ARTHRITIS (OSTEOARTHRITIS)

BASICS

OVERVIEW

- "Arthritis" is the medical term for inflammation of the joints; "osteoarthritis" is a form of joint inflammation (arthritis) characterized by long-term (chronic) deterioration or degeneration of the joint cartilage
- Progressive and permanent deterioration of joint cartilage
- Also known as "degenerative joint disease" or "DJD"

GENETICS

- Primary degenerative joint disease (progressive and permanent deterioration of joint cartilage) is rare—once associated with a colony of beagles
- Dogs—causes of secondary degenerative joint disease (progressive and permanent deterioration of joint cartilage) are varied, including abnormal development of the hip (known as "hip dysplasia") or elbow (known as "elbow dysplasia"); abnormal development of bone and cartilage, leading to a flap of cartilage within the joint (known as "osteochondritis dissecans" or "OCD"); dislocation of the knee cap (known as a "patellar luxation"); congenital (present at birth) shoulder dislocation (known as a "shoulder luxation"); noninflammatory death of tissue (known as "necrosis") involving the femoral head (the "ball" of the hip joint) with collapse of the bone (condition known as "Legg-Calvé-Perthes disease"); and cranial cruciate ligament rupture of the stifle or knee
- Cats—causes of secondary degenerative joint disease (progressive and permanent deterioration of joint cartilage) are dislocation of the knee cap (patellar luxation), abnormal development of the hip (hip dysplasia), and any joint disease (known as an "arthropathy")

SIGNALMENT/DESCRIPTION of ANIMAL

Species

- Dogs and cats

Mean Age and Range

- Secondary degenerative joint disease (progressive and permanent deterioration of joint cartilage) due to congenital (present at birth) disorders (such as hip dysplasia) seen in immature animals; some present with DJD signs when older (such as cases of hip or elbow dysplasia)
- Secondary to trauma—any age

SIGNS/OBSERVED CHANGES in the ANIMAL

- Dogs—decreased activity level; unwilling to perform certain tasks; intermittent lameness or stiff gait that slowly progresses
- Possible history of joint trauma; abnormal development of bone and cartilage, leading to a flap of cartilage within the joint (osteochondritis dissecans); or developmental disorders
- Lameness or abnormal gait may become worse with exercise, long periods of lying down or resting, and/or cold weather
- Cats—obvious lameness may not be seen; instead, may have difficulty grooming, jumping onto furniture, or accessing the litter box; may have increased irritability
- Stiff-legged or altered gait (such as "bunny hopping" in hip dysplasia)
- Not using the affected leg(s)
- Decreased range of motion
- Grating detected with joint movement (known as "crepitus")
- Joint swelling (fluid build-up in the joint [known as "joint effusion"] and/or thickening of the joint capsule)
- Joint pain
- Joint instability
- Obvious joint deformity

CAUSES

- Primary—no known cause (so called "idiopathic osteoarthritis")
- Secondary—results from an initiating cause, such as abnormal wear on normal cartilage (examples, secondary to joint instability, abnormal joints, trauma to cartilage or supporting soft tissues) or normal wear on abnormal cartilage (example, secondary to defects in the bone and cartilage [known as "osteochondral defects"])

RISK FACTORS

- Working, athletic, and obese dogs place more stress on their joints
- Dogs with disorders that affect collagen or cartilage (such as increased levels of steroids produced by the adrenal glands [known as "hyperadrenocorticism" or "Cushing's disease"], diabetes mellitus ["sugar diabetes"], inadequate levels of thyroid hormone [known as "hypothyroidism"], excessive looseness of the joints [known as "hyperlaxity"], or prolonged treatment with steroids)

TREATMENT

HEALTH CARE

- Medical treatment—usually tried initially
- Physical therapy—very beneficial
- Maintaining or increasing joint motion—passive range of motion exercises, massage, swimming (as directed by your pet's veterinarian)
- Pain management—cold and heat therapy, as directed by your pet's veterinarian
- Muscle tone/strengthening exercises—swimming (aerobic exercise with minimal weight bearing), controlled leash walks up hills or on soft surfaces (such as sand), and dry or water treadmill

ACTIVITY

- Limited to a level that minimizes aggravation of clinical signs

DIET

- Weight reduction for obese patients—decreases stress placed on arthritic joints
- Omega fatty acids may decrease inflammation; use as directed by your pet's veterinarian

SURGERY

- Surgical options—improve joint geometry or remove bone-on-bone contact areas
- Surgical procedure cutting into or entering a joint (known as an "arthrotomy")—used to remove aggravating causes (such as bone and/or cartilage fragments or flaps)
- Using a special lighted instrument called an "arthroscope" (general term for procedure is "arthroscopy") to allow the surgeon to see inside the joint—used to diagnose and remove aggravating causes; flushing the joint may be beneficial
- Reconstructive procedures—used to eliminate joint instability and correct structural or anatomic problems (such as in animals with dislocation of the knee cap [patellar luxation])
- Joint removal—such as removal of the femoral head (the "ball") of the hip joint for cases of abnormal development of the hip (hip dysplasia; procedure known as "femoral head and neck ostectomy" or "FHO")
- Joint replacement—total hip replacement is common; total elbow replacement still is experimental
- Joint fusion (known as "arthrodesis")—in selected long-term (chronic) cases and for joint instability

ALTERNATIVE THERAPIES

- Acupuncture
- K Laser – therapeutic laser treatments to reduce inflammation and promote healing
- Physical Therapy

MEDICATIONS

Medications presented in this section are intended to provide general information about possible treatment. The treatment for a particular condition may evolve as medical advances are made; therefore, the medications should not be considered as all inclusive.

- Nonsteroidal anti-inflammatory drugs (NSAIDs) to decrease pain and inflammation—examples are carprofen, deracoxib, etodolac, meloxicam, tepoxalin
- Medications intended to slow the progression of arthritic changes and protect joint cartilage (known as "chondroprotective drugs"), such as polysulfated glycosaminoglycans, glucosamine, and chondroitin sulfate—may help limit cartilage damage and degeneration; may help alleviate pain and inflammation
- Polyglycan injections (Glucosamine, Chondroitin Sulfate, Hyaluronic Acid) once weekly for 4 weeks, then every other week for 3 additional treatments.
- Adequan injections (Polysulfated glycosaminoglycan) twice weekly for 5 weeks
- Steroids—decrease inflammation; however, long-term (chronic) use may delay healing and may initiate damage to joint cartilage; examples of steroids are prednisone administered by mouth or triamcinolone administered by injection into the joint (known as an "intra-articular injection")
- Fish Oil (eg. AllerG3 caps) – Omega 3 fatty acids from fish oil help to reduce inflammation
- Oral joint supplements containing chondroprotective ingredients – eg. Phycox, Dasuquin, Cosequin, Synovi-G4
- Adjunctive pain medications – eg. Tramadol, Amantadine, Gabapentin

FOLLOW-UP CARE

PATIENT MONITORING

- Clinical deterioration—indicates need to change drug selection or dosage; may indicate need for surgical intervention

PREVENTIONS AND AVOIDANCE

- Early identification of conditions that may lead to osteoarthritis and prompt treatment to help reduce progression of secondary conditions

EXPECTED COURSE AND PROGNOSIS

- Slow progression of disease likely
- Medical or surgical treatment usually allows a good quality of life

KEY POINTS

- Medical therapy is designed to control signs of osteoarthritis (known as “palliative treatment”) and not to cure the condition
- Slow progression of disease likely
- Medical or surgical treatment usually allows a good quality of life
- Discuss treatment options, activity level, and diet with your pet’s veterinarian