measures used allows trends to be noted to guide further treatment if necessary. TVP

PROIN ER™ (phenylpropanolamine hydrochloride extended-release tablets) For complete prescribing information, see full package insert. **Caution:** Federal law restricts this drug to use by or on the order of a licensed veterinarian. It is a violation of Federal Law to use this product other than as directed in the labeling. **Indication:** For the control of urinary incontinence due to urethral sphincter hypotonus in dogs. **Warnings:** Not for human use. Keep out of reach of children. Consult a physician in case of accidental ingestion by humans. Keep PROIN ER in a secured location out of reach of dogs, cats, and other animals to prevent accidental ingestion or overdose. **Precautions:** PROIN ER may mask signs of incontinence due to urinary tract infection. Proin ER is not effective in dogs with incontinence due to neurological disease or malformations. PROIN ER may cause hypertension; therefore, use with caution in dogs with pre-existing heart disease, hypertension, liver disease, kidney insufficiency, diabetes, glaucoma, and conditions with a predilection for hypertension. Use with caution in dogs receiving sympathomimetic drugs, tricyclic antidepressants, or monoamine oxidase inhibitors as increased toxicity may result. Use with caution in dogs administered halogenated gaseous anesthetics as this may increase the risk of cardiac arrhythmias. Proin ER may cause increased thirst; therefore, provide dogs with ample fresh water. The safe use of PROIN ER has not been evaluated in dogs that are intended for breeding, or that are pregnant or lactating. **Adverse reactions:** In the open-label clinical field study involving 119 dogs administered PROIN ER once a day for 180 days, the most common clinical abnormalities documented were emesis, body weight loss, hypertension, diarrhea, proteinuria, tachycardia, lethargy, decreased appetite, urinary tract infection and elevated alkaline phosphatase and/or alanine aminotransferase. There were an additional 21 dogs enrolled with hypertension who remained hypertensive throughout the study. During the first week of administration of PROIN ER, 15% of dogs had reported emesis, diarrhea, or decreased appetite which improved or resolved prior to the Day 21 visit. Four deaths occurred during the study. One dog was euthanized for pulmonary metastasis and one dog for poor quality of life due to hindlimb weakness. One dog had emesis and died at home; upon necropsy a foreign body was present in the small intestine. The fourth dog had been treated for a urinary tract infection three weeks prior to sudden death of undetermined cause. **Effectiveness:** Effectiveness of PROIN ER was demonstrated in a multi-center, prospective, open-label, 6-month study in client-owned dogs of various breeds. In this study, 119 dogs (113 spayed females and 6 neutered males, aged 1-16 years and weighing 4.9-81.8 kg) who were considered well controlled for signs of urinary incontinence (UI) while receiving PROIN Chewable Tablets for at least 30 days prior to study start were enrolled in the study. Of these dogs, 104 were evaluated for effectiveness. The owners continued to administer PROIN Chewable Tablets twice a day and recorded episodes of UI during a baseline period (Day -7 through Day -1). After the baseline period, the owner transitioned to administration of PROIN ER once a day, at the labeled dose, and recorded urinary accidents for 28 days. The primary variable was the ratio of average daily incidence of UI during the 7 days preceding the Day 28 clinic visit compared to the baseline period. It was concluded that PROIN ER was effective for the control of urinary incontinence due to urethral sphincter hypotonus in dogs. The secondary outcome variable was owner assessment of the control of UI at the end of the 28 day study period. The owner assessment was "improved" for 13 (12.5%) dogs, "stayed the same" for 90 (86.5%) dogs and "worsened" for 1 dog (1%). **Animal Safety:** See full product insert for further details. **To obtain full product information please call 800-874-9764 or visit Proin-ER.com. Approved by FDA under NADA #141-517.** PROIN ER is a trademark of Pegasus Laboratories, Inc.

Dosage and Administration: For use in dogs only. The total recommended dosage range is 2 to 4 mg/kg (0.9 to 1.8 mg/lb) of body weight once daily. Administer with food. Do not split or crush tablets. **Storage:** Store at 20-25°C (68-77°F). **WARNINGS: NOT FOR USE IN HUMANS. KEEP THIS AND ALL DRUGS OUT OF REACH OF CHILDREN.**



[a]The goal is for the patient to have a good quality of life. Complete pain control may not be achievable.
[b]These agents can take 6 to 12 weeks to be effective.

