

Understanding Congenital Hip Dysplasia

Congenital hip dysplasia (CHD) is an abnormal development of the hip joint involving the bone, muscle and connective tissue in dogs. The result is an abnormal joint laxity that may eventually progress to degenerative joint disease (DJD), more commonly known as arthritis.

Recognizing and treating CHD is important because, if left untreated, it could progressively debilitate an otherwise healthy dog. In young dogs, the looseness of the hips may cause a variable amount of pain. However, this is an unreliable way to diagnose the problem.

Most owners recognize the disease by the time a dog is a young adult, from 12 to 36 months old. Logically, any structural abnormality causing clinical signs should show up at this point when activity is increasing. The dog with hip dysplasia most often is described by its owner as "bunny hopping." The altered gait becomes more pronounced with age. Labrador Retriever and German Shepherd dog owners seem to be particularly astute at noticing differences in gait, says Joseph Harari, D.V.M., veterinary orthopedic surgeon and former surgical faculty member at the University of Illinois and Washington State University veterinary colleges.

"By the time these owners get their dog to a veterinarian, they generally have a good idea what's going on and may suspect CHD," Harari says. "Rarely do I surprise one of them with the diagnosis of CHD, even though they are disappointed.

"Diagnostically, we look at the history of the complaint and clinical symptoms to guide us. Sometimes, we can palpate or feel the looseness in a young dog's hips or the arthritic changes in an older dog. Certainly if CHD is suspected, hip radiographs, more commonly called X-rays, are in order."

Treatment Options

"Treatment options for an owner of a dog with CHD depend on the dog's role in the future, the dog's age, clinical findings and the evidence we see on radiographs," Harari says.

Dogs that are from 8 to 14 month old may do well with a triple pelvic osteotomy (TPO). A TPO is a surgical procedure in which bones around the hip socket are rotated and allowed to heal into a better position relative to the ball at the top of the femur. "Dogs that undergo TPOs at the right time—given that arthritic changes have not begun—face a good prognosis for a return to full activities including hunting. I'd say 80 to 90 percent do very well," Harari says.

Generally after 18 months of age, loose hips will have progressed to DJD. A TPO is not indicated at this point because irreversible degeneration has started. In this case an owner faces two surgical options and one nonsurgical.

The most conservative care is indicated for least active dogs. It involves the use of anti-inflammatory drugs. In addition, the owner is instructed to reduce a dog's obesity, to increase its muscle mass with low impact activities such as swimming, and to eliminate all activities when the dog is in obvious pain. "The best part about this conservative approach is that it does not alter the surgical options that can be used later," Harari says.

The two surgical options available for CHD that has progressed to DJD are excision of the head and neck of the femur or a total hip joint replacement. Removal of the head and neck of the femur results in the animal forming a false joint surrounding the pelvic portion and the end of the femur. Some people question a dog's ability to function after this common procedure, Harari says. "While the dog's post-surgical gait is not normal because its range of motion is decreased, it also is not painful like an arthritic joint. But while the dog's gait is not normal, the athletic dog often does fine as long as it maintains good muscle mass and a high level of activities."

A total hip arthroplasty (THA) is a procedure in which the ball and the socket are removed and replaced with metal and plastic components similar to a hip replacement procedure in humans. The parts are usually held in place with tough cement. But unlike humans, dogs weigh less and their activity level can be near normal after a THA because stress on the components is less. "This is the closest veterinary medicine has to ensuring a dog will be normal after surgery with a full resumption of all activities," Harari says. "Barring the uncommon complications of loosening, infection or nerve damage, we can expect 90 to 95 percent success." The downside of the procedure is that the price starts at \$2,500 and may go much higher. Owners also must seek out qualified veterinary orthopedic specialists to replace a hip joint.

Should Dogs with CHD be Bred?

"Absolutely not," Harari says "It would be professionally negligent for a veterinarian to recommend anything other than to spay or neuter dogs with CHD. Although we don't know the exact genetic cause of CHD, numerous studies show a strong genetic link along with other factors. At least the genetic factor is one we can control."