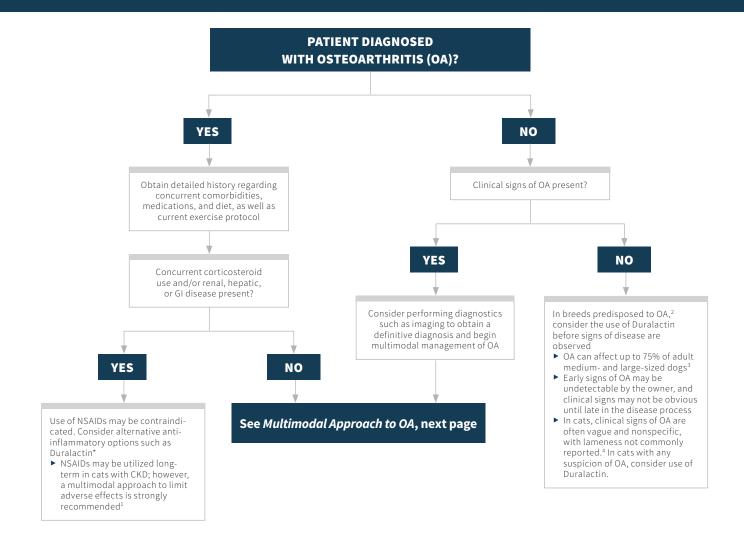
MULTIMODAL APPROACH TO OSTEOARTHRITIS

Sponsored by PRN Pharmacal



^{*}This product is a nutritional supplement and has not been approved by the FDA, nor is it intended to diagnose, treat, cure, or prevent any disease. It should only be used through consultation with a veterinarian and in conjunction with an overall wellness program.

MULTIMODAL APPROACH TO OA

Anti-inflammatory medications

- ► NSAIDs
 - Adverse effects of NSAIDs vary but can include GI signs (eg, vomiting, diarrhea, hyporexia, ulcerative disease)
 - Dose reductions can be considered to mitigate adverse effects, but this has been shown to result in decreased efficacy of the NSAID⁵
- ► Corticosteroids
 - Can have significant long-term adverse effects
 - Cannot be used concurrently with NSAIDs
- ► Duralactin
 - A novel therapeutic targeting inflammation by reducing neutrophil migration
 - Should be considered for patients that cannot tolerate traditional anti-inflammatory medications
 - Can also be used as an adjunctive support for patients on chronic NSAID therapy
 - Once-daily administration available in multiple formulations to improve client compliance for consistent administration
 - Results can be seen 4 to 7 days after initiating treatment
 - · Safe for use in dogs, cats, and horses
- ► Analgesics (eg, tramadol, gabapentin)
 - Evidence of efficacy in the management of OA is limited⁶⁻⁹
- Adverse effects include sedation and the potential for abuse
- ► Intra-articular injections (eg, corticosteroids, hyaluronic acid)
- ► Polysulfated glycosaminoglycan (PSGAG)
- Injectable chondroprotectant
- ► Nonpharmaceutical interventions
 - Low-impact, regular exercise once adequate analgesia has been achieved
 - Weight optimization
 - Physical therapy

CLINICAL IMPROVEMENT ACHIEVED? YES NO ► Regular physical examinations, Reassess multimodal approach. blood work monitoring, and Consider optimizing alternative quality-of-life assessments therapies such as nutraceuticals. should be performed in physical therapy, weight management, conjunction with the pet owner and intra-articular treatments to determine if any additional therapies are needed Consider dose reduction of NSAIDs or steroid medication to further eliminate unwanted adverse effects

References

- Monteiro B, Steagall PVM, Lascelles BDX, et al. Long-term use of non-steroidal anti-inflammatory drugs in cats with chronic kidney disease: from controversy to optimism. J Small Anim Pract. 2019;60(8):459-462.
- Anderson KL, Zulch H, O'Neill DG, Meeson RL, Collins LM. Risk factors for canine osteoarthritis and its predisposing arthropathies: a systematic review. Front Vet Sci. 2020;7:220.
- Anderson KL, O'Neill DG, Brodbelt DC, Church DB. Prevalence, duration and risk factors for appendicular osteoarthritis in a UK dog population under primary veterinary care. Sci Rep. 2018;8(1):5641.
- Bennett D, Zainal Ariffin SM, Johnston P.
 Osteoarthritis in the cat: 1. How common is it and how easy to recognize? *J Feline Med Surg*. 2012;14(1):65-75.
- Wernham BG, Trumpatori B, Hash J, et al. Dose reduction of meloxicam in dogs with osteoarthritis-associated pain and impaired mobility. J Vet Intern Med. 2011;25(6):1298-1305.
- Budsberg SC, Torres BT, Kleine SA, Sandberg GS, Berjeski AK. Lack of effectiveness of tramadol hydrochloride for the treatment of pain and joint dysfunction in dogs with chronic osteoarthritis. *J Am Vet Med Assoc*. 2018;252(4):427-432.
- Westling M, Millis DL. The effect of oral tramadol on ground reaction forces in dogs with experimentally induced osteoarthritis. Vet Comp Orthop Traumatol. 2012:4:A22
- Wagner AE, Mich PM, Uhrig SR, Hellyer PW. Clinical evaluation of perioperative administration of gabapentin as an adjunct for postoperative analgesia in dogs undergoing amputation of a forelimb. J Am Vet Med Assoc. 2010;236(7): 751-756.
- KuKanich B. Outpatient oral analgesics in dogs and cats beyond nonsteroidal antiinflammatory drugs: an evidence-based approach. Vet Clin Small Anim Pract. 2013;43(5):1109-1125.

