Osteomyelitis in Dogs
By Dr. Karen Becker

Hi, this is Dr. Karen Becker, and today we're going to discuss osteomyelitis. Osteomyelitis is infection of the bone and/or the bone marrow caused by either a bacterial or fungal infection. Inflammation may be the result of either a chronic or acute infection that can originate in another area of the body and travel to the bone through the bloodstream, or it could come from another infection that is located near a piece of bone.

Fungal infections that result in osteomyelitis are typically due to a systemic fungal disease such as valley fever, blastomycosis, or Cryptococcus infection. Bacterial bone infections usually occur secondarily to bites or other wounds, sometimes bone fractures, or foreign objects like foxtails that get into the body. An infection in another area of the body, for example, a dental or ear infection can also move through the bloodstream and end up in the bone.

Other causes of infection can include accidents or injuries involving bone and soft tissue, or a post-operative infection that develops after a dog or cat receives a surgical implant or undergoes another type of bone surgery, let's say, a fracture repair.

Symptoms and Diagnosis

Early symptoms of osteomyelitis typically include pain, fever, and soft tissue swelling. The dog or cat may be lethargic, weak, depressed, and unwilling to eat. The dog or cat could experience episodic lameness or the inability to move the affected limb at all. Certainly muscle-wasting may also occur, which means they don't want to bear weight on the limbs, so the muscles get smaller.

Oftentimes joints will begin to swell as the infection spreads, and if the condition is chronic, sometimes fluid or pus may drain from the soft tissue surrounding the infected bone. If the infection is the result of a broken bone or repair of a fracture, healing of the bone will certainly be inhibited.

Your veterinarian will likely take a complete history. He or she will perform a physical examination and do some appropriate bloodwork, including a culture and sensitivity testing of any pus or discharge that could be draining. Sometimes veterinarians need to take biopsies of the surrounding tissues. Certainly X-rays are indicated as well as sometimes an ultrasound. If your pet's immune system has recognized that the infection is present, the lab work will reveal an elevated white blood cell count.

If a fungal infection is suspected, special testing may be required to isolate and identify the fungal organism that's involved. X-rays will usually show soft-tissue swelling as well as some changes in the fibrous connective tissue surrounding the bone, and sometimes even new bone growth in really chronic cases. If bone infection is persistent, then naturally bone necrosis will also be very evident on X-rays.

Treatment

Hopefully your veterinarian will be able to culture the lesion. Once the culture identifies the specific organism that's causing the infection, your vet can prescribe the correct treatment protocol. It is really important that the exact infectious agent be identified via culture, so that the most appropriate therapy is instituted.

Bone infections are considered very serious and should be treated as aggressively as possible. In dogs or cats with wounds, the first step is to irrigate the wound to clean it and allow the pus to continue draining away from the bone. Surgical removal of devitalized tissue and sequestra, which are dead fragments of bone, will also be required.

If a broken bone is involved, it must be stabilized to prevent further damage to surrounding tissues and to the remaining bone. This may require surgery depending on the location and severity of the fracture. In really severe fractures, there is a risk that the infection can spread to other parts of the body and other tissues. Sadly, sometimes amputation is actually recommended to be able to save the pet's life.

If the infection is bacterial, appropriate antibiotic therapy will be instituted and certainly will be required for an extended period of time like months. At that time, we certainly recommend that you also use a probiotic for your pet. If a systemic fungal disease is identified, treatment will involve antifungal medications.

Repeating X-rays will be necessary to determine how the infection is resolving. And if there's a fracture present, that's really important to judge if the fracture is healing.

Long-term Care

Since osteomyelitis can present or turn into a chronic problem, it's really important to be aggressive at the beginning to try and reduce the potential for this condition lagging on and on. Depending on the severity of the infection, treatment can be costly, as certainly long-term antibiotic and antifungal medications can become quite expensive.

Acute cases of osteomyelitis actually tend to respond better than chronic cases. While the bone is healing, it's very important to note that the bone is unstable. Your dog's or cat's activity will be restricted during this time. It's best to set up a space in a quiet area of your home, away from other activities or distractions that might tempt your pet to become physically active.

Sometimes dogs require cage rest, so that they can't move around at all. Kitties as well if they're prone to jumping up on counters and things. It's really important that they don't move around in ways that could inhibit the healing process. Potty trips outside will also need to be supervised, so that your dog doesn't try to run or play. You may find it easier to carry your pet back and forth inside and outside until the bone is stable enough for him or her to bear weight on it.

Controlled physical therapy performed by a certified rehabilitation therapist can be really beneficial for patients during this time, as can incorporating immune stimulating herbs and nutraceuticals, which will be prescribed by your holistic veterinarian.

[END]