CT = computed tomography; MMPM = multimodal pain management; MRI = magnetic resonance imaging; QoL = quality of life; ROM = range of motion; SMART = specific, measurable, achievable, relevant, time-bound; TCA = tricyclic antidepressant.

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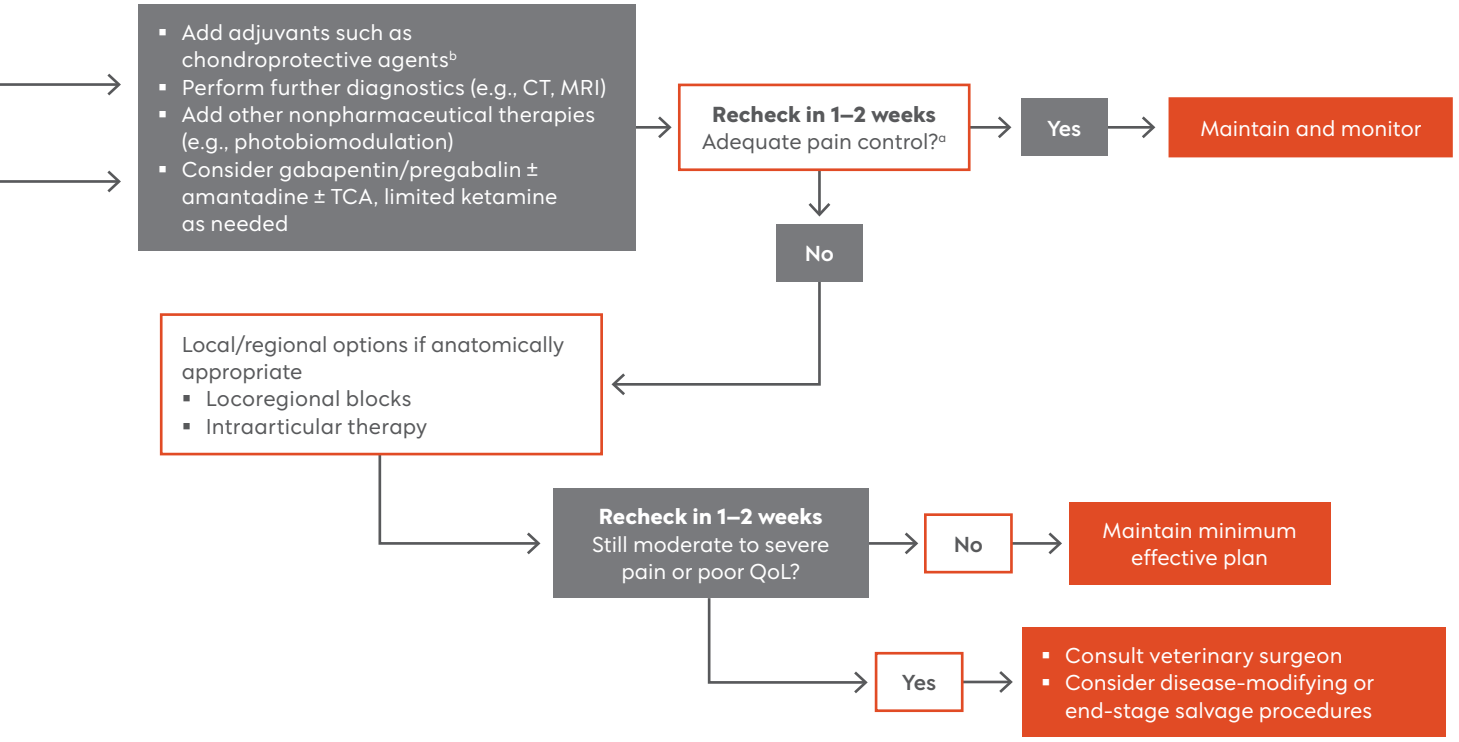

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Author

Mike Dutton

Dr. Dutton is a graduate of Michigan State University and has a master's degree in pain management. Prior to his retirement, he founded and owned 4 veterinary hospitals in New Hampshire. During his career, he cofounded the Association of Exotic Mammal Veterinarians and served in several positions in veterinary organizations. He has also lectured and written on veterinary pain management both locally and nationally. Dr. Dutton is a diplomate of the American Board of Veterinary Practitioners (ABVP) in 4 specialties. Additionally, he is an International Veterinary Academy of Pain Management–certified veterinary pain practitioner, a World Aquatic Veterinary Medical Association–certified aquatic veterinarian, and a founding fellow of the ABVP Companion Animal Pain Management Fellowship.