

Osteoarthritis: Medical Management

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BASIC INFORMATION

Description

Osteoarthritis (OA) or degenerative joint disease (DJD) is a chronic degenerative condition of one or more joints that results in decreased mobility and pain. OA is categorized as primary (very rare in dogs and cats) when it occurs with aging or an unknown cause or secondary when it results from another condition. Secondary OA is extremely common in dogs and is increasingly diagnosed in cats. OA can affect any joint, but the hip, stifle (knee), elbow, and shoulder joints are most commonly involved in dogs. In most cases, OA develops slowly over months to years and worsens with time.

Causes

Any event that injures, damages, strains, or causes a joint and its surrounding structures to become inflamed may eventually lead to OA. It is a common consequence of hip dysplasia, cranial cruciate ligament disease, osteochondritis dissecans, and other developmental or degenerative joint diseases in dogs. It may also occur after septic or immune-mediated arthritis, prolonged immobilization of a joint, joint surgery, direct trauma or dislocation of a joint, and certain metabolic bone diseases.

Clinical Signs

Lameness, stiffness, and pain are the most common signs. Stiffness is often worse after periods of rest and improves as the animal becomes more active. Lameness may be constant or sporadic and may worsen after exercise, especially if the exercise is followed by a rest period. Affected joints may crackle, pop, or grate and have decreased range of motion. Manual movement of the joint or affected leg may cause obvious pain. As the OA worsens, the animal may be reluctant to get up and move around.

Diagnostic Tests

OA may be suspected based on the history and clinical signs. X-rays of affected joints are needed to confirm the diagnosis, but the radiographic signs of OA often do not correlate with clinical signs and historical findings. In some cases, fluid can be retrieved to confirm the diagnosis by analysis and culture. With OA, joint fluid is not actively inflamed or infected.

TREATMENT AND FOLLOW-UP

Treatment Options

Medical therapy is the most commonly used treatment. Surgery may be needed in cases of joint instability (such as cranial cruciate ligament rupture or joint dislocation) or severe, debilitating disorders

(such as hip dysplasia) to provide permanent fusion (arthrodesis) of selected joints. (See the handouts on these surgical options.)

Medical therapy involves measures to decrease stress on the joint, improve the health of cartilage and joint surfaces, improve mobility, and decrease pain. Weight loss decreases stress on joints. Consistent, frequent, low-impact exercise (such as walking or swimming) can help facilitate weight loss and improve joint mobility and muscle mass in the affected legs. High-impact forms of exercise, such as running and jumping, are avoided. When available, physical rehabilitation can also significantly improve your pet's quality of life.

A variety of supplements, such as glucosamine, chondroitin sulfate, and omega-3 fatty acids, appear to decrease chronic degenerative processes within joints and may also alleviate some pain. These supplements are safe and can be used for years if needed. As an alternative to glucosamine/chondroitin sulfate, injectable polysulfated glycosaminoglycans can be administered by your veterinarian.

Nonsteroidal anti-inflammatory drugs (NSAIDs) are commonly administered for acute episodes of clinical signs and may be needed in some animals for long periods. Examples of drugs that are used in dogs include carprofen (*Rimadyl*), deracoxib (*Deramaxx*), firocoxib (*Previcox*), meloxicam (*Metacam*), tepoxalin (*Zubrin*), and etodolac (*Etogesic*). Meloxicam is most commonly used in cats. It is important to note that NSAIDs designed for people are often toxic to animals and should not be used.

Acupuncture has provided relief to some animals. Steroid medications are usually given only as a last resort because of their serious side effects and generally destructive effects on joint cartilage.

Follow-up Care

Periodic rechecks are advised to monitor response to therapy and progression of the disease. X-rays are not much help for monitoring the progression of OA but may be useful when surgery is planned. Laboratory tests are often performed prior to and during long-term NSAID therapy, because these drugs can cause or aggravate existing liver and kidney disease.

Prognosis

OA is a chronic, progressive disease whose course is difficult to predict. Even when an acceptable treatment regimen is achieved initially, modifications are usually required as the disease progresses. When medical therapy is unsuccessful and cannot be further adjusted, surgical alternatives such as joint fusion, arthroplasty, or joint replacement may be considered